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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) or (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report _____
For the transition period from _____ **to** _____
Commission file number: 001-37668

Ferroglobe PLC

(Exact name of Registrant as specified in its charter)

England and Wales
(Jurisdiction of incorporation or organization)

2nd Floor West Wing, Lansdowne House, 57 Berkeley Square
London W1J 6ER, United Kingdom
+44-(0)203-129-2420
(Address of principal executive offices)

Beatriz García-Cos Chief Financial Officer and Principal Accounting Officer
2nd Floor West Wing, Lansdowne House, 57 Berkeley Square
London W1J 6ER, United Kingdom
+44-(0)203-129-2420
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Ordinary Shares (nominal value of $0.01)	**GSM**	**NASDAQ Global Select Market**

Securities registered or to be registered pursuant to Section 12(g) of the Act.
None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.
None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Ordinary Shares (nominal value of $0.01) 169,130,722

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐
Emerging growth company☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

† Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report ☒

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS

This annual report includes statements that are, or may be deemed to be, forward-looking statements within the meaning of the securities laws of certain applicable jurisdictions. These forward-looking statements are made under the "safe harbor" provision under Section 21E of the Securities Exchange Act of 1934, as amended, and as defined in the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, all statements other than statements of historical facts contained in this annual report, including, without limitation, those regarding our future financial position and results of operations, our strategy, plans, objectives, goals and targets, future developments in the markets in which we operate or are seeking to operate or anticipated regulatory changes in the markets in which we operate or intend to operate. These statements are often, but not always, made through the use of words or phrases such as “believe,” “anticipate,” “could,” “may,” “would,” “should,” “intend,” “plan,” “potential,” “predict(s),” “will,” “expect(s),” “estimate(s),” “project(s),” “positioned,” “strategy,” “outlook,” “aim,” “assume,” “continue,” “forecast,” “guidance,” “projected,” “risk” and similar expressions.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performance and are based on numerous assumptions. Our actual results of operations, financial condition and the development of events may differ materially from (and be more negative than) those made in, or suggested by, the forward-looking statements. Investors should read the section entitled “Item 3.D.—Key Information—Risk Factors” and the description of our segments in the section entitled “Item 4.B.—Information on the Company—Business Overview” for a more complete discussion of the factors that could affect us. All such forward-looking statements involve estimates and assumptions that are subject to risks, uncertainties and other factors that could cause actual results to differ materially from the results expressed in, or suggested by, the statements. Among the key factors that could cause actual results to differ materially from those projected in the forward-looking statements are the following:

- the impacts of the COVID-19 pandemic;
- the outcomes of pending or potential litigation;
- operating costs, customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers) may be greater than expected;
- the retention of certain key employees may be difficult;
- intense competition and expected increased competition in the future;
- our ability to adapt services to changes in technology or the marketplace;
- our ability to maintain and grow relationships with customers and clients;
- the historic cyclicality of the metals industry and the attendant swings in market price and demand;
- increases in energy costs and the effect on costs of production;
- energy prices, disruptions in the supply of power and changes in governmental regulation of the power sector;
- availability of raw materials and transportation;
- the cost of raw material inputs and the ability to pass along those costs to customers;
- costs associated with labor disputes and stoppages;

- our ability to maintain our liquidity and to generate sufficient cash to service indebtedness;
- integration and development of prior and future acquisitions;
- our ability to implement strategic initiatives and actions taken to increase sales growth;
- our ability to compete successfully;
- the availability and cost of maintaining adequate levels of insurance;
- our ability to protect trade secrets, trademarks and other intellectual property;
- equipment failures, delays in deliveries or catastrophic loss at any of our manufacturing facilities, which may not be covered under any insurance policy;
- exchange rate fluctuations;
- changes in laws protecting U.S., Canadian and European Union companies from unfair foreign competition (including antidumping and countervailing duty orders and laws) or the measures currently in place or expected to be imposed under those laws;
- compliance with, or potential liability under, environmental, health and safety laws and regulations (and changes in such laws and regulations, including in their enforcement or interpretation);
- risks from international operations, such as foreign exchange fluctuations, tariffs, duties and other taxation, inflation, increased costs, political risks and our ability to maintain and increase business in international markets;
- risks associated with mining operations, metallurgical smelting and other manufacturing activities;
- our ability to manage price and operational risks including industrial accidents and natural disasters;
- our ability to acquire or renew permits and approvals;
- potential losses due to unanticipated cancellations of service contracts;
- risks associated with potential unionization of employees or work stoppages that could adversely affect our operations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by governmental authorities;
- changes in general economic, business and political conditions, including changes in the financial markets;
- uncertainties and challenges surrounding the implementation and development of new technologies;
- risks related to our capital structure; and
- risks related to our ordinary shares.

These and other factors are more fully discussed in the “Item 3.D.—Key Information—Risk Factors” and “Item 4.B.—Information on the Company—Business Overview” sections and elsewhere in this annual report.

The factors described above and set forth in "Item 3.D.—Key Information—Risk Factors" section are not exhaustive. Other sections of this annual report describe additional factors that could adversely affect our business, financial condition or results of operations. Moreover, we operate in a very competitive and rapidly changing commercial environment. New risk factors emerge from time to time and it is not possible for us to predict or list all such risks, nor can we assess the impact of all possible risks on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained, or implied by, in any forward-looking statements.

The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, after the date on which the statements are made or to reflect the occurrence of unanticipated events. You should read this annual report and the documents we reference herein carefully and completely, with the understanding that our actual future results or performance may be materially different from what we anticipate.

CURRENCY PRESENTATION AND DEFINITIONS

In this annual report, references to "$," "US$" and "U.S. Dollars" are to the lawful currency of the United States of America, references to "Euro" and "€" are to the single currency adopted by participating member states of the European Union relating to Economic and Monetary Union and references to "Pound Sterling" and "£" are to the lawful currency of the United Kingdom.

Unless otherwise specified or the context requires otherwise, all financial information for the Company provided in this annual report is denominated in U.S. Dollars.

Definitions

Unless otherwise specified or the context requires otherwise in this annual report:

- the terms (1) "we," "us," "our," "Company," "Ferroglobe," and "our business" refer to Ferroglobe PLC and its subsidiaries, Globe Specialty Metals, Inc. ("Globe") and its consolidated subsidiaries and Grupo FerroAtlántica, S.A.U. ("FerroAtlántica") and its consolidated subsidiaries; (2) "Globe" refers solely to Globe Specialty Metals, Inc. and its consolidated subsidiaries and (3) "FerroAtlántica" or the "FerroAtlántica Group" refers solely to FerroAtlántica and its consolidated subsidiaries;
- "Business Combination" refers to the business combination of Globe and FerroAtlántica as wholly-owned subsidiaries of Ferroglobe PLC on December 23, 2015;
- "Class A Ordinary Shares" refers to share capital issued in connection with the Business Combination, which has subsequently been converted into ordinary shares of Ferroglobe PLC as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe PLC shareholders on November 18, 2016;
- "Consolidated Financial Statements" refers to the audited consolidated financial statements of Ferroglobe PLC and its subsidiaries as of December 31, 2019 and December 31, 2018 and for each of the years ended December 31, 2019, 2018 and 2017, including the related notes thereto, prepared in accordance with IFRS (as such terms are defined herein);
- "IFRS" refers to International Financial Reporting Standards as issued by the International Accounting Standards Board;
- "Indenture" refers to the indenture, dated as of February 15, 2017, among Ferroglobe PLC and Globe Specialty Metals, Inc. as co-issuers, certain subsidiaries of Ferroglobe PLC as guarantors, and Wilmington Trust, National Association as trustee, registrar, transfer agent and paying agent;

- "Notes" refer to the $350,000,000 aggregate principal amount of senior unsecured notes bearing interest of 9.375% issued by Ferroglobe PLC and Globe Specialty Metals, Inc., due March 1, 2022 (the "Notes");
- "Predecessor" refers to FerroAtlántica for all periods prior to the Business Combination;
- "Revolving Credit Facility" refers to borrowings available under the credit agreement, dated as of February 27, 2018, as amended on or about October 31, 2018 and February 22, 2019, among Ferroglobe PLC, as borrower, certain subsidiaries of Ferroglobe PLC from time to time party thereto as guarantors, the financial institutions from time to time party thereto as lenders, PNC Bank, National Association, as administrative agent, issuing lender and swing loan lender, PNC Capital Markets LLC, Citizens Bank, National Association and BMO Capital Markets Corp., as joint legal arrangers and bookrunners, Citizens Bank, National Association, as syndication agent, and BMO Capital Markets Corp., as documentation agent, as amended from time to time;
- "shares" or "ordinary shares" refer to the authorized share capital of Ferroglobe PLC;
- "tons" refer to metric tons (approximately 2,204.6 pounds or 1.1 short tons);
- "U.S. Exchange Act" refers to the U.S. Securities Exchange Act of 1934, as amended; and
- "U.S. Securities Act" refers to the U.S. Securities Act of 1933, as amended.
- "ABL Revolver" refers to credit available under the credit agreement, dated as of October, 11, 2019, Ferroglobe subsidiaries Globe Specialty Metals, Inc., and QSIP Canada ULC, as borrowers, entered into a Credit and Security Agreement for a new $100 million north American asset-based revolving credit facility, with PNC Bank, N.A., as lender.
- "SPE" refers to Ferrous Receivables DAC, a special purpose entity domiciled and incorporated in Ireland to which trade receivables generated by the Company's subsidiaries in the United States, Canada, Spain and France were sold.
- "LIBOR" refers to the basic rate of interest used under the ABL Revolver, the interest to be paid will be LIBOR plus aplicable margin.

PRESENTATION OF FINANCIAL INFORMATION

The selected financial information as of December 31, 2019 and December 31, 2018 and for the years ended December 31, 2019, 2018 and 2017 is derived from our Consolidated Financial Statements, which are included elsewhere in this annual report and which are prepared in accordance with IFRS. The selected financial information related to other periods is derived as noted in "Item 3.—Key Information Selected Financial Data."

Certain numerical figures set out in this annual report, including financial data presented in millions or thousands and percentages describing market shares, have been subject to rounding adjustments, and, as a result, the totals of the data in this annual report may vary slightly from the actual arithmetic totals of such information. Percentages and amounts reflecting changes over time periods relating to financial and other data set forth in "Item 5.—Operating and Financial Review and Prospects" are calculated using the numerical data in our Consolidated Financial Statements or the tabular presentation of other data (subject to rounding) contained in this annual report, as applicable, and not using the numerical data in the narrative description thereof.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

The following selected financial information as of December 31, 2019 and 2018 and for the years ended December 31, 2019, 2018, 2017, 2016 and 2015 is derived from our Consolidated Financial Statements, prepared in accordance with IFRS, which are included elsewhere in this annual report. Our Spanish hydroelectric operations were disposed of in August 2019. Accordingly, the consolidated income statements for 2018, 2017, 2016 and 2015 have been re-cast to show the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

Ferroglobe was formed upon the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's "Predecessor" for accounting purposes. Therefore, the selected consolidated income statement of the Company for the year ended December 31, 2015 comprised the results of the following entities for the periods noted:

- Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015;
- FerroAtlántica, the Company's "Predecessor," for the year ended December 31, 2015; and
- Globe for the eight-day period ended December 31, 2015.

The selected consolidated financial information as of and for the years ended December 31, 2019, 2018, 2017, 2016 and 2015 is not intended to be an indicator of our potential financial condition or results of operations in the future. The following tables should be read in conjunction with "Item 5.A.—Operating and Financial Review and Prospects—Operating Results," and our Consolidated Financial Statements included elsewhere in this annual report.

Consolidated Income Statement Data

($ thousands)	Year ended December 31, 2019	2018 (1)	2017 (1)	2016 (1)	2015 (1)(2)
Sales	1,615,222	2,242,002	1,732,276	1,560,773	1,295,548
Cost of sales	(1,214,397)	(1,446,677)	(1,043,275)	(1,043,113)	(818,040)
Other operating income	54,213	45,844	18,100	26,020	15,596
Staff costs	(285,029)	(338,862)	(300,035)	(294,253)	(203,669)
Other operating expense	(225,705)	(277,560)	(234,399)	(237,350)	(193,380)
Depreciation and amortization charges, operating allowances and write-downs	(120,194)	(113,837)	(100,402)	(121,981)	(62,890)
Impairment losses	(175,899)	(58,919)	(31,641)	(267,450)	(52,042)
Net (loss) gain due to changes in the value of assets	(1,574)	(7,623)	7,504	1,891	(912)
(Loss) gain on disposal of non-current assets	(2,223)	14,564	(4,316)	340	(2,214)
Bargain purchase gain	—	40,142	—	—	—
Other losses	—	—	(2,613)	(40)	(347)
Operating (loss) profit	(355,586)	99,074	41,199	(375,163)	(22,350)
Finance income	1,380	4,858	2,409	1,591	1,602
Finance costs	(63,225)	(57,066)	(59,969)	(24,612)	(24,267)
Financial derivative gain (loss)	2,729	2,838	(6,850)	—	—
Exchange differences	2,884	(14,136)	8,214	(3,513)	35,904
(Loss) profit before tax	**(411,818)**	**35,568**	**(14,997)**	**(401,697)**	**(9,111)**
Income tax benefit (expense)	41,541	(20,459)	14,225	46,662	(48,640)
(Loss) profit for the year from continuing operations	**(370,277)**	**15,109**	**(772)**	**(355,035)**	**(57,751)**
Profit (loss) for the year from discontinued operations	84,637	9,464	(5,050)	(3,578)	(721)
(Loss) profit for the year	**(285,640)**	**24,573**	**(5,822)**	**(358,613)**	**(58,472)**
Loss attributable to non-controlling interests	5,039	19,088	5,144	20,186	15,204
(Loss) profit attributable to the Parent	**(280,601)**	**43,661**	**(678)**	**(338,427)**	**(43,268)**

Earnings (loss) per share

($ thousands except for share amounts)	2019	2018 (1)	2017 (1)	2016 (1)	2015 (1)(2)
Profit (loss) attributable to the Parent	(280,601)	43,661	(678)	(338,427)	(43,268)
Weighted average basic shares outstanding	169,152,905	171,406,272	171,949,128	171,838,153	99,699,262
Basic profit (loss) per ordinary share	**(1.66)**	**0.25**	**—**	**(1.97)**	**(0.43)**
Weighted average basic shares outstanding	169,152,905	171,406,272	171,949,128	171,838,153	99,699,262
Effect of dilutive securities	—	123,340	—	—	—
Weighted average dilutive shares outstanding	169,152,905	171,529,612	171,949,128	171,838,153	99,699,262
Diluted earnings (loss) per ordinary share	**(1.66)**	**0.25**	**—**	**(1.97)**	**(0.43)**

Cash dividends declared

($ thousands except for share amounts)	2019	2018	2017	2016	2015 (2)
Cash dividends declared	—	20,642	—	54,988	21,479
Cash dividends declared per ordinary share	—	0.12	—	0.32	0.12

Consolidated Statement of Financial Position Data

	As of December 31,				
($ thousands)	2019	2018	2017	2016	2015 (2)
Cash and cash equivalents	94,852	216,647	184,472	196,931	116,666
Non-current restricted cash and cash equivalents	28,323	—	—	—	—
Total assets	1,734,353	2,123,817	2,000,257	2,019,301	2,391,161
Non-current liabilities	734,599	740,368	612,303	500,503	603,500
Current liabilities	397,457	499,077	450,196	626,756	492,688
Equity	602,297	884,372	937,758	892,042	1,294,973

(1) Our Spanish hydroelectric operations were disposed of in August 2019. Accordingly, the consolidated income statements for prior periods 2018, 2017, 2016 and 2015 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

(2) Financial data for 2015 for Ferroglobe is derived from the results and financial position of: (a) Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015; (b) FerroAtlántica for the year ended December 31, 2015; and (c) Globe for the eight-day period ended December 31, 2015.

B. Capitalization and indebtedness.

Not applicable.

C. Reasons for the offer and use of proceeds.

Not applicable.

D. Risk factors.

An investment in our ordinary shares carries a significant degree of risk. You should carefully consider the following risks and all other information in this annual report, including our Consolidated Financial Statements elsewhere in the 20-F. Additional risks and uncertainties we are not presently aware of, or that we currently deem immaterial, could also affect our business operations and financial condition. If any of these risks are realized, our business, results of operations and financial condition could be adversely affected to a material degree. As a result, the trading price of our ordinary shares could decline and you could lose part or all of your investment.

Risks Related to Our Business and Industry

Our operations depend on industries including the aluminum, steel, polysilicon, silicone and photovoltaic/solar industries, which, in turn, rely on several end-markets. A downturn or change in these industries or end-markets could adversely affect our business, results of operations and financial condition.

Because we primarily sell the silicon metal, silicon-based alloys, manganese-based alloys and other specialty alloys we produce to manufacturers of aluminum, steel, polysilicon, silicones, and photovoltaic products, our results are significantly affected by the economic trends in the steel, aluminum, polysilicon, silicone and photovoltaic industries. Primary end users that drive demand for steel and aluminum include construction companies, shipbuilders, electric appliance and car

manufacturers, and companies operating in the rail and maritime industries. Primary end users that drive demand for polysilicon and silicones include the automotive, chemical, photovoltaic, pharmaceutical, construction and consumer products industries. Demand for steel, aluminum, polysilicon and silicones from such companies is strongly correlated with changes in gross domestic product and is affected by global economic conditions. Fluctuations in steel and aluminum prices may occur due to sustained price shifts reflecting underlying global economic and geopolitical factors, changes in industry supply-demand balances, the substitution of one product for another in times of scarcity, and changes in national tariffs. Lower demand for steel and aluminum can quickly cause a substantial build-up of steel and aluminum stocks, resulting in a decline in demand for silicon metal, silicon-based alloys, manganese-based alloys, and other specialty alloys. Polysilicon and silicone producers are subject to fluctuations in crude oil, platinum, methanol and natural gas prices, which could adversely affect their businesses. Changes in power regulations in different countries, fluctuations in the relative costs of different sources of energy, and supply-demand balances in the different parts of the value chain, among other factors, may significantly affect the growth prospects of the photovoltaic industry. A significant and prolonged downturn in the end-markets for steel, aluminum, polysilicon, silicone and photovoltaic products, could adversely affect these industries and, in turn, our business, results of operations and financial condition.

COVID-19 update

In early 2020, the outbreak of coronavirus disease ("COVID-19") in China spread to other jurisdictions, including locations where the Company conducts business. As of the date of the issuance of the consolidated financial statements, the COVID-19 outbreak has not yet had a material effect on the Company's liquidity or financial position. Management continue to monitor the impact that the COVID-19 pandemic is having on the Company, the specialty chemical industry and the economies in which the Company operates. Given the speed and frequency of continuously evolving developments with respect to this pandemic and the uncertainties this may bring for the Company and the demand for its products it is difficult to forecast the level of trading activities and hence cash flow in the next twelve months. Management have developed an impact assessment to stress test and assess potential responses to a downside scenario. The assessment involves application of key assumptions around market demand and prices, including the extent of the decrease that might be experienced in summer 2020 and the subsequent timing and level of recovery. Additionally, judgment is required around the level and extent of mitigating actions such as reductions in operating costs and capital expenditure. Developing a reliable estimate of the potential impact on the results of operations and cash flow at this time is difficult as markets and industries react to the pandemic and the measures implemented in response to it, but the downside scenario analysis supports an expectation that the Company will have cash headroom to continue to operate throughout the following twelve months. The key assumption underlying this assessment is a recovery in forecast trading activity in the latter part of 2020.

The metals industry is cyclical and has been subject in the past to swings in market price and demand which could lead to volatility in our revenues.

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets, from late 2014 to late 2017. During the second half of 2018 and throughout 2019, we experienced the most dramatic decline in prevailing prices of our products, which adversely affected our results. The business also experienced a reduction in sales volumes as a result of lower customer demand and a decrease in prices variance.

Historically, Ferroglobe's indirect subsidiary Globe Metallurgical Inc., has been affected by recessionary conditions in the end-markets for its products, such as the automotive and construction industries. In April 2003, Globe Metallurgical Inc. sought protection under Chapter 11 of the U.S. Bankruptcy Code following its inability to restructure or refinance its indebtedness amidst a confluence of several negative economic and other factors, including an influx of low-priced, dumped imports, which caused it to default on then-outstanding indebtedness. A recurrence of such economic factors could have a material adverse effect on our business, results of operations and financial condition.

Additionally, as a result of unfavorable conditions in the end-markets for its products, Globe Metales S.R.L. ("Globe Metales") went through reorganization proceedings ("*concurso preventivo*") in 1999, which ended in February 2019.

While such reorganization proceedings were ongoing (until February 2019), Globe Metales could not dispose of or encumber its registered assets (including its real estate) or perform any action outside its ordinary course of business without prior court approval.

In addition to the deterioration of market conditions for several of our products in the second half of 2018 and the whole of 2019, while it is difficult to forecast the impacts of the COVID-19 pandemic, at the present time the Company's day-to day operations continue without being materially affected and it is not causing disruption in our business and supply chains. Such conditions, and any decline in the global silicon metal, manganese-based alloys and silicon-based alloys industries could have a material adverse effect on our business, results of operations and financial condition. Moreover, our business is directly related to the production levels of our customers, whose businesses are dependent on highly cyclical markets, such as the automotive, residential and non-residential construction, consumer durables, polysilicon, steel, and chemical industries. In response to unfavorable market conditions, customers may request delays in contract shipment dates or other contract modifications. If we grant modifications, these could adversely affect our anticipated revenues and results of operations. Also, many of our products are traded internationally at prices that are significantly affected by worldwide supply and demand. Consequently, our financial performance will fluctuate with the general economic cycle, which could have a material adverse effect on our business, results of operations and financial condition.

Our business is particularly sensitive to increases in energy costs, which could materially increase our cost of production.

Electricity is one of our largest production components. The price of electricity is determined in the applicable domestic jurisdiction and is influenced both by supply and demand dynamics and by domestic regulations. Changes in local energy policy, increased costs due to scarcity of energy supply, climate conditions, the termination or non-renewal of any of our power purchase contracts and other factors may affect the price of electricity supplied to our plants and adversely affect our results of operations and financial conditions.

Because electricity is indispensable to our operations and accounts for a high percentage of our production costs, we are particularly vulnerable to supply limitations and cost fluctuations in energy markets. For example, at our Argentine, South African and Chinese plants, production must be modulated to reduce consumption of energy in peak hours or in seasons with higher energy prices, in order for us to maintain profitability. Our Venezuelan operations depend on national hydroelectric energy production (rainfall) to produce sufficient power to provide a reliable source of supply, which is not always possible. Generation of electricity in France by our own hydroelectric power operations partially mitigates our exposure to price increases in that market. However, in the past we have pursued possibilities of disposing of those operations, and may do so in the future. Such a divestiture, if completed, may result in a greater exposure to increases in electricity prices. Similarly the disposal in 2019 of our hydroelectric assets in Spain may result in a greater exposure to price fluctuations, for our Spanish ferroalloys business and therefore impact margins.

Electrical power to our U.S. and Canadian facilities is supplied mostly by American Electric Power Co., Alabama Power Co., Brookfield Renewable Partners L.P., Hydro-Québec, the Tennessee Valley Authority, and Niagara Mohawk Power Corporation through dedicated lines. Our Alloy, West Virginia facility obtains approximately 45% of its power needs under a fixed-price power purchase agreement with a nearby hydroelectric facility owned by a Brookfield affiliate. This facility is over 70 years old and any breakdown could result in the Alloy facility having to purchase more grid power at higher rates. The hydropower contract with Brookfield for the Alloy plant expires in December, 2021. A contract extension is currently being negotiated but no assurance can be given that an arrangement will be reached and future rate increases may occur depending upon the outcome of those negotiations. Our hydropower allocation with the New York Power Authority is dependent upon several financial and employee targets being met. Any change in the allocation may result in power cost increases for the Niagara Falls plant. The energy supply for our Mendoza, Argentina facility is supplied the national network administrator Cammesa under a power agreement expiring in December 2020 with a low rate specifically approved for ultra electrointensive industries. The extension of this rate after December 2020 is being negotiated. There can be no assurance that such negotiations will be completed on terms we consider to be commercially reasonable, or at all.

Energy supply to our facilities in South Africa is provided by Eskom (State-owned power utility) through rates that are approved annually by the national power regulator (NERSA). These rates have had an upward trend in the past years, due

to the instability of available supply, and are likely to continue increasing. Also, NERSA applies certain revisions to rates based on cost variances for Eskom that are not within our control.

In Spain, power is purchased in a competitive wholesale market. Our facilities have to pay access tariffs to the national grid and get certain payments in exchange for providing services to the grid (*i.e.*, interruptibility services). The volatile nature of the wholesale market in Spain results in price uncertainty that can be only partially offset by financial hedging contracts. Also, the payment we receive for the services provided to the grid are a major component of our power supply arrangements in Spain, and regulation for such services has been altered several times during the past years and the economic benefits of such services vary significantly from one year to the next, affecting our production cost and results from our operations.

In addition, France, South Africa and the U.S., our energy purchase arrangements depend to a certain extent on rebates or revenues that we get for providing different services to the grid (interruptibility, load shaving, off-peak consumption, etc.). These rebates may be significant, but such arrangements with relevant grid operators and/or regulators may vary over time, which may affect our production costs and results from our operations.

Losses caused by disruptions in the supply of power would reduce our profitability.

Large amounts of electricity are used to produce silicon metal, manganese- and silicon-based alloys and other specialty alloys, and our operations are heavily dependent upon a reliable supply of electrical power. We may incur losses due to a temporary or prolonged interruption of the supply of electrical power to our facilities, which can be caused by unusually high demand, blackouts, equipment failure, natural disasters or other catastrophic events, including failure of the hydroelectric facilities that currently provide power under contract to our West Virginia, New York, Québec and Argentina facilities. Additionally, on occasion, we have been instructed to suspend operations for several hours by the sole energy supplier in South Africa due to a general power shortage in the country. It is possible that this supplier may instruct us to suspend our operations for a similar or longer period in the future. Such interruptions or reductions in the supply of electrical power adversely affect production levels and may result in reduced profitability. Our insurance coverage does not cover all interruption events and may not be sufficient to cover losses incurred as a result.

In addition, investments in Argentina's electricity generation and transmission systems have been lower than the increase in demand in recent years. If this trend is not reversed, there could be electricity supply shortages as the result of inadequate generation and transmission capacity. Given the heavy dependence on electricity of our manufacturing operations, any electricity shortages could adversely affect our financial results.

Government regulations of electricity in Argentina give priority of use of hydroelectric power to residential users and subject violators of these restrictions to significant penalties. This preference is particularly acute during Argentina's winter months due to a lack of natural gas. We have previously successfully petitioned the government to exempt us from these restrictions given the demands of our business for continuous supply of electric power. If we are unsuccessful in our petitions or in any action we take to ensure a stable supply of electricity, our production levels may be adversely affected and our profitability reduced.

Any decrease in the availability, or increase in the cost, of raw materials or transportation could materially increase our costs.

Principal components in the production of silicon metal, silicon-based alloys and manganese-based alloys include coal, charcoal, graphite and carbon electrodes, manganese ore, quartzite, wood chips, steel scrap, and other metals. While we own certain sources of raw materials, we also buy raw materials on a spot or contracted basis. The availability of these raw materials and the prices at which we purchase them from third-party suppliers depend on market supply and demand and may be volatile. Our ability to obtain these materials in a cost efficient and timely manner is dependent on certain suppliers, their labor union relationships, mining and lumbering regulations and output, the effects of the COVID-19 pandemic and general local economic conditions.

Over the previous years, certain raw materials (particularly graphite electrodes, coal, manganese ore, and other electrode components) have experienced significant price increases and quick price moves in relatively short periods of time. In some cases, this has been combined with certain shortage in the availability of such raw materials. While we try to anticipate potential shortages in the supply of critical raw materials with longer term contracts and other purchasing strategies, these price swings and supply shortages may affect our cost of production or even cause interruptions in our operations, which may have a material adverse effect on our business, results of operations and financial condition.

We make extensive use of shipping by sea, rail and truck to obtain the raw materials used in our production and deliver our products to customers, depending on the geographic region and product or input. Raw materials and products often must be transported over long distances between mines and other production sites and the plants where raw materials are consumed, and between those sites and our customers. Any severe delay, interruption or other disruption in such transportation, any material damage to raw materials utilized by us or to our products while being transported, or a sharp rise in transportation prices could have a material adverse effect on our business, results of operations and financial condition. In addition, because we may not be able to obtain adequate supplies of raw materials from alternative sources on terms as favorable as our current arrangements, or at all, any disruption or shortfall in the production and delivery of raw materials could result in higher raw materials costs and likewise materially adversely affect our business, results of operations and financial condition.

Cost increases in raw material inputs may not be passed on to our customers, which could negatively impact our profitability.

The prices of our raw material inputs are determined by supply and demand, which may be influenced by, *inter alia*, economic growth and recession, changes in world politics, unstable governments in exporting nations, and inflation. The market prices of raw material inputs will thus fluctuate over time, and we may not be able to pass significant price increases on to our customers. If we do try to pass them on, we may lose sales and thereby revenue, in addition to having the higher costs. Additionally, decreases in the market prices of our products will not necessarily enable us to obtain lower prices from our suppliers.

Metallurgical manufacturing and mining are inherently dangerous activities and any accident resulting in injury or death of personnel or prolonged production shutdowns could adversely affect our business and operations.

Metallurgical manufacturing generally, and smelting in particular, is inherently dangerous and subject to risks of fire, explosion and sudden major equipment failure. Quartz and coal mining are also inherently dangerous and subject to numerous hazards, including collisions, equipment failure, accidents arising from the operation of large mining and rock transportation equipment, dust inhalation, flooding, collapse, blasting operations and operating in extreme climatic conditions. These hazards have led to accidents resulting in the serious injury and death of production personnel and prolonged production shutdowns in the past. We may experience fatal accidents or equipment malfunctions in the future, which could have a material adverse effect on our business and operations.

We are heavily dependent on our mining operations, which are subject to certain risks that are beyond our control and which could result in materially increased expenses and decreased production levels.

We mine quartz and quartzite at open pit mining operations and coal at underground and surface mining operations. We are heavily dependent on these mining operations for our quartz and coal supplies. Certain risks beyond our control could disrupt our mining operations, adversely affect production and shipments, and increase our operating costs, such as: the closure of operations as a result of the COVID-19 pandemic or another infectious desease; a major incident at the mine site that causes all or part of the operations of the mine to cease for some period of time; mining, processing and plant equipment failures and unexpected maintenance problems; disruptions in the supply of fuel, power and/or water at the mine site; adverse changes in reclamation costs; the inability to renew mining concessions upon their expiration; the expropriation of territory subject to a valid concession without sufficient compensation; and adverse weather and natural disasters, such as heavy rains or snow, flooding and other natural events affecting operations, transportation or customers.

Regulatory agencies have the authority under certain circumstances following significant health and safety violations or incidents to order a mine to be temporarily or even permanently closed. If this occurs, we may be required to incur significant legal and capital expenditures to re-open the affected mine. In addition, environmental regulations and enforcement could impose unexpected costs on our mining operations, and future regulations could increase those costs or limit our ability to produce quartz and sell coal. A failure to obtain and renew permits necessary for our mining operations could limit our production and negatively affect our business. It is also possible that we have extracted or may in the future extract quartz from territory beyond the boundary of our mining concession or mining right, which could result in penalties or other regulatory action or liabilities.

We are subject to environmental, health and safety regulations, including laws that impose substantial costs and the risk of material liabilities.

Our operations are subject to extensive foreign, federal, national, state, provincial and local environmental, health and safety laws and regulations governing, among other things, the generation, discharge, emission, storage, handling, transportation, use, treatment and disposal of hazardous substances; land use, reclamation and remediation; waste management and pollution prevention measures; greenhouse gas emissions; and the health and safety of our employees. We are also required to obtain permits from governmental authorities for certain operations, and to comply with related laws and regulations. We may not have been and may not be at all times in full compliance with such permits and related laws and regulations. If we violate or fail to comply with these permits and related laws and regulations, we could be subject to penalties, restrictions on operations or other sanctions, obligations to install or upgrade pollution control equipment and legal claims, including for alleged personal injury or property or environmental damages. Such liability could adversely affect our reputation, business, results of operations and financial condition. In addition, in the context of an investigation, the government may impose obligations to make technology upgrades to our facilities that could result in our incurring material capital expenses. For example, we have received two Notices and Findings of Violation (“NOV/FOV”) from the U.S. federal government, alleging numerous violations of the Clean Air Act relating to the Company’s Beverly, Ohio facility. Should the Company and the federal government be unable to reach a negotiated resolution of the NOV/FOVs, the U.S. government could file a formal lawsuit in U.S. federal court for injunctive relief, potentially requiring the Company to implement emission reduction measures, and for civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April, 2013 to the present. See “Item 8.A.—Financial Information—Consolidated Financial Statements and Other Financial Information—Legal proceedings” for additional information. The Beverly facility also is located in an area currently designated as Non-Attainment for the one hour SO2 National Ambient Air Quality Standards (“NAAQS”). The Company has been working with the Ohio Environmental Protection Agency to develop a plan to ensure that the facility is not causing exceedances of the one hour NAAQS standard for SO2. This plan ultimately will require the approval of the United States Environmental Protection Agency (“EPA”). At this time, the specifics of the plan that the EPA ultimately will approve are not yet known and it could prove technically or economically infeasible for the Beverly facility to remain operational and comply with such plan.

The metals and mining industry is generally subject to risks and hazards, including fire, explosion, toxic gas leaks, releases of other hazardous materials, rockfalls, and incidents involving mobile equipment, vehicles or machinery. These could occur by accident or by breach of operating and maintenance standards, and could result in personal injury, illness or death of employees or contractors, or in environmental damage, delays in production, monetary losses and possible legal liability.

Under certain environmental laws, we could be required to remediate or be held responsible for the costs relating to contamination at our or our predecessors’ past or present facilities and at third party waste disposal sites. We could also be held liable under these environmental laws for sending or arranging for hazardous substances to be sent to third party disposal or treatment facilities if such facilities are found to be contaminated. Under these laws we could be held liable even if we did not know of, or did not cause, such contamination, or even if we never owned or operated the contaminated disposal or treatment facility.

There are a variety of laws and regulations in place or being considered at the international, federal, regional, state and local levels of government that restrict or propose to restrict and impose costs on emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause us to incur material costs if we are required to reduce or offset greenhouse gas emissions, or to purchase emission credits or allowances, and may result in a material increase in our energy costs due to additional regulation of power generators. Environmental laws are complex, change

frequently and are likely to become more stringent in the future. Because environmental laws and regulations are becoming more stringent and new environmental laws and regulations are continuously being enacted or proposed, such as those relating to greenhouse gas emissions and climate change, the level of expenditures required for environmental matters could increase in the future. Future legislative action and regulatory initiatives could result in changes to operating permits, additional remedial actions, material changes in operations, increased capital expenditures and operating costs, increased costs of the goods we sell, and decreased demand for our products that cannot be assessed with certainty at this time.

Therefore, our costs of complying with current and future environmental laws, and our liabilities arising from past or future releases of, or exposure to, hazardous substances may adversely affect our business, results of operations and financial condition.

Compliance with existing and proposed climate change laws and regulations could adversely affect our performance.

Under current European Union legislation, all industrial sites are subject to cap-and-trade programs, by which every facility with carbon emissions is required to purchase in the market emission rights for volumes of emission that exceed a certain allocated level. So far, and until 2020, the allocated level of emissions is sufficient for our business such that any of emissions rights purchases will have a limited impact on our business. After 2020, however, new regulations reducing the allocation of free allowances may require us to make significant purchases of emissions rights in the market. Also, certain Canadian provinces have implemented cap-and-trade programs. As a result, our facilities in Canada and in the European Union may be required to purchase emission credits in the future. The requirement to purchase emissions rights in the market could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity.

In other jurisdictions, including the United States and South Africa, pending proposals for climate change legislation would require businesses that emit greenhouse gases to buy emission credits from the government, other businesses or through an auction process. While no such requirements applicable to our business have yet been enacted, if any such program were enacted in the future, we may be required to purchase emission credits for greenhouse gas emissions resulting from our operations. Although it is not possible at this time to predict what, if any, climate change laws or regulations will be enacted, any new restrictions on greenhouse gas emissions, including a cap-and-trade program or an emissions tax, could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations and liquidity.

We make a significant portion of our sales to a limited number of customers, and the loss of a portion of the sales to these customers could have a material adverse effect on our revenues and profits.

In the year ended December 31, 2019, our ten largest customers accounted for approximately 39.9% of Ferroglobe's consolidated revenue. We expect that we will continue to derive a significant portion of our business from sales to these customers.

Some contracts with our customers do not entail commitments from the customer to purchase specified or minimum volumes of products over time. Accordingly, we face a risk of unexpected reduced demand for our products from such customers as a result of, for instance, downturns in the industries in which they operate or any other factor affecting their business, which could have a material adverse effect on our revenues and profits.

If we were to experience a significant reduction in the amount of sales we make to some or all of such customers and could not replace these sales with sales to other customers, this could have a material adverse effect on our revenues and profits.

Our business benefits from antidumping and countervailing duty orders and laws that protect our products by imposing special duties on unfairly traded imports from certain countries. If these duties or laws change, certain foreign competitors might be able to compete more effectively.

Antidumping and countervailing duty orders are designed to provide relief from imports sold at unfairly low or subsidized prices by imposing special duties on such imports. Such orders normally benefit domestic suppliers and foreign suppliers not covered by the orders. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, antidumping and countervailing duties are in place covering silicon metal imports from China.

The current antidumping and countervailing duty orders may not remain in effect and continue to be enforced from year to year, the products and countries now covered by orders may no longer be covered, and duties may not continue to be assessed at the same rates. In the United States, rates of duty can change as a result of "administrative reviews" of antidumping and countervailing duty orders. These orders can also be revoked as a result of periodic "sunset reviews," which determine whether the orders will continue to apply to imports from particular countries. Antidumping and countervailing duties in the European Union and Canada are also subject to periodic reviews. In the European Union and in Canada, such reviews can include interim reviews, expiry reviews and other types of proceedings that may result in changes in rates of duty or termination of the duties.

Similarly, export duties imposed by foreign governments that are currently in place may change. For example, duties on Chinese exports of types of ferroalloys produced by Ferroglobe could be reduced.

Changes in any of these factors could adversely affect our business and profitability. Finally, at times, in filing trade actions, we arguably act against the interests of our customers. Certain of our customers may not continue to do business with us as a result.

In June 2019, a sunset review of the U.S. antidumping duty order on silicon metal from Russia was initiated. The U.S. International Trade Commission is currently conducting the final phase of its review of the order, which may result in the removal of the duties on such imports. If the duties are removed, our sales of silicon metal in the United States and U.S. market prices may be adversely affected.

In addition, Euroalliages filed a request with the European Commission on behalf of Ferroglobe subsidiaries FerroAtlàntica, S.A. and FerroPem for an expiry review of the antidumping measures on ferrosilicon from China and Russia. Based on this request, the European Commission initiated in April 2019 a review to determine whether to maintain the antidumping measures in place and the rates of duty to be imposed.

Products we manufacture may be subject to unfair import competition that may affect our profitability.

A number of the products we manufacture, including silicon metal and ferrosilicon, are globally-traded commodities that are sold primarily on the basis of price. As a result, our sales volumes and prices may be adversely affected by influxes of imports of these products that are dumped or are subsidized by foreign governments. Our silicon metal and ferrosilicon operations have been injured by such unfair import competition in the past. Applicable antidumping and countervailing duty laws and regulations may provide a remedy for unfairly traded imports in the form of special duties imposed to offset the unfairly low pricing or subsidization. However, the process for obtaining such relief is complex and uncertain. As a result, while we have sought and obtained such relief in the past, in some cases we have not been successful. Thus, there is no assurance that such relief will be obtained, and if it is not, unfair import competition could have a material adverse effect on our business, results of operations and financial condition.

Competitive pressure from Chinese steel, aluminum, polysilicon and silicone producers may adversely affect the business of our customers, reducing demand for our products. Our customers may relocate to China, where they may not continue purchasing from us.

China's aluminum, polysilicon and steel producing capacity exceeds local demand and has made China an increasingly large net exporter of aluminum and steel, and the Chinese silicone manufacturing industry is growing. Chinese aluminum, polysilicon, steel and silicone producers — who are unlikely to purchase silicon metal, manganese- and silicon-based alloys and other specialty metals from our subsidiaries outside of China due to the ample availability of domestic Chinese production — may gain global market share at the expense of our customers. An increase in Chinese aluminum, steel, polysilicon and silicone industry market share could adversely affect the production volumes, revenue and profits of our customers, resulting in reduced purchases of our products.

Moreover, our customers might seek to relocate or refocus their operations to China or other countries with lower labor costs and higher growth rates. Any that do so might thereafter choose to purchase from other suppliers of silicon metal, manganese- and silicon-based alloys and other specialty metals which in turn could have a material adverse effect on our business, results of operations and financial condition.

We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business.

A majority of our employees are members of labor unions. In the future, we may experience protracted negotiations with labor unions, strikes, work stoppages or other industrial actions from time to time. Strikes called by employees or unions could materially disrupt our operations, including productions schedules and delivery times. We have experienced strikes by our employees at several of our facilities from time to time. Any such work stoppage could have a material adverse effect on our business, results of operations and financial condition.

New labor contracts will have to be negotiated to replace expiring contracts from time to time. It is possible that future collective bargaining agreements will contain terms less favorable than the current agreements. Any failure to negotiate renewals of labor contracts on terms acceptable to us, with or without work stoppages, could have a materially adverse effect on our business, results of operations and financial condition.

Many of our key customers or suppliers are similarly subject to union disputes and work stoppages, which may reduce their demand for our products or interrupt the supply of critical raw materials and impede their ability to fulfil their commitments under existing contracts. In 2016, we temporarily reduced production at one of our plants as a result of a strike affecting one of our customers which resulted in delays in contract shipment dates and led to a decrease in prices for certain of our products.

We are dependent on key personnel.

Our success depends in part upon the retention of key employees. Competition for qualified personnel can be intense. Current and prospective employees may experience uncertainty about our business or industry, which may impair our ability to attract, retain and motivate key management, sales, technical and other personnel.

If key employees depart our overall business may be harmed. We also may have to incur significant costs in identifying, hiring and retaining replacements for departing employees, may lose significant expertise and talent relating to our business and our ability to further realize the anticipated benefits of the Business Combination may be adversely affected. In addition, the departure of key employees could cause disruption or distractions for management and other personnel. Furthermore, we cannot be certain that we will be able to attract and retain replacements of a similar caliber as departing key employees.

The long term success of our operations depends to a significant degree on the continued employment of our core senior management team. In particular, we are dependent on the skills, knowledge and experience of Javier López Madrid, our Executive Chairman, Marco Levi, our Chief Executive Officer, and Beatriz García-Cos, our Chief Financial Officer. If

these employees are unable to continue in their respective roles, or if we are unable to attract and retain other skilled employees, our business, results of operations and financial condition could be adversely affected. We currently have employment agreements with Mr. López Madrid, Dr. Levi and Ms. García-Cos. These agreements contain certain non-compete provisions, which may not be fully enforceable by us. Additionally, we are substantially dependent upon key personnel among our legal, financial and information technology staff, who enable us to meet our regulatory, contractual and financial reporting obligations, including reporting requirements under our credit facilities.

Shortages of skilled labor could adversely affect our operations.

We depend on skilled labor for the operation of our submerged arc furnaces and other facilities. Some of our facilities are located in areas where demand for skilled personnel often exceeds supply. Shortages of skilled furnace technicians and other skilled workers, including as a result of deaths, work stoppages or quarantines resulting from the COVID-19 pandemic, could restrict our ability to maintain or increase production rates, lead to production inefficiencies and increase our labor costs.

In certain circumstances, the members of our Board may have interests that may conflict with yours as a holder of ordinary shares.

Our directors have no duty to us with respect to any information such directors may obtain (i) otherwise than as our directors and (ii) in respect of which directors owe a duty of confidentiality to another person, provided that where a director's relationship with such other person gives rise to a conflict, such conflict has been authorized by our Board in accordance with our articles of association ("Articles"). Our Articles provide that a director shall not be in breach of the general duties directors owe to us pursuant to the UK Companies Act 2006 because such director:

- fails to disclose any such information to our Board, directors or officers; or
- fails to use or apply any such information in performing such director's duties as a director.

In such circumstances, certain interests of the members of our Board may not be aligned with your interests as a holder of ordinary shares and the members of our Board may engage in certain business and other transactions without any accountability or obligation to us.

We may not realize the cost savings, synergies and other benefits that we expect to achieve from further operational improvements.

We are constantly looking for opportunities to improve our operations through changes in technology, processes, information systems, and management best practices. These continuous improvement initiatives are complex and require skilled management and labor to implement them.

In our efforts to integrate and improve our operations fully and successfully, we may encounter material unanticipated problems, expenses, liabilities, competitive responses, loss of client relationships, and a resulting diversion of management's attention. The challenges include, among others:

- managing a significantly larger company;
- coordinating geographically separate organizations;
- potential diversion of management focus and resources from ordinary operational matters and future strategic opportunities;
- retaining existing customers and attracting new customers;
- maintaining employee morale and retaining key management and other employees;

- integrating two unique business cultures that are not necessarily compatible;
- the possibility of faulty assumptions underlying expectations of the Business Combination;
- issues in achieving anticipated operating efficiencies, business opportunities and growth prospects;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- issues in integrating information technology, communications and other systems;
- changes in applicable laws and regulations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by the governmental authorities; and
- managing tax costs or inefficiencies associated with integrating our operations.

Many of these factors are outside of our control and any one of them could result in increased costs, decreased revenues and diversion of management's time and energy, which could materially impact our business, results of operations and financial condition.

Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or draw under our credit facility to fund any actual loss incurred.

We purchased a Representations and Warranties insurance policy (the "R&W Policy") in connection with the Business Combination to insure us against breaches of certain representations and warranties made by Grupo Villar Mir S.A.U. ("Grupo VM") and FerroAtlántica in the Business Combination Agreement (as defined below). The R&W Policy has a face amount equal to $50,000,000 and is subject to an initial retention amount of $10,000,000, as well as other limitations and conditions. As a result of Grupo VM's ownership of the Company following completion of the Business Combination, the R&W Policy only provides insurance to the extent of approximately 43% of insurable losses incurred by us. Accordingly, the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica. In addition, we will not be able to recover losses attributable to breaches of certain representations and warranties that are excluded from the R&W Policy or for which coverage under the R&W Policy expired in December 2018 or for losses that would result in payments under the R&W Policy in excess of the $50,000,000 face amount of the R&W Policy.

On November 18, 2016, Ferroglobe completed the distribution to the holders of our ordinary shares at the time of beneficial interest units (the "Trust Units") in a newly formed Delaware Statutory Trust, Ferroglobe Representation and Warranty Insurance Trust ("Ferroglobe R&W Trust"), to which Ferroglobe had assigned its interest in the R&W Policy. Having assigned the R&W Policy, if we suffer a loss attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica, we will be required to use our existing cash on hand or draws under our credit facility to fund the actual loss incurred to the extent that it is not met by Grupo VM, in the case of a breach by Grupo VM. Losses attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica could have a material adverse effect on our business, financial condition and results of operations.

Any failure to integrate recently acquired businesses successfully or to complete future acquisitions successfully could be disruptive of our business and limit our future growth.

From time to time, we expect to pursue acquisitions in support of our strategic goals. In connection with any such acquisition, we could face significant challenges in managing and integrating our expanded or combined operations, including acquired assets, operations and personnel. There can be no assurance that acquisition opportunities will be

available on acceptable terms or at all or that we will be able to obtain necessary financing or regulatory approvals to complete potential acquisitions. Our ability to succeed in implementing our strategy will depend to some degree upon the ability of our management to identify, complete and successfully integrate commercially viable acquisitions. Acquisition transactions may disrupt our ongoing business and distract management from other responsibilities.

For example, in February 2018, we completed the acquisition from a wholly-owned subsidiary of Glencore International AG ("Glencore") of a 100% interest in Glencore's manganese alloys plants in Mo i Rana (Norway) and Dunkirk (France). Although the purchase was made under what we believe to be favorable financial terms and we expect it to result in a 10-20% increase in Company-wide revenue, the acquisition increases the management complexity of our operations, adds a new currency (Norwegian Krone) to our foreign exchange exposure, and will require additional attention from management in order for us to successfully integrate and capture synergies. There can be no assurance that the acquisition will result in the realization of the benefits anticipated. Specifically, during 2018 the manganese alloys and the manganese ore markets evolved in such way that margins in these specific operations have significantly eroded and results and profitability from these operations were below historical averages.

Grupo VM, our principal shareholder, has significant voting power with respect to corporate matters considered by our shareholders.

Our principal shareholder, Grupo VM, owns shares representing approximately 54% of the aggregate voting power of our capital stock. By virtue of Grupo VM's voting power, as well as Grupo VM's representation on the Board, Grupo VM will have significant influence over the outcome of any corporate transaction or other matters submitted to our shareholders for approval. Grupo VM will be able to block any such matter, including ordinary resolutions, which, under English law, require approval by a majority of outstanding shares cast in the vote. Grupo VM will also be able to block special resolutions, which, under English law, require approval by the holders of at least 75% of the outstanding shares entitled to vote and voting on the resolution, such as an amendment of the Articles or the exclusion of preemptive rights. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our legal and capital structure and our day-to-day operations, as well as the ability to elect and change our management and to approve other changes to our operations.

Grupo VM, has pledged most of its shares in our company to secure a syndicate loan led by Crédit Suisse; if Grupo VM defaults on the underlying loan, we could experience a change in control.

Grupo VM guaranteed its obligations pursuant to a credit agreement (the "GVM Credit Agreement"), which allows them to borrow up to €115 million ("GVM Loan"). In June 2018, Grupo VM entered into a security and pledge agreement (the "GVM Pledge Agreement"), with a syndicate of banks and funds led by Crédit Suisse (the "Lenders"), pursuant to which Grupo VM agreed to pledge most of its shares to the Lenders to secure the outstanding GVM Loan.

In the event Grupo VM defaults under the GVM Credit Agreement, the Lenders may foreclose on the shares subject to the pledge. In such case, we could experience a change of control. Upon a change in control, we may be required, among other things, immediately to repay outstanding principal as well as, accrued interest and any other amounts owed by us under one or more of our bank facilities or our other debt. If upon a change of control, we do not have sufficient funds available to make such payments out of our available cash, third party financing would be needed, yet may be impermissible under our other debt agreements. In addition, certain other contracts we are party to from time to time may contain change of control provisions. Upon a change in control, such provisions may be triggered, which could cause our contracts to be terminated or give rise to other obligations, each of which could have a material adverse effect on our business, results of operations and financial condition.

We may engage in related party transactions with affiliates of Grupo VM, our principal shareholder.

Conflicts of interest may arise between our principal shareholder and your interests as a shareholder. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our day-to-day operations, including the pursuit of related party transactions. We have entered, and may in the future enter, into agreements with companies who are affiliates of Grupo VM, our principal shareholder. Such agreements have been

approved by, or would be subject to the approval of, the Board or the Audit Committee, as its delegate. The terms of such agreements may present material risks to our business and results of operations. For example, we have entered into a number of agreements with affiliates of Grupo VM with respect to, among other things, the provision of information technology and data processing services and the management of certain aspects of our hydroelectric plants. See "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions."

We are exposed to significant risks in relation to compliance with anti-bribery and corruption laws, anti-money laundering laws and regulations, and economic sanctions programs.

Doing business on a worldwide basis requires us to comply with the laws and regulations of various jurisdictions. In particular, our international operations are subject to anti-corruption laws, most notably the U.S. Foreign Corrupt Practices Act of 1977 ("FCPA") and the UK Bribery Act of 2010 (the "Bribery Act"), international trade sanctions programs, most notably those administered by the U.N., U.S. and European Union, anti-money laundering laws and regulations, and laws against human trafficking and slavery, most notably the UK Modern Slavery Act 2015 ("Modern Slavery Act").

The FCPA and Bribery Act prohibit offering or providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. We may deal from time to time with both governments and state-owned business enterprises, the employees of which are considered foreign officials for purposes of these laws. International trade sanctions programs restrict our business dealings with or relating to certain sanctioned countries and certain sanctioned entities and persons no matter where located.

As a result of doing business internationally, we are exposed to a risk of violating applicable anti-bribery and corruption ("ABC") laws, international trade sanctions, and anti-money laundering ("AML") laws and regulations. Some of our operations are located in developing countries that lack well-functioning legal systems and have high levels of corruption. Our continued expansion and worldwide operations, including in developing countries, our development of joint venture relationships worldwide, and the engagement of local agents in the countries in which we operate tend to increase the risk of violations of such laws and regulations. Violations of ABC laws, AML laws and regulations, and trade sanctions are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts (and termination of existing contracts) and revocations or restrictions of licenses, as well as criminal penalties including possible imprisonment. Moreover, any major violations could have a significant impact on our reputation and consequently on our ability to win future business.

For its part, the Modern Slavery Act requires any commercial organization that carries on a business or part of a business in the United Kingdom which (i) supplies goods or services and (ii) has an annual global turnover of £36 million to prepare a slavery and human trafficking statement for each financial year ending on or after March 31, 2016. In this statement, the commercial organization must set out the steps it has taken to ensure there is no modern slavery in its own business and its supply chain, or provide an appropriate negative statement. The UK Secretary of State may enforce this duty by means of civil proceedings. The nature of our operations and the regions in which we operate may make it difficult or impossible for us to detect all incidents of modern slavery in certain of our supply chains. Any failure in this regard would not violate the Modern Slavery Act *per se*, but could have a significant impact on our reputation and consequently on our ability to win future business.

We seek to build and continuously improve our systems of internal controls and to remedy any weaknesses identified. As part of our efforts to comply with all applicable law and regulation, we have introduced a global ethics and compliance program. We believe we are devoting appropriate time and resources to its implementation, related training, and to monitoring compliance. Despite these efforts, we cannot be certain that our policies and procedures will be followed at all times or that we will prevent or timely detect violations of applicable laws, regulations or policies by our personnel, partners or suppliers. Any actual or alleged failure to comply with applicable laws or regulations could lead to material liabilities not covered by insurance or other significant losses, which in turn could have a material adverse effect on our business, results of operations, and financial condition.

We operate in a highly competitive industry.

The silicon metal market and the silicon-based and manganese-based alloys markets are global, capital intensive and highly competitive. Our competitors may have greater financial resources, as well as other strategic advantages, to maintain, improve and possibly expand their facilities, and, as a result, they may be better positioned than we are to adapt to changes in the industry or the global economy. Advantages that our competitors have over us from time to time, new entrants that increase competition in our industry, and increases in the use of substitutes for certain of our products could have a material adverse effect on our business, results of operations and financial condition.

Though we are not currently operating at full capacity, we have historically operated at near the maximum capacity of our operating facilities. Because the cost of increasing capacity may be prohibitively expensive, we may have difficulty increasing our production and profits.

Our facilities are able to manufacture, collectively, approximately 242,000 tons of silicon metal (including Dow's portion of the capacity of our Alloy, West Virginia and Bécancour, Québec plants), 462,000 tons of silicon-based alloys and 655,000 tons of manganese-based alloys on an annual basis. Our ability to increase production and revenues will depend on expanding existing facilities, acquiring facilities or building new ones. Increasing capacity is difficult because:

- adding 30,000 tons of new production capacity to an existing silicon manufacturing plant would cost approximately $120,000 thousand and take at least 12 to 18 months to complete once permits are obtained;

- a greenfield development project would take at least three to five years to complete and would require significant capital expenditure and, regulatory compliance costs; and

- obtaining sufficient and dependable electric power at competitive rates in areas near the required natural resources is extremely difficult.

We may not have sufficient funds to expand existing facilities, acquire new facilities, or open new ones and may be required to incur significant debt to do so, which could have a material adverse effect on our business and financial condition.

We are subject to restrictive covenants under our credit facilities and other financing agreements. These covenants could significantly affect the way in which we conduct our business. Our failure to comply with these covenants could lead to an acceleration of our debt.

We have entered into credit facilities that contain covenants that in certain circumstances, among other things, restrict our ability to sell assets; incur, repay or refinance indebtedness; create liens; make investments; engage in mergers or acquisitions; pay dividends, including dividends by subsidiaries to Ferroglobe PLC; repurchase stock; or make capital expenditures. These credit facilities also require compliance with specified financial covenants, including minimum cash liquidity level. Further, North American inventories and a significant customer portfolio are pledged to secure our Asset-Based Loan revolver.

We have in the past breached certain financial covenants under our credit facilities, including financial maintenance covenants for the three months ended September 30 and December 31, 2016 under our then existing revolving credit facility. Our ability to comply with applicable debt covenants may be affected by events beyond our control, potentially leading to future breaches. The breach of any of the covenants contained in our credit facilities, unless waived, would constitute an event of default, in turn permitting the lenders to terminate their commitments to extend credit under, and accelerate the maturity of, the credit facilities in question. If in such circumstances we were unable to repay lenders and holders, or obtain waivers from them on acceptable terms or at all, the lenders and holders could foreclose upon the collateral securing the credit facilities and exercise other rights. Such events, should they occur, could have a material adverse effect on our business, results of operations and financial condition. See "—Risks Related to Our Capital Structure—We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business" below.

Our insurance costs may increase materially, and insurance coverages may not be adequate to protect us against all risks and potential losses to which we may be subject.

We maintain various forms of insurance covering a number of specified and consequential risks and losses arising from insured events under the policies, including securities claims, certain business interruptions and claims for damage and loss caused by certain natural disasters, such as earthquakes, floods and windstorms. Our existing property and liability insurance coverage contains various exclusions and limitations on coverage. In some previous insurance policy renewals, we have acceded to larger premiums, self-insured retentions and deductibles. For example, as a result of the explosion at our facility in Chateau Feuillet, France, the applicable property insurance premium increased. We may also be subject to additional exclusions and limitations on coverage in future insurance policy renewals. There can be no assurance that the insurance policies we have in place are or will be sufficient to cover all potential losses we may incur. In addition, due to changes in our circumstances and in the global insurance market, insurance coverage may not continue to be available to us on terms we consider commercially reasonable or be sufficient to cover multiple large claims.

We have operations and assets in the United States, Spain, France, Canada, China, South Africa, Norway, Venezuela, Argentina, Mauritania and may have operations and assets in other countries in the future. Our international operations and assets may be subject to various economic, social and governmental risks.

Our international operations and sales may expose us to risks that are more significant in developing markets than in developed markets and which could negatively impact future revenue and profitability. Operations in developing countries may not operate or develop in the same way or at the same rate as might be expected in a country with an economy, government and legal system similar to western countries. The additional risks that we may be exposed to in such cases include, but are not limited to:

- tariffs and trade barriers;
- sanctions and other restrictions in our ability to conduct business with certain countries, companies or individuals;
- recessionary trends, inflation or instability of financial markets;
- regulations related to customs and import/export matters;
- tax issues, such as tax law changes, changes in tax treaties and variations in tax laws;
- changes in regulations that affect our business, such as new or more stringent environmental requirements or sudden and unexpected raises in power rates;
- limited access to qualified staff;
- inadequate infrastructure;
- cultural and language differences;
- inadequate banking systems;
- restrictions on the repatriation of profits or payment of dividends;
- crime, strikes, riots, civil disturbances, terrorist attacks or wars;
- nationalization or expropriation of property;
- less access to urgent medical care for employees and key personnel in the case of severe illness, including as a result of the COVID-19 pandemic;
- law enforcement authorities and courts that are weak or inexperienced in commercial matters; and

- deterioration of political relations among countries.

In addition to the foregoing, exchange controls and restrictions on transfers abroad and capital inflow restrictions have limited, and can be expected to continue to limit, the availability of international credit.

The critical social, political and economic conditions in Venezuela have adversely affected, and may continue to adversely affect, our results of operations.

Among other policies in recent years, the Venezuelan government has continuously devalued the Bolívar. The resulting inflation has devastated the country, which is experiencing all manner of shortages of basic materials and other goods and difficulties in importing raw materials. In 2016, we idled our Venezuelan operations and sought to determine the recoverable value of the long lived assets there. We concluded that the costs to dispose of the facility exceeded the fair value of the assets, primarily due to political and financial instability in Venezuela. Accordingly, we wrote down the full value of our Venezuelan facilities. Our Venezuelan subsidiary has been able to meet its obligations (tax, labor, power costs and others) in the past through the sales of existing stock to customers. However, our inability to generate cash in that market may cause us to default on some of our obligations there in the future, which may result in administrative intervention or other consequences. In addition, in the recent past the Venezuelan government has threatened to nationalize certain businesses and industries, which could result in a loss of our Venezuelan facilities for no consideration. If the social, political and economic conditions in Venezuela continue as they are, or worsen, our business, results of operations and financial condition could be adversely affected.

We are exposed to foreign currency exchange risk and our business and results of operations may be negatively affected by the fluctuation of different currencies.

We transact business in numerous countries around the world and a significant portion of our business entails cross border purchasing and sales. Our sales made in a particular currency do not exactly match the amount of our purchases in such currency. We prepare our consolidated financial statements in U.S. Dollars, while the financial statements of each of our subsidiaries are prepared in the entities functional currency. Accordingly, our revenues and earnings are continuously affected by fluctuations in foreign currency exchange rates. For example, our sales made in U.S. Dollars exceed the amount of our purchases made in U.S. Dollars, such that the appreciation of certain currencies (like the Euro or the South African Rand) against the U.S. Dollar would tend to have an adverse effect on our costs. Such adverse movements in relevant exchange rates could have a material adverse effect on our business, results of operations and financial condition.

We depend on a limited number of suppliers for certain key raw materials. The loss of one of these suppliers or the failure of one of any of them to meet contractual obligations to us could have a material adverse effect on our business.

Colombia and the United States are among the preferred sources for the coal consumed in the production of silicon metal and silicon-based alloys, and the vast majority of producers source coal from these two countries. In the year ended December 31, 2019, approximately 74% of our coal was purchased from third parties. Of our third party purchases, approximately 70% came from Colombia. Additionally, nearly all of the manganese ore we purchase comes from suppliers located in South Africa and Gabon. We do not control these third party suppliers and must rely on them to perform in accordance with the terms of their contracts. If these suppliers fail to provide us with the required raw materials in a timely manner, or at all, or if the quantity or quality of the materials they provide is lower than that contractually agreed, we may not be able to procure adequate supplies of raw materials from alternative sources on comparable terms, or at all, which could have a material adverse effect on our business, results of operations and financial condition. In addition, since many suppliers of these raw materials are located in the same region, if a natural disaster or event affected one of these regions it is likely alternative sources would also be similarly affected.

Planned investments in the expansion and improvement of existing facilities and in the construction of new facilities may not be successful.

We may engage in significant capital improvements to our existing facilities to upgrade and add capacity to those facilities. We also may engage in the development and construction of new facilities. Should any such efforts not be completed in a

timely manner and within budget, or be unsuccessful otherwise, we may incur additional costs or impairments which could have a material adverse effect on our business, results of operations and financial condition.

Any delay or failure to procure, renew or maintain necessary governmental permits, including environmental permits and concessions to operate our hydropower plants would adversely affect our results of operations.

The operation of our hydropower plants is highly regulated, requires various governmental permits, including environmental permits and concessions, and may be subject to the imposition of conditions by government authorities. We cannot predict whether the conditions prescribed in such permits and concessions will be achievable. The denial of a permit essential to a hydropower plant or the imposition of impractical conditions would impair our ability to operate the plant. If we fail to satisfy the conditions or comply with the restrictions imposed by governmental permits or concessions, or restrictions imposed by other applicable statutory or regulatory requirements, we may face enforcement action and be subject to fines, penalties or additional costs or revocation of such permits or concessions. Any failure to procure, renew or abide by necessary permits and concessions would adversely affect the operation of our hydropower plants.

Equipment failures may lead to production curtailments or shutdowns and repairing any failure could require us to incur capital expenditures and other costs.

Many of our business activities are characterized by substantial investments in complex production facilities and manufacturing equipment. Because of the complex nature of our production facilities, any interruption in manufacturing resulting from fire, explosion, industrial accidents, natural disaster, equipment failures or otherwise could cause significant losses in operational capacity and could materially and adversely affect our business, results of operations and financial condition.

Our hydropower generation assets and other equipment may not continue to perform as they have in the past or as they are expected. A major equipment failure due to wear and tear, latent defect, design error or operator error, early obsolescence, natural disaster or other force majeure event could cause significant losses in operational capacity. Repairs following such failures could require us to incur capital expenditures and other costs. Such major failures also could result in damage to the environment or damages and harm to third parties or the public, which could expose us to significant liability. Such costs and liabilities could adversely affect our business, results of operations and financial condition.

We depend on proprietary manufacturing processes and software. These processes may not yield the cost savings that we anticipate and our proprietary technology may be challenged.

We rely on proprietary technologies and technical capabilities in order to compete effectively and produce high quality silicon metal and silicon-based alloys, including:

- computerized technology that monitors and controls production furnaces;
- electrode technology and operational know-how;
- metallurgical processes for the production of solar-grade silicon metal;
- production software that monitors the introduction of additives to alloys, allowing the precise formulation of the chemical composition of products; and
- flowcaster equipment, which maintains certain characteristics of silicon-based alloys as they are cast.

We are subject to a risk that:

- we may not have sufficient funds to develop new technology and to implement effectively our technologies as competitors improve their processes;

- if implemented, our technologies may not work as planned; and
- our proprietary technologies may be challenged and we may not be able to protect our rights to these technologies.

Patent or other intellectual property infringement claims may be asserted against us by a competitor or others. Our intellectual property rights may not be enforceable and may not enable us to prevent others from developing and marketing competitive products or methods. An infringement action against us may require the diversion of substantial funds from our operations and may require management to expend efforts that might otherwise be devoted to operations. A successful challenge to the validity of any of our patents may subject us to a significant award of damages, and may oblige us to secure licenses of others' intellectual property, which could have a material adverse effect on our business, results of operations and financial condition.

We also rely on trade secrets, know-how and continuing technological advancement to maintain our competitive position. We may not be able to effectively protect our rights to unpatented trade secrets and know-how.

Ferroglobe PLC is a holding company whose principal source of revenue is the income received from its subsidiaries.

Ferroglobe PLC is dependent on the income generated by its subsidiaries in order to earn distributable profits and pay dividends to shareholders. The amounts of distributions and dividends, if any, to be paid to us by any operating subsidiary will depend on many factors, including such subsidiary's results of operations and financial condition, limits on dividends under applicable law, its constitutional documents, documents governing any indebtedness, applicability of tax treaties and other factors which may be outside our control. If our operating subsidiaries do not generate sufficient cash flow, we may be unable to earn distributable profits and pay dividends on our shares.

Our business operations may be impacted by various types of claims, lawsuits, and other contingent obligations.

We are involved in various legal and regulatory proceedings including those that arise in the ordinary course of our business. We estimate such potential claims and contingent liabilities and, where appropriate, record provisions to address these contingent liabilities. The ultimate outcome of the legal matters currently pending against our Company is uncertain, and although such claims, lawsuits and other legal matters are not expected individually to have a material adverse effect, such matters in the aggregate could have a material adverse effect on our business, results of operations and financial condition. Furthermore, we could, in the future, be subject to judgments or enter into settlements of lawsuits and claims that could have a material adverse effect on our results of operations in any particular period. While we maintain insurance coverage in respect of certain risks and liabilities, we may not be able to obtain such insurance on acceptable terms in the future, if at all, and any such insurance may not provide adequate coverage against such claims. See "Item 8.A.—Financial Information—Consolidated Statements and Other Financial Information—Legal proceedings" for additional information regarding legal proceedings to which we are party.

We are exposed to changes in economic and political conditions where we operate and globally that are beyond our control.

Our industry is affected by changing economic conditions, including changes in national, regional and local unemployment levels, changes in national, regional and local economic development plans and budgets, shifts in business investment and consumer spending patterns, credit availability, and business and consumer confidence. Disruptions in national economies and volatility in the financial markets may and often will reduce consumer confidence, negatively affecting business investment and consumer spending. The outlook for the global economy in the near to medium term is negative due to several factors, including the COVID-19 pandemic, geopolitical risks and concerns about global growth and stability. Concerns also remain regarding the sustainability of the European Monetary Union and its common currency, the Euro, in their current form, particularly following the referendum vote in favor of the United Kingdom's exit from the European Union in June 2016, the UK Prime Minister's formal delivery of a notice of withdrawal from the European Union in March 2017 ("Brexit"), and the UK House of Commons' repeated rejection of the proposed Agreement on the Withdrawal of the United Kingdom from the European Union in January and March 2019. On January, 29, 2020, the European Parliament ratified the Brexit agreement, which became effective on January 31, 2020.

In addition, we may face risks associated with the current uncertainty and the consequences that may result from such exit, in particular with respect to tax, customs and duty laws and regulations, volatility in exchange rates and interest rates, the ability of certain of our personnel to work at our headquarters in London, and our ability to sell and transport products from manufacturing facilities on the continent to our customers in the United Kingdom.

We are not able to predict the timing or duration of periods economic growth in the countries where we operate or sell products, nor are we able to predict the timing or duration of any economic downturn or recession that may occur in the future.

Cybersecurity breaches and threats could disrupt our business operations and result in the loss of critical and confidential information.

We rely on the effective functioning and availability of our information technology and communication systems and the security of such systems for the secure processing, storage and transmission of confidential information. The sophistication and magnitude of cybersecurity incidents are increasing and include, among other things, unauthorized access, computer viruses, deceptive communications and malware. Information technology security processes may not effectively detect or prevent cybersecurity breaches or threats and the measures we have taken to protect against such incidents may not be sufficient to anticipate or prevent rapidly evolving types of cyber-attacks. Breaches of the security of our information technology and communication systems could result in destruction or corruption of data, the misappropriation, corruption or loss of critical or confidential information, business disruption, reputational damage, litigation and remediation costs.

Possible new tariffs and duties that might be imposed by certain governments, including the United States, the European Union and others, could have a material adverse effect on our results of operations.

The United States has imposed import tariffs of 25 percent on steel and 10 percent on aluminum, with exemptions for steel from Argentina, Australia, Brazil, Canada, Mexico, and South Korea, and aluminum from Argentina, Australia, Canada, and Mexico. These tariffs have been expanded to apply to steel and aluminum derivatives from most countries. China, the EU, and other countries have imposed retaliatory duties on products from the United States.

The United States also has imposed 25 percent tariffs on a wide array of Chinese products, including products produced and consumed by Ferroglobe, and 7.5 percent on a smaller range of products. The United States and China have reached an initial Phase 1 agreement to resolve the trade dispute between the two countries. The agreement has resulted in the suspension of Chinese retaliatory duties on certain U.S. products and the commitment by China to purchase products from the United States. It is unclear whether and, if so, when the two countries will reach a Phase 2 agreement that would resolve the dispute more broadly.

There are indications that China is trying to adhere to the Phase 1 agreement. However, if China were found to be in noncompliance, the United States could reimpose tariffs on Chinese products that are currently suspended or increase the existing tariffs.

Any “trade war” resulting from the imposition of tariffs could have a significant adverse effect on world trade and the world economy. To date, tariffs have not affected our business to a material degree.

Our suppliers, customers, agents or business partners may be subject to or affected by export controls or trade sanctions imposed by government authorities from time to time, which may restrict our ability to conduct business with them and potentially disrupt our production or our sales.

The United States, European Union, United Nations and other authorities have variously imposed export controls and trade sanctions on certain countries, companies, individuals and products, restricting our ability to trade normally with or in them. At present, compliance with such trade regulation is not affecting our business to a material degree. However, new trade regulations may be imposed at any time that target or otherwise affect our customers, suppliers, agents or business partners or their products. In particular, trade sanctions could be imposed that restrict our ability to do business with one

or more critical suppliers and require special licenses to do so. Such events could potentially disrupt our production or sales and have a material adverse effect on our business, results of operations and financial condition.

We make significant investments in the development of new technologies and new products. The success of such technologies or products is inherently uncertain and the investments made may fail to render the desired increased in profitability.

In order to improve our processes and increase the margins in our products we have constantly invested significant amounts in the development of new technologies and in the development of new value added products. However, these developments are inherently uncertain, since they may fail to render the desired results when implemented at an industrial scale.

Specifically, we have invested in the construction of a factory to produce solar-grade silicon metal through a technology developed by the Company. We believe the technology presents several advantages when compared to current solar-grade silicon production processes since the technology has proven to render the desired technological and cost results at a laboratory scale. However, the implementation of the technology at an industrial scale is challenging especially in light of current market conditions. The current market for solar-grade silicon (or polysilicon) is very volatile and has suffered from declining prices in the past few years. Further investment in this project has been temporarily suspended and the future profitability of this project is uncertain.

Risks Related to Our Capital Structure

Our leverage may make it difficult for us to service our debt and operate our business.

We have significant outstanding indebtedness and debt service requirements. Our leverage could have important consequences, including:

- making it more difficult for us to satisfy our obligations to all creditors and holders;
- requiring us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thus reducing the availability of our cash flow to fund internal growth through working capital and capital expenditures and for other general corporate purposes;
- increasing our vulnerability to a downturn in our business or economic or industry conditions;
- placing us at a competitive disadvantage compared to our competitors that have less indebtedness in relation to cash flow;
- limiting our flexibility in planning for or reacting to changes in our business and our industry;
- restricting us from investing in growing our business, pursuing strategic acquisitions and exploiting certain business opportunities; and
- limiting, among other things, our and our subsidiaries' ability to incur additional indebtedness, including refinancing, or raise equity capital in the future and increasing the costs of such additional financings.

Our ability to service our indebtedness will depend on our future performance and liquidity, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors, including the COVID-19 pandemic. Many of these factors are beyond our control. We may not be able to generate enough cash flow from operations or obtain enough capital to service our indebtedness or fund our planned capital expenditures. If we cannot service our indebtedness and meet our other obligations and commitments, we might be required to refinance our indebtedness, obtain additional financing, delay planned capital expenditures or to dispose of assets to obtain funds for such purpose. We cannot assure

you that any refinancing or asset dispositions could be effected on a timely basis or on satisfactory terms, if at all, or would be permitted by the terms of our outstanding debt instruments.

We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business.

Restrictive covenants under our financing agreements, including the Indenture and the ABL Revolver, may restrict our ability to operate our business. Our failure to comply with these covenants, including as a result of events beyond our control, could result in an event of default that could materially and adversely affect our business, results of operations and financial condition.

In particular, the Indenture and the ABL Revolver contain negative covenants restricting, among other things, our ability to:

- incur indebtedness or issue guarantees;
- create or incur liens;
- make restricted payments;
- merge or consolidate with other companies;
- make dispositions of assets or subsidiaries;
- make certain transactions with affiliate companies;
- make a substantial change to the general nature of our business;
- make certain loans or advances, guaranties and investments to any of the subsidiaries of the Company, outside from normal course of the Business;
- make certain capital expenditures and leases;
- amend organizational documents;
- enter into sale-leaseback transactions; and
- enter into agreements that contain a negative pledge.

All of these limitations are subject to significant exceptions and qualifications.

The restrictions contained in our financing agreements could affect our ability to operate our business and may limit our ability to react to market conditions or take advantage of potential business opportunities as they arise. For example, such restrictions could adversely affect our ability to finance our operations, make strategic acquisitions, investments or alliances, restructure our organization or finance our capital needs. Additionally, our ability to comply with these covenants and restrictions may be affected by events beyond our control. These include prevailing economic, financial and industry conditions. If we breach any of these covenants or restrictions, we could be in default under our financing agreements.

If there were an event of default under any of our debt instruments that is not cured or waived, the holders of the defaulted debt could terminate their commitments thereunder and declare all amounts outstanding with respect to such indebtedness due and payable immediately, which, in turn, could result in cross-defaults under our other outstanding debt instruments. Any such actions could force us into bankruptcy or liquidation.

We may not be able to generate sufficient cash to pay our accounts payable, meet our debt service obligations or meet our obligations under other financing agreements, in which case our creditors could declare all amounts owed to them due and payable, leading to liquidity issues.

Our ability to make interest payments and to meet our other debt service obligations, or to refinance our debt, depends on our future operating and financial performance, which, in turn, depends on our ability to successfully implement our business strategies and plans as well as general economic, financial, competitive, regulatory and other factors beyond our control, including the COVID-19 pandemic. If we cannot generate sufficient cash to meet our debt service requirements, we may, among other things, need to refinance all or a portion of our debt to obtain additional financing, delay planned capital expenditures or investments or sell material assets.

If we are not able to refinance any of our debt, obtain additional financing or sell assets on commercially reasonable terms or at all, we may not be able to satisfy our debt obligations. If we are also unable to satisfy our obligations on other financing arrangements, we could be in default under our existing financing agreements or other relevant financing agreements that we may enter into in the future. In the event of certain defaults under existing agreements, the lenders under the respective facilities or financing instruments could take certain actions, including terminating their commitments and declaring all principal amounts outstanding under our credit facilities and other indebtedness due and payable, together with accrued and unpaid interest. Such a default, or a failure to make interest payments, could cause borrowings under other debt instruments that contain cross-acceleration or cross-default provisions to become due and payable on an accelerated basis. If the debt under any of the material financing arrangements that we have entered into or will subsequently enter into were to be accelerated, our assets may be insufficient to repay the outstanding debt in full. Any such actions could force us into bankruptcy or liquidation, and we might not be able to repay our obligations under our financing agreements in such an event.

We may not be able to repurchase the Notes upon a Change of Control.

The senior Notes require the Issuers to offer to repurchase all or any part of each holder’s notes upon the occurrence of a change of control, as defined in the Indenture, at a purchase price equal to 101% of the principal amount, plus accrued and unpaid interest thereon, to the date of purchase. If such an event were to occur, we may not have sufficient financial resources available to satisfy all of those obligations.

Risks Related to Our Ordinary Shares

Our share price may be volatile, and purchasers of our ordinary shares could incur substantial losses.

Our share price has been volatile in the recent past and may be so in the future. Moreover, stock markets in general experience periods of extreme volatility that are often unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell our ordinary shares at or above the price at which you purchase them. The market price for our shares may be influenced by many factors, including:

- the success of competitive products or technologies;
- regulatory developments in the United States and other countries;
- developments or disputes concerning patents or other proprietary rights;
- the recruitment or departure of key personnel;
- quarterly or annual variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the industries in which we compete and issuance of new or changed securities analysts’ reports or recommendations;

- the failure of securities analysts to cover our ordinary shares or changes in financial estimates by analysts;
- the inability to meet the financial estimates of analysts who follow our ordinary shares;
- investor perception of our Company and of the industries in which we compete; and
- general economic, political and market conditions.

If securities or industry analysts do not publish or cease publishing research reports about us, if they adversely change their recommendations regarding our ordinary shares, or if our operating results do not meet their expectations, the price of our ordinary shares could decline.

The trading market for our ordinary shares will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. Securities and industry analysts currently publish limited research on us. If there is limited or no securities or industry analyst coverage of us, the market price and trading volume of our ordinary shares would likely be negatively impacted. Moreover, if any of the analysts who may cover us downgrade our ordinary shares or provide relatively more favorable recommendations concerning our competitors, or as we experienced in 2018 and 2019, if our operating results or prospects do not meet their expectations, the market price of our ordinary shares could decline. If any of the analysts who may cover us were to cease coverage or fail regularly to publish reports about our Company, we could lose visibility in the financial markets, which, in turn, could cause our share price or trading volume to decline.

As a foreign private issuer and "controlled company" within the meaning of the rules of NASDAQ, we are subject to different U.S. securities laws and NASDAQ governance standards than domestic U.S. issuers of securities. These may afford relatively less protection to holders of our ordinary shares, who may not receive all corporate and company information and disclosures they are accustomed to receiving or in a manner to wich they are accustomed.

As a foreign private issuer, the rules governing the information that we disclose differ from those governing U.S. corporations pursuant to the U.S. Exchange Act. Although we intend to report periodic financial results and certain material events, we are not required to file quarterly reports on Form 10-Q or provide current reports on Form 8-K disclosing significant events within four days of their occurrence. In addition, we are exempt from the SEC's proxy rules, and proxy statements that we distribute will not be subject to review by the SEC. Our exemption from Section 16 rules requiring the reporting of beneficial ownership and sales of shares by insiders means that you will have less data in this regard than shareholders of U.S. companies that are subject to this part of the U.S. Exchange Act and that our insiders are not subject to short-swing profit rules. As a result, in deciding whether to purchase our shares, you may not have all the data that you are accustomed to having when making investment decisions with respect to domestic U.S. public companies.

As a "controlled company" within the meaning of the corporate governance standards of NASDAQ, we may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our Board consist of independent directors;
- the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board's independent directors in a vote in which only independent directors participate, or (2) a nominations committee composed solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

We may utilize these exemptions for as long as we continue to qualify as a "controlled company." While exempt, we will not be required to have a majority of independent directors, our nominations and compensation committees will not be

required to consist entirely of independent directors and such committees will not be subject to annual performance evaluations.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as our Company, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided that we nevertheless comply with NASDAQ's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to U.K. requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of U.S. companies that are subject to all of the corporate governance requirements of NASDAQ.

We may lose our foreign private issuer status in the future, which could result in significant additional costs and expenses.

We could cease to be a foreign private issuer if a majority of our outstanding voting securities are directly or indirectly held of record by U.S. residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. In that event, the regulatory and compliance costs we would incur as a domestic registrant may be significantly higher than we incur as a foreign private issuer, which could have a material adverse effect on our business, operating results and financial condition.

If Grupo VM's share ownership falls below 50%, we may no longer be considered a "controlled company" within the meaning of the rules of NASDAQ.

In the event Grupo VM sells shares in our Company to such an extent that it thereafter owns less than 50% of the total voting rights in our shares, we would no longer be considered a "controlled company" within the meaning of the corporate governance standards of NASDAQ. Under NASDAQ rules, a company that ceases to be a controlled company must comply with the independent board committee requirements as they relate to the nominating and corporate governance and compensation committees on the following phase-in schedule: (1) one independent committee member at the time it ceases to be a controlled company, (2) a majority of independent committee members within 90 days of the date it ceases to be a controlled company, and (3) all independent committee members within one year of the date it ceases to be a controlled company. Additionally, NASDAQ rules provide a 12 month phase-in period from the date a company ceases to be a controlled company to comply with the majority independent board requirement. If, within the phase-in periods, we are not able to recruit additional directors who would qualify as independent, or otherwise fail to comply with applicable NASDAQ rules, we may be subject to delisting by NASDAQ. Furthermore, a change in our board of directors and committee membership may result in a change in corporate strategy and operation philosophies, which could have a material adverse effect on our business, results of operations and financial condition.

As an English public limited company, certain capital structure decisions require shareholder approval, which may limit our flexibility to manage our capital structure.

English law provides that a board of directors may only allot shares (or rights or convertible into shares) with the prior authorization of shareholders, such authorization being up to the aggregate nominal amount of shares and for a maximum period of five years, each as specified in the articles of association or relevant shareholder resolution. The Articles authorize the allotment of additional shares for a period of five years from October 26, 2017 (being the date of the adoption of the Articles), which authorization will need to be renewed upon expiration (*i.e.*, at least every five years) but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally provides shareholders with preemptive rights when new shares are issued for cash. However, it is possible for the articles of association, or for shareholders acting in a general meeting, to exclude preemptive rights. Such an exclusion of preemptive rights may be for a maximum period of up to five years from the date of adoption of the articles of association, if the exclusion is contained in the articles of association, or from the date of the shareholder

resolution, if the exclusion is by shareholder resolution. In either case, this exclusion would need to be renewed by our shareholders upon its expiration (*i.e.*, at least every five years). The Articles exclude preemptive rights for a period of five years from October 26, 2017, which exclusion will need to be renewed upon expiration (*i.e.*, at least every five years) to remain effective, but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally prohibits a public company from repurchasing its own shares without the prior approval of shareholders by ordinary resolution, such being a resolution passed by a simple majority of votes cast, and other formalities. As an English company listed on NASDAQ, we may not make on-market purchases of our shares and may make off-market purchases only for the purposes of or pursuant to an employees' share scheme where our shareholders have approved our doing so by ordinary resolution (and with a maximum duration of such approval of five years) or with the prior consent of our shareholders by ordinary resolution to the proposed contract for the purchase of our shares.

English law requires that we meet certain financial requirements before we declare dividends or repurchases.

Under English law, we may only declare dividends, make distributions or repurchase shares out of distributable reserves of the Company or distributable profits. "Distributable profits" are a company's accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously written off in a reduction or reorganization of capital duly made, as reported to the Companies House. In addition, as a public company, we may only make a distribution if the amount of our net assets is not less than the aggregate amount of our called-up share capital and undistributable reserves and if, and to the extent that, the distribution does not reduce the amount of those assets to less than that aggregate amount. The Articles permit declaration of dividends by ordinary resolution of the shareholders, provided that the directors have made a recommendation as to its amount. The dividend shall not exceed the amount recommended by the directors. The directors may also decide to pay interim dividends if it appears to them that the profits available for distribution justify the payment. When recommending or declaring the payment of a dividend, the directors will be required under English law to comply with their duties, including considering our future financial requirements.

The enforcement of shareholder judgments against us or certain of our directors may be more difficult.

Because we are a public limited company incorporated under English law, and because most of our directors and executive officers are non-residents of the United States and substantially all of the assets of such directors and executive officers are located outside of the United States, our shareholders could experience more difficulty enforcing judgments obtained against our Company or our directors in U.S. courts than would currently be the case for U.S. judgments obtained against a U.S. public company or U.S. resident directors. In addition, it may be more difficult (or impossible) to assert some types of claims against our Company or its directors in courts in England, or against certain of our directors in courts in Spain, than it would be to bring similar claims against a U.S. company or its directors in a U.S. court.

The United States is not currently bound by a treaty with Spain or the United Kingdom providing for reciprocal recognition and enforcement of judgments rendered in civil and commercial matters with Spain or the United Kingdom, other than arbitral awards. There is, therefore, doubt as to the enforceability of civil liabilities based upon U.S. federal securities laws in an action to enforce a U.S. judgment in Spain or the United Kingdom. In addition, the enforcement in Spain or the United Kingdom of any judgment obtained in a U.S. court based on civil liabilities, whether or not predicated solely upon U.S. federal securities laws, will be subject to certain conditions. There is also doubt that a court in Spain or the United Kingdom would have the requisite power or authority to grant remedies in an original action brought in Spain or the United Kingdom on the basis of U.S. federal securities laws violations.

Risks Related to Tax Matters

The application of Section 7874 of the Code, including under recent IRS guidance, and changes in law could affect our status as a foreign corporation for U.S. federal income tax purposes.

We believe that, under current law, we should be treated as a foreign corporation for U.S. federal income tax purposes. However, the U.S. Internal Revenue Service (the "IRS") may assert that we should be treated as a U.S. corporation for U.S. federal income tax purposes pursuant to Section 7874 of the Internal Revenue Code of 1986, as amended (the

"Code"). Under Section 7874 of the Code, we would be treated as a U.S. corporation for U.S. federal income tax purposes if, after the Business Combination, (i) at least 80% of our ordinary shares (by vote or value) were considered to be held by former holders of common stock of Globe by reason of holding such common stock, as calculated for Section 7874 purposes, and (ii) our expanded affiliated group did not have substantial business activities in the United Kingdom (the "80% Test"). The percentage (by vote and value) of our ordinary shares considered to be held by former holders of common stock of Globe immediately after the Business Combination by reason of their holding common stock of Globe is referred to in this disclosure as the "Section 7874 Percentage."

Determining the Section 7874 Percentage is complex and, with respect to the Business Combination, subject to legal uncertainties. In that regard, the IRS and U.S. Department of the Treasury ("U.S. Treasury") issued temporary Regulations in April 2016 and finalized Regulations in July 2018 (collectively, the "Section 7874 Regulations"), which include a rule that applies to certain transactions in which the Section 7874 Percentage is at least 60% and the parent company is organized in a jurisdiction different from that of the foreign target corporation (the "Third Country Rule"). This rule applies to transactions occurring on or after November 19, 2015, which date is prior to the closing of the Business Combination. If the Third Country Rule were to apply to the Business Combination, the 80% Test would be deemed met and we would be treated as a U.S. corporation for U.S. federal income tax purposes. While we believe the Section 7874 Percentage is less than 60% such that the Third Country Rule does not apply to us, we cannot assure you that the IRS will agree with this position and would not successfully challenge our status as a foreign corporation. If the IRS successfully challenged our status as a foreign corporation, significant adverse tax consequences would result for us and could apply to our shareholders.

In addition, changes to Section 7874 of the Code, the U.S. Treasury Regulations promulgated thereunder, or to other relevant tax laws (including under applicable tax treaties) could adversely affect our status or treatment as a foreign corporation, and the tax consequences to our affiliates, for U.S. federal income tax purposes, and any such changes could have prospective or retroactive application. Recent legislative proposals have aimed to expand the scope of U.S. corporate tax residence, including by potentially causing us to be treated as a U.S. corporation if the management and control of us and our affiliates were determined to be located primarily in the United States, or by reducing the Section 7874 Percentage at or above which we would be treated as a U.S. corporation such that it would be lower than the threshold imposed under the 80% Test.

Recent IRS guidance and changes in law could affect our ability to engage in certain acquisition strategies and certain internal restructurings.

Even if we are treated as a foreign corporation for U.S. federal income tax purposes, the Section 7874 Regulations materially changed the manner in which the Section 7874 Percentage will be calculated in certain future acquisitions of U.S. businesses in exchange for our equity, which may affect the tax efficiencies that otherwise might be achieved in transactions with third parties. For example, the Section 7874 Regulations would impact certain acquisitions of U.S. companies for our Ordinary Shares (or other stock) in the 36-month period beginning December 23, 2015, by excluding from the Section 7874 Percentage the portion of Ordinary Shares that are allocable to former holders of common stock of Globe. This rule would generally have the effect of increasing the otherwise applicable Section 7874 Percentage with respect to our future acquisition of a U.S. business. The Section 7874 Regulations also may more generally limit the ability to restructure the non-U.S. members of our Company to achieve tax efficiencies, unless an exception applies. However, no such acquisition of a U.S. business was made during the 36 months period.

Recent IRS proposed regulations and changes in laws or treaties could affect the expected financial synergies of the Business Combination.

The IRS and the U.S. Treasury also issued rules that provide that certain intercompany debt instruments issued on or after April 5, 2016, will be treated as equity for U.S. federal income tax purposes, therefore limiting U.S. tax benefits and resulting in possible U.S. withholding taxes. As a result of these rules, we may not be able to realize a portion of the financial synergies that were anticipated in connection with the Business Combination, and such rules may materially affect our future effective tax rate. While these new rules are not retroactive, they could impact our ability to engage in future restructurings if such transactions cause an existing debt instrument to be treated as reissued. Furthermore, under certain circumstances, recent treaty proposals by the U.S. Treasury, if ultimately adopted by the United States and relevant

foreign jurisdictions, could reduce the potential tax benefits for us and our affiliates by imposing U.S. withholding taxes on certain payments from our U.S. affiliates to related and unrelated foreign persons.

We are subject to tax laws of numerous jurisdictions and our interpretation of those laws is subject to challenge by the relevant governmental authorities.

We and our subsidiaries are subject to tax laws and regulations in the United Kingdom, the United States, France, Spain, South Africa and the other jurisdictions in which we operate. These laws and regulations are inherently complex, and we and our subsidiaries are (and have been) obligated to make judgments and interpretations about the application of these laws and regulations to us and our subsidiaries and their operations and businesses. The interpretation and application of these laws and regulations could be challenged by the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material an effect our effective tax rate.

We intend to operate so as to be treated exclusively as a resident of the United Kingdom for tax purposes, but the relevant tax authorities may treat us as also being a resident of another jurisdiction for tax purposes.

We are a company incorporated in the United Kingdom. Current U.K. tax law provides that we will be regarded as being a U.K. resident for tax purposes from incorporation and shall remain so unless (i) we were concurrently resident of another jurisdiction (applying the tax residence rules of that jurisdiction) that has a double tax treaty with the United Kingdom and (ii) there is a tiebreaker provision in that tax treaty which allocates exclusive residence to that other jurisdiction.

Based upon our management and organizational structure, we believe that we should be regarded solely as resident in the United Kingdom from our incorporation for tax purposes. However, because this analysis is highly factual and may depend on changes in our management and organizational structure, there can be no assurance regarding the final determination of our tax residence. Should we be treated as resident in a country or jurisdiction other than the United Kingdom, we could be subject to taxation in that country or jurisdiction on our worldwide income and may be required to comply with a number of material and formal tax obligations, including withholding tax and reporting obligations provided under the relevant tax law, which could result in additional costs and expenses and an increase of our effective tax rate.

We may not qualify for benefits under the tax treaties entered into between the United Kingdom and other countries.

We intend to operate in a manner such that, when relevant, we are eligible for benefits under the tax treaties entered into between the United Kingdom and other countries. However, our ability to qualify and continue to qualify for such benefits will depend upon the requirements contained within each treaty and the applicable domestic laws, as the case may be, on the facts and circumstances surrounding our operations and management, and on the relevant interpretation of the tax authorities and courts.

Our or our subsidiaries' failure to qualify for benefits under the tax treaties could result in adverse tax consequences to us and our subsidiaries and could result in certain tax consequences of owning or disposing of our ordinary shares differing from those discussed below.

Future changes to domestic or international tax laws or to the interpretation of these laws by the governmental authorities could adversely affect us and our subsidiaries.

The U.S. Congress, the U.K. Government, the Organization for Economic Co-operation and Development and other government agencies in jurisdictions where we and our affiliates do business have had an extended focus on issues related to the taxation of multinational corporations. One example is in the area of "base erosion and profit shifting" (or "BEPS"), in which payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. Thus, the tax laws in the United States, the United Kingdom or other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could adversely affect us. Furthermore, the interpretation and application of domestic or international tax laws made by us and our subsidiaries could differ from that of the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material. On July 1, 2018, OECD's so-called "Multi-Lateral Instrument" entered into force covering 87 jurisdictions and impacting over 1,200 double tax treaties. The adoption and transposition into domestic legislations of the Anti-Tax Avoidance Directives (known as "ATAD 1 & 2") by the European Union is another key development.

Further developments are to be seen in areas such as the “making tax digital - initiatives” allowing authorities to monitor multinationals’ tax position on a more real time basis and the contemplated introduction of new taxes, such as revenue-based digital services taxes aimed at technology companies, but which may impact traditional businesses as well in the sense of allocating a portion of the profitability of the given company to jurisdictions where it has significant sales even though it is not physically present. The latest development by the OECD in this field are the so-called Pillar One and Pillar Two. Under Pillar One, the OECD intends to set up the foundations for allocating to the market jurisdiction (i) non-routine profit; (ii) a fixed remuneration based on the Arm´s length Principle for baseline distribution and marketing functions; and (iii) an additional profit where in-country functions exceed the base-line activity already compensated. In principle, our business is not in scope of this measure as it refers to raw materials and commodities and this kind of business is excluded under the current drafting of the paper. Then, Pillar Two, also called GloBE (Global Anti-Base Erosion Proposal) consist of setting the ground for a minimum taxation, giving the countries the right to “tax back” profit that is currently taxed below a minimum rate. This goal is reached through several avenues, that is, (i) the inclusion of foreign income when taxed below the minimum rate; (ii) an undertaxed payment rule to related parties to deny deduction or impose taxation when payment was not subject to tax; (iii) switch over rule in the double tax treaties to allow the residence jurisdiction to switch from exemption to credit method when profit of permanent establishment is taxed below the minimum rate; and (iv) a subject to tax rule to allow withholding tax or other taxation or adjust eligibility to treaty benefits on payments not subject to the minimum rate. GloBE could affect our effective tax rate when implemented.

We may become subject to income or other taxes in jurisdictions which would adversely affect our financial results.

We and our subsidiaries are subject to the income tax laws of the United Kingdom, the United States, France, Spain, South Africa and the other jurisdictions in which we operate. Our effective tax rate in any period is impacted by the source and the amount of earnings among our different tax jurisdictions. A change in the division of our earnings among our tax jurisdictions could have a material impact on our effective tax rate and our financial results. In addition, we or our subsidiaries may be subject to additional income or other taxes in these and other jurisdictions by reason of the management and control of our subsidiaries, our activities and operations, where our production facilities are located or changes in tax laws, regulations or accounting principles like those referred to as to Pillar One and Pillar Two once fully developed and implemented. Although we have adopted guidelines and operating procedures to ensure our subsidiaries are appropriately managed and controlled, we may be subject to such taxes in the future and such taxes may be substantial. The imposition of such taxes could have a material adverse effect on our financial results.

We may incur current tax liabilities in our primary operating jurisdictions in the future.

We expect to make current tax payments in some of the jurisdictions where we do business in the normal course of our operations. Our ability to defer the payment of some level of income taxes to future periods is dependent upon the continued benefit of accelerated tax depreciation on our plant and equipment in some jurisdictions, the continued deductibility of external and intercompany financing arrangements, the application of tax losses prior to their expiration in certain tax jurisdictions and the application of tax credits including R&D credits, among other factors. The level of current tax payments we make in any of our primary operating jurisdictions could adversely affect our cash flows and have a material adverse effect on our financial results.

Changes in tax laws may result in additional taxes for us.

We cannot assure you that tax laws in the jurisdictions in which we reside or in which we conduct activities or operations will not be changed in the future. Such changes in tax law could result in additional taxes for us.

U.S. federal income tax reform could adversely affect us.

Legislation commonly known as the Tax Cuts and Jobs Act (the "TCJA") was enacted on December 22, 2017 in the United States. The TCJA made significant changes to the U.S. federal tax code, including a reduction in the U.S. federal corporate statutory tax rate from 35% to 21% as well as the introduction of a base erosion minimum tax (BEAT). The TCJA also made changes to the U.S. federal taxation of foreign earnings and to the timing of recognition of certain revenue and expenses and the deductibility of certain business expenses. We examined the impact the TCJA may have on our business in detail since enactment. Although further guidance continues to be released by the IRS, so far we have concluded that tax reform should not have a material adverse impact on the taxation of our U.S. business, as of December 31, 2019. This annual report does not discuss in detail the TCJA or the manner in which it might affect us or our stockholders. We urge you to consult with your own legal and tax advisors with respect to the Tax Reform Act and the potential tax consequences of investing in our shares.

Our transfer pricing policies are open to challenge from taxation authorities internationally.

Tax authorities have become increasingly focused on transfer pricing in recent years. Due to our international operations and an increasing number of inter-company cross-border transactions, we are open to challenge from tax authorities with regards to the pricing of such transactions. A successful challenge by tax authorities may lead to a reallocation of taxable income to a different tax jurisdiction and may potentially lead to an increase of our effective tax rate.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Ferroglobe PLC

Ferroglobe PLC, initially named VeloNewco Limited, was incorporated under the U.K. Companies Act 2006 as a private limited liability company in the United Kingdom on February 5, 2015, as a wholly-owned subsidiary of Grupo VM. On October 16, 2015 VeloNewco Limited re-registered as a public limited company. As a result of the Business Combination, which was completed on December 23, 2015, FerroAtlántica and Globe merged through corporate transactions to create Ferroglobe PLC, one of the largest producers worldwide of silicon metal and silicon- and manganese-based alloys. To effect the Business Combination, Ferroglobe acquired from Grupo VM all of the issued and outstanding ordinary shares, par value €1,000 per share, of Grupo FerroAtlántica, SAU in exchange for 98,078,161 newly issued Class A Ordinary Shares, nominal value $7.50 per share, of Ferroglobe, after which FerroAtlántica became a wholly-owned subsidiary of Ferroglobe. Immediately thereafter, Gordon Merger Sub, Inc., a wholly-owned subsidiary of Ferroglobe, merged with and into Globe Specialty Metals, Inc., and each outstanding share of common stock, par value $0.0001 per share, was converted into the right to receive one newly-issued ordinary share, nominal value $7.50 per share, of Ferroglobe. After these steps, Ferroglobe issued, in total, 171,838,153 shares, out of which 98,078,161 shares were issued to Grupo VM and 73,759,992 were issued to the former Globe shareholders. Our ordinary shares are currently traded on the NASDAQ under the symbol "GSM."

On June 22, 2016, we completed a reduction of our share capital, as a result of which the nominal value of each share was reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to distributable reserves.

On November 18, 2016, our Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe R&W Trust to certain Ferroglobe shareholders. Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or borrow to fund any actual loss incurred.

On August 21, 2018, we announced a share repurchase program, which provided authorization to purchase up to $20 million of our ordinary shares in the period ending December 31, 2018. On November 7, 2018, we completed the repurchase program, resulting in the acquisition of a total of 2,894,049 ordinary shares for total consideration of $20,100 thousand, including applicable stamp duty. The average price paid per share was $6.89. The share repurchase program resulted in 1,152,958 ordinary shares purchased and cancelled and 1,741,091 ordinary shares purchased into treasury, all of which remained held in treasury at December 31, 2018. See “Item 16.E.— Purchases of Equity Securities by the Issuer and Affiliated Purchasers.”

During the year under review, a small number of the ordinary shares held in treasury have been used to satisfy share awards made by the Company to its management team under the Ferroglobe PLC Equity Incentive Plan 2016. The number of ordinary shares held in Treasury as at December 31, 2019 was 1,733,051. See *Note 13*.

Significant milestones in our history are as follows:

- **1996:** acquisition of the Spanish company Hidro Nitro Española, S.A. (“Hidro Nitro Española”), operating in the ferroalloys and hydroelectric power businesses, and start of the quartz mining operations through the acquisition of Cuarzos Industriales S.A. from Portuguese cement manufacturer Cimpor;

- **1998:** expansion of our manganese- and silicon-based alloy operations through the acquisition of 80% of the share capital of FerroAtlántica de Venezuela (currently FerroVen, S.A.) from the Government of Venezuela in a public auction;

- **2000:** acquisition of 67% of the share capital of quartz mining company Rocas, Arcillas y Minerales, S.A. from Elkem, a Norwegian silicon metal and manganese- and silicon-based alloy producer;

- **2005:** acquisition of Pechiney Electrométallurgie, S.A., now renamed FerroPem, S.A.S., a silicon metal and silicon-based alloys producer with operations in France, along with its affiliate Silicon Smelters (Pty) Ltd. in South Africa;

- **2005:** acquisition of the metallurgical manufacturing plant in Alloy, West Virginia, and Alabama Sand and Gravel, Inc. in Billingsly, Alabama, both in the U.S.;

- **2006:** acquisition of Globe Metallurgical Inc., the largest merchant manufacturer of silicon metal in North America and largest specialty ferroalloy manufacturer in the United States;

- **2006:** acquisition of Stein Ferroaleaciones S.A., an Argentine producer of silicon-based specialty alloys, and its Polish affiliate, Ultracore Polska;

- **2007:** creation of Grupo FerroAtlántica, S.A.U., the holding company of our FerroAtlántica Group;

- **2007:** acquisition of Camargo Correa Metais S.A., a major Brazilian silicon metal manufacturer;

- **2008:** acquisition of Rand Carbide PLC, a ferrosilicon plant in South Africa, from South African mining and steel company Evraz Highveld Steel and Vanadium Limited, and creation of Silicio FerroSolar, S.L., which conducts research and development activities in the solar grade silicon sector;

- **2008:** acquisition of 81% of Solsil, Inc., a producer of high-purity silicon for use in photovoltaic solar cells

- **2008:** acquisition of a majority stake in Ningxia Yonvey Coal Industry Co., Ltd., a producer of carbon electrodes (the remaining stake subsequently purchased in 2012);

- **2009:** creation of French company Photosil Industries, S.A.S., which conducts research and development activities in the solar grade silicon sector;

- **2009:** sale of interest in Camargo Correa Metais S.A. in Brazil to Dow Corning Corporation and formation of a joint venture with Dow Corning at the Alloy, West Virginia facility;

- **2010:** acquisition of Core Metals Group LLC, one of North America's largest and most efficient producers and marketers of high-purity ferrosilicon and other specialty metals;

- **2010:** acquisition of Chinese silicon metal producer Mangshi Sinice Silicon Industry Company Limited;

- **2011:** acquisition of Alden Resources LLC, North America's leading miner, processor and supplier of specialty metallurgical coal to the silicon and silicon-based alloy industries;

- **2012:** acquisition of SamQuarz (Pty) Ltd, a South African producer of silica, with quartz mining operations;

- **2012:** acquisition of a majority stake (51%) in Bécancour Silicon, Inc., a silicon metal producer in Canada, operated as a joint venture with Dow Corning as the holder of the minority stake of 49%;

- **2014:** acquisition of Silicon Technology (Pty) Ltd. ("Siltech"), a ferrosilicon producer in South Africa;

- **2018:** acquisition from a subsidiary of Glencore PLC of a 100% interest in manganese alloys plants in Mo i Rana, Norway and Dunkirk, France, through newly-formed subsidiaries Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France, SAS; and

- **2018:** sale of the majority interest in Hidro Nitro Española to an entity sponsored by a Spanish renewable energies fund.

- **2019:** sale of 100% interest in FerroAtlántica, S.A.U. ("FAU"), to investment vehicles affiliated with TPG Sixth Street Partners.

- **2019:** sale of 100% interest in Ultra Core Polska, z.o.o, to Cedie, S.A.

Corporate and Other Information

Our registered office is located at 5 Fleet Place, London EC4M 7RD, our Board of Directors is based at our London Office at 2nd floor West Wing, Lansdowne House 57 Berkeley Square, London W1J 6ER, United Kingdom and our management is based in London and also at Torre Espacio, Paseo de la Castellana, 259-D, P49, 28046 Madrid, Spain. The telephone number of our London Office is +44 (0)203 129 2420 and of our Spanish Office is +34 915 903 219. Our Internet address is http://www.ferroglobe.com. The information on our website is not a part of this document. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov.

B. Business Overview

We are a global leader in the silicon and specialty metals industry with an expansive geographical reach, established through Globe's predominantly North American-centered footprint and FerroAtlántica's predominantly European-centered footprint.

Through its operating subsidiaries, Ferroglobe is one of the world's largest producers of silicon metal, silicon-based alloys and manganese-based alloys. Additionally, Ferroglobe currently has quartz mining activities in Spain, the United States, Canada, South Africa and Mauritania, low-ash metallurgical quality coal mining activities in the United States, and

interests in hydroelectric power in France. Ferroglobe controls a meaningful portion of most of its raw materials and captures, recycles and sells most of the by-products generated in its production processes.

We sell our products to a diverse base of customers worldwide, in a varied range of industries. These industries include aluminum, silicone compounds used in the chemical industry, ductile iron, automotive parts, photovoltaic (solar) cells, electronic semiconductors and steel, all of which are key elements in the manufacturing of a wide range of industrial and consumer products.

We are able to supply our customers with the broadest range of specialty metals and alloys in the industry from our production centers in North America, Europe, South America, Africa and Asia. Our broad manufacturing platform and flexible capabilities allow us to optimize production and focus on products most likely to enhance profitability, including the production of customized solutions and high purity metals to meet specific customer requirements. We also benefit from low operating costs, resulting from our ownership of sources of critical raw materials and the flexibility derived from our ability to alternate production at certain of our furnaces between silicon metal and silicon-based alloy products.

Industry and Market Data

The statements and other information contained below regarding Ferroglobe's competitive position and market share are based on the reports periodically published by leading metals industry consultants and leading metals industry publications and information centers, as well as on the estimates of Ferroglobe's management.

Competitive Strengths and Strategy of Ferroglobe

Competitive Strengths

Leading market positions in silicon metal, silicon-based alloys and manganese-based alloys

We are a leading global producer in our core products based on merchant production capacity and hold the leading market share in certain of our products. Specifically, in the case of silicon metal, with maximum global production capacity of 242 thousand metric tons (which includes 51% of our attributable joint venture capacity and considers the most favorable production mix), we have approximately 64% of the merchant production capacity market share in North America and approximately 26% of the global market share (all of the world excluding China), according to management estimates for our industry. In the case of manganese-based alloys, following the acquisition of the Dunkirk, France and Mo i Rana, Norway plants in 2018, our market share is approximately 34% in Europe, and we are among the three largest global producers of manganese alloys excluding China.

Our scale and global presence across five continents allows us to offer a wide range of products to serve a variety of end-markets, including those which we consider to be dynamic, such as the solar, automotive, consumer electronic products, semiconductors, construction and energy industries. As a result of our market leadership and breadth of products, we possess critical insight into market demand allowing for more efficient use of our resources and operating capacity. Our ability to supply critical sources of high-quality raw materials from within our Company group promotes operational and financial stability and reduces the need for us to compete with our competitors for supply. We believe this also provides a competitive advantage, allowing us to deliver an enhanced product offering with consistent quality on a cost-efficient basis to our customers.

Global production footprint and reach

Our diversified production base consists of production facilities across North America, Europe, South America, South Africa and Asia. We have the capability to produce our core products at multiple facilities, providing a competitive advantage when reacting to changing global demand trends and customer requirements. Furthermore, this broad base ensures reliability to our customers that value timely delivery and consistent product quality. Our diverse production base also enables us to optimize our production plans and shift production to the lowest cost facilities. Most of our production facilities are located close to sources of principal raw materials, key customers or major transport hubs to facilitate delivery

of raw materials and distribution of finished products. This enables us to service our customers globally, while optimizing our working capital, as well as enabling our customers to optimize their inventory levels.

Diverse base of high-quality customers across growing industries

We sell our products to customers in over 30 countries, with our largest customer concentration in North America and in Europe. Our products are used in end products spanning a broad range of industries, including solar, personal care and healthcare products, automobile parts, carbon and stainless steel, water pipe, solar, semiconductor, oil and gas, infrastructure and construction. Although some of these end-markets have growth drivers similar to our own, others are less correlated and offer the benefits of diversification. This wide range of products, customers and end-markets provides significant diversity and stability to our business.

Many of our customers, we believe, are leaders in their end-markets and fields. We have built long-lasting relationships with customers based on the breadth and quality of our product offerings and our ability to produce products that meet specific customer requirements. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years. For the year ended December 31, 2019 and December 31, 2018, Ferroglobe's ten largest customers accounted for approximately 39.9% and 33.8%, respectively, of Ferroglobe's consolidated revenue. Our customer relationships provide us with stability and visibility into our future volumes and earnings, though we are not reliant on any individual customer or end-market. Our customer relationships, together with our diversified product portfolio, provide us with opportunities to cross sell new products; for example, by offering silicon-based or manganese-based alloys to existing steelmaking customers.

Flexible and low-cost structure

We believe we have an efficient cost structure, enhanced over time by vertical integration through strategic acquisitions and as a result of the Business Combination in December 2015. The largest components of our cost base are raw materials and power. Our relatively low operating costs are primarily a result of our ownership of, and proximity to, sources of raw materials, our access to attractively priced power supplies and skilled labor and our efficient production processes.

We believe our vertically integrated business model and ownership of sources of raw materials provides us with a cost advantage over our competitors. Moreover, such ownership and the fact that we are not reliant on any single supplier for the remainder of our raw materials needs generally ensures stable, long term supply of raw materials for our production processes, thereby enhancing operational and financial stability. Transportation costs can be significant in our business; our proximity to sources of raw materials and customers improves logistics and represents another cost advantage. The proximity of our facilities to our customers also allows us to provide just in time delivery of finished goods and reduces the need to store excess inventory, resulting in more efficient use of working capital. Additionally, we believe we have competitive power supply contracts in place that provide us with reliable, long term access to power at reasonable rates. We capture, recycle and sell most of the by-products generated in our production processes, which further reduces our costs.

We operate with a largely variable cost of production and our diversified production base allows us to shift our production and distribution between facilities and products in response to changes in market conditions over time. Additionally, the diversity of our currency and commodity exposures provides, to a degree, a natural hedge against foreign exchange and raw materials pricing volatility. Our production costs are mostly dependent on local factors while our product prices are influenced more by global factors. Depreciation of local, functional currencies relative to the U.S. Dollar, when it occurs, reduces the costs of our operations, offering an increased competitive edge in the international market.

We believe our scale and global presence enables us to sustain our operations throughout periods of economic downturn, volatile commodity prices and demand fluctuations.

Stable supply of critical, high quality raw materials

In order to ensure reliable supplies of high-quality raw materials for the production of our metallurgical products, we have invested in strategic acquisitions of sources that supply a meaningful portion of the inputs our manufacturing operations consume. Specifically, we own and operate specialty, low ash, metallurgical quality coal mines in the United States, high purity quartz quarries in the United States, Spain and South Africa, charcoal production units in South Africa, and our Yonvey production facility for carbon electrodes in Ningxia, China. For raw materials needs our subsidiaries cannot meet, we have qualified multiple suppliers in each operating region for each raw material, helping to ensure reliable access to high quality raw materials.

Efficient and environmentally friendly by-product usage

We utilize or sell most of the by-products of our manufacturing process, which reduces cost and the environmental impact of our operations. We have developed markets for the by-products generated by our production processes and have transformed our manufacturing operations so that little solid waste disposal is required. By-products not recycled in the manufacturing process are generally sold to companies, which process them for use in a variety of other applications. These materials include: silica fume (also known as microsilica), used as a concrete additive, refractory material and oil well conditioner; fines - the fine material resulting from crushing lumps; and dross, which results from the purification process during smelting.

Pioneer in innovation with focus on technological advances and development of next generation products

Our talented workforce has historically developed proprietary technological capabilities and next generation products in-house, which we believe give us a competitive advantage. In addition to a dedicated R&D division, we have cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. Our R&D achievements include:

- ELSA electrode — We have internally developed a patented technology for electrodes used in silicon metal furnaces, which we have sold to several major silicon producers globally. This technology, known as the ELSA electrode technology, improves energy efficiency in the production process of silicon metal and significantly reduces iron contamination. It enables us to run our furnaces with fewer stoppages, minimizing the consumption of power, which is one of the largest cost components in the smelting process. The ELSA electrode technology and related know how is unique and has no proven alternative worldwide. The ELSA electrode is a key technology in running high capacity silicon furnaces (the size and capacity of silicon furnaces is limited by the size of its electrodes, and the ELSA technology allows us to reduce this bottleneck), improving our productivity and lowering our unit cost.

- Solar Grade Silicon — Ferroglobe's solar grade silicon involves the production of upgraded metallurgical grade (UMG) type solar grade silicon metal with a purity above 99.9999% through a new, potentially cost effective, electrometallurgical purification process in place of the traditional chemical process for the production of solar grade polycrystalline silicon, which tends to be costly and involves high energy consumption and potential environmental hazards. The new technology, developed by Ferroglobe at its research and development facilities, aims to reduce the costs and energy consumption associated with the production of solar grade silicon. We have commenced production of such UMG solar grade silicon through this new process at a prototype factory. The construction of a larger greenfield facility is currently on stand-by until better conditions in the solar grade silicon market can be valued. In 2016, we entered into an agreement with Aurinka Photovoltaic Group, SL, providing for the formation and operation of a joint venture for the purpose of producing upgraded metallurgical grade (UMG) solar silicon. On July 11, 2019, the parties terminated the joint venture by mutual agreement. See "Item 7.B – Related Party Transactions – Aurinka and the Solar JV", below.

Experienced management team in the metals and mining industry

We have a seasoned and experienced management team with extensive knowledge of the global metals and mining industry, operational and financial expertise and a track record of developing and managing large-scale operations. Our management team is committed to responding quickly and effectively to macroeconomic and industry developments, to identifying and delivering growth opportunities and to improving our performance by way of a continuous focus on operational cost control and a disciplined, value-based approach to capital allocation. Our management team is complemented by a skilled operating team with solid technical knowledge of production processes and strong relationships with key customers.

Business Strategy

Maintain and leverage industry leading position in core businesses and pursue long-term growth

We intend to maintain and leverage our position as a leading global producer of silicon metal and one of the leading global producers of ferroalloys based on production capacity. We believe we will achieve our goals through developing our existing strengths and pursuing long-term growth. We plan to achieve organic growth by continually enhancing our production capabilities as well as by developing new products to further diversify our portfolio of products and expand our customer base. We intend to focus our production and sales efforts on high-margin products and end-markets that we consider to have the highest potential for profitability and growth. We will continue to capitalize on our global reach and the diversity of our production base to adapt to changes in market demands, shifting our production and distribution across facilities and between different products as necessary in order to remain competitive and maximize profitability. We aim to obtain further direct control of key raw materials to secure our long-term access to scarce reserves, which we believe will allow us to continue delivering enhanced products while maintaining our low-cost position. Additionally, we will continue regularly to review our customer contracts in an effort to improve their terms and to optimize the balance between selling under long-term agreements and retaining some exposure to spot markets. We intend to maintain pricing that appropriately reflects the value of our products and our level of customer service and, in light of commodity prices and demand fluctuations, may decide to move away from contracts with index-based prices in favor of contracts with fixed prices, particularly at prices which ensure a profit throughout the cycles our business experiences.

Maintain low cost position while controlling inputs

We believe we have an efficient cost structure and, going forward, we will seek to further reduce costs and improve operational efficiency through a number of initiatives. We plan to focus on controlling the cost of our raw materials through our captive sources and long-term supply contracts and on lowering our fixed costs in order to reduce the unit costs of our silicon metal and ferroalloy production. We aim to improve our internal processes and further integrate our global footprint, such as benefits from value chain optimization, including enhancements in raw materials procurement and materials management; adoption of best practices and technical and operational know how across our platform; reduced freight costs from improved logistics as well as savings through the standardization of monitoring and reporting procedures, technology, systems and controls. We intend to enhance our production process through R&D and targeted capital expenditure and leverage our geographic footprint to shift production to the most cost effective and appropriate facilities and regions for such products. We will continue to regularly review our power supply contracts with a view to improving their terms and more competitive tariff structures. In addition, we will seek to maximize the value derived from the utilization and sale of by-products generated in our production processes and continue to focus on innovation to develop next generation products.

We believe we differentiate ourselves from our competitors on the basis of our technical expertise and innovation, which allow us to deliver new high-quality products to meet our customers' needs. We intend to keep using these capabilities in the future to retain existing customers and cultivate new business. We plan to leverage the expertise of our dedicated team of specialists to advance and to develop next generation products and technologies that fuel organic growth. In particular, we intend develop high value powders for high end applications, including silicon-based anodic materials for Li-ion batteries. We also aim to further develop our specialized foundry products, such as value-added inoculants and customized nodularizers, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Maintain financial discipline to facilitate ongoing operations and support growth

We believe maintaining financial discipline will provide us with the ability to manage the volatility in our business resulting from changes in commodity prices and demand fluctuations. We intend to preserve a strong and conservative balance sheet, with sufficient liquidity and financial flexibility to facilitate all of our ongoing operations, to support organic and strategic growth and to finance prudent capital expenditure programs aimed at placing us in a better position to generate increased revenues and cash flows by delivering a more comprehensive product mix and optimized production in response to market circumstances. We plan to become even more efficient in our working capital management through various initiatives aimed at optimizing inventory levels and accounts receivable. We will also seek to repay indebtedness from free cash flow and retain low leverage for maximum free cash flow generation.

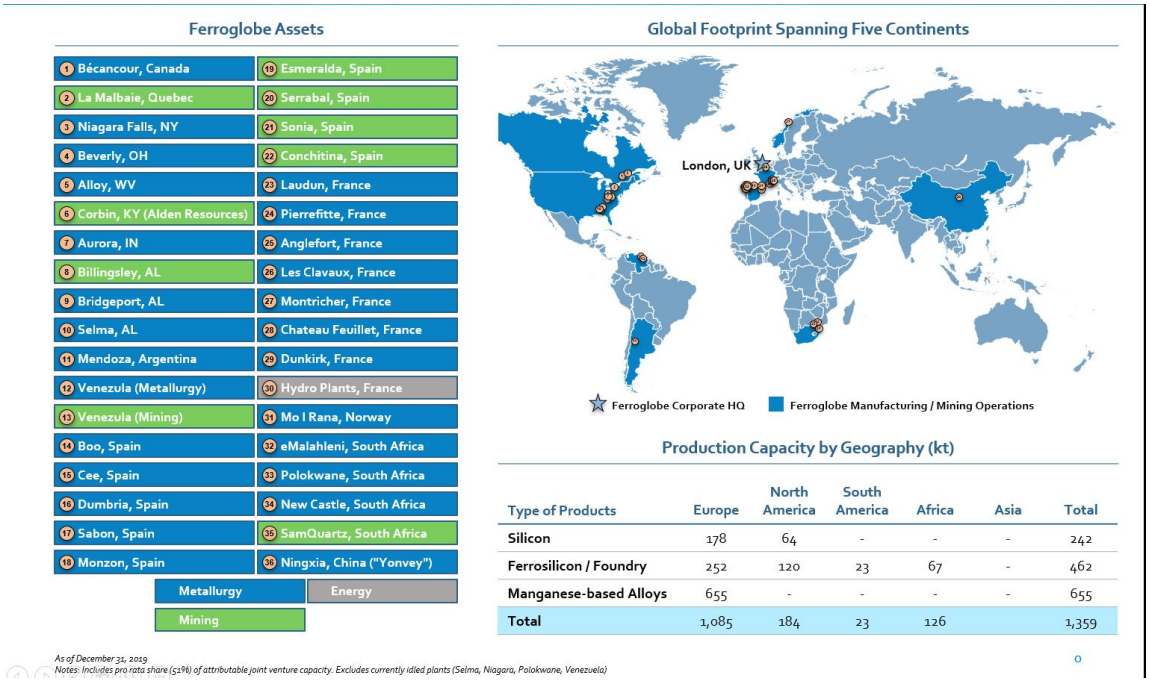
Pursue strategic opportunities

We have a proven track record of disciplined acquisitions of complementary businesses and successfully integrating them into existing operations while retaining a targeted approach through appropriate asset divestitures. Our past acquisitions have increased the vertical integration of our activities, allowing us to deliver an enhanced product offering on a cost-efficient basis. We regularly consider and evaluate strategic opportunities for our business and will continue to do so in the future with the objective of expanding our capabilities and leveraging our products and operations. In particular, we intend to pursue complementary acquisitions and other investments at appropriate valuations for the purpose of increasing our capacity, increasing our access to raw materials and other inputs, further refining existing products, broadening our product portfolio and entering new markets. We will consider such strategic opportunities in a disciplined fashion while maintaining a conservative leverage position and strong balance sheet.

We will also seek to evaluate our core business strategy on an ongoing basis and may divest certain non-core and lower margin businesses to improve our financial and operational results.

Facilities and Production Capacity

The following chart shows, as of December 31, 2019, the location of our assets and our production capacity, including 51% of the capacity of our joint ventures (of which we own 51%), by geography, of silicon, silicon-based alloys and manganese-based alloys. It is important to note that certain facilities may and do switch from time to time among different families of products (for instance, from silicon metal to silicon-based alloys and vice-versa) or among different products within the same family (for instance from ferromanganese to silicomanganese). Such switches change the production capacity at each plant.



Type of Products	Europe	North America	South America	Africa	Asia	Total
Silicon	178	64	-	-	-	242
Ferrosilicon / Foundry	252	120	23	67	-	462
Manganese-based Alloys	655	-	-	-	-	655
Total	1,085	184	23	126		1,359

Our production facilities are strategically located throughout the world. We operate quartz mines located in Spain, South Africa, Canada, and the United States, and charcoal production in South Africa. Additionally, we operate low-ash, metallurgical grade coal mines in the United States.

From time to time, in response to market conditions and to manage operating expenses, facilities are fully or partially idled. As of December 31, 2019, certain facilities in the United States, Spain, Venezuela, South Africa and China are partially or fully idled, as a result of current market conditions.

Ferroglobe has no installed power capacity in Spain as of December 31, 2019. Ferroglobe's total installed power capacity in Spain was 167 megawatts as of December, 31 2018. In 2019, 167 megawatts of hydro production capacity were divested for net cash proceeds of $177,627 thousand. Also, Ferroglobe subsidiaries own a total of 18.9 megawatts of hydro production capacity in France.

Products

For the years ended December 31, 2019, 2018 and 2017, Ferroglobe's consolidated sales by product were as follows:

	Year ended December 31,		
($ thousands)	**2019**	**2018**	**2017**
Silicon metal	539,872	933,366	739,618
Manganese-based alloys	447,311	527,757	363,644
Ferrosilicon	275,368	359,374	266,862
Other silicon-based alloys	181,736	215,697	188,183
Silica fume	33,540	37,061	36,338
Energy	—	12,149	7,244
Byproducts and other	137,395	156,598	130,387
Total Sales	**1,615,222**	**2,242,002**	**1,732,276**
Shipments in metric tons:			
Silicon metal	239,692	352,578	325,884
Manganese-based alloys	392,456	424,358	274,119
Ferrosilicon	203,761	205,246	185,952
Other silicon-based alloys	91,668	106,457	97,069
Average Selling price ($/MT):			
Silicon metal	2,252	2,647	2,270
Manganese-based alloys	1,140	1,244	1,327
Ferrosilicon	1,351	1,751	1,435
Other silicon-based alloys	1,983	2,026	1,939

Silicon metal

Ferroglobe is a leading global silicon metal producer with a total production capacity of approximately 241,750 tons (including 51% of the joint venture capacity attributable to us) per annum in several facilities in the United States, France, South Africa, Canada and Spain. This production capacity reflects the production mix that was current as of December 31, 2019, but different production configurations can result in silicon metal production capacity of up to 416,750 tons per annum. For the years ended December 31, 20919, 2018 and 2017, Ferroglobe's revenues generated by silicon metal sales accounted for 33.4%, 41.6% and 42.7%, respectively, of Ferroglobe's total consolidated revenues.

Silicon metal is used by primary and secondary aluminum producers, who require silicon metal with certain requirements to produce aluminum alloys. For the year ended December 31, 2019, sales to aluminum producers represented approximately 45% of silicon metal revenues. The addition of silicon metal reduces shrinkage and the hot cracking tendencies of cast aluminum and improves the castability, hardness, corrosion resistance, tensile strength, wear resistance and weldability of the aluminum end products. Aluminum is used to manufacture a variety of automotive components, including engine pistons, housings, and cast aluminum wheels and trim, as well as high tension electrical wire, aircraft parts, beverage containers and other products which require aluminum properties.

Silicon metal is also used by several major silicone chemical producers. For the year ended December 31, 2019 sales to chemical producers represented approximately 43% of silicon metal revenues. Silicone chemicals are used in a broad range of applications, including personal care items, construction-related products, health care products and electronics. In construction and equipment applications, silicone chemicals promote adhesion, act as a sealer and have insulating properties. In personal care and health care products, silicone chemicals add a smooth texture, protect against ultraviolet rays and provide moisturizing and cleansing properties. Silicon metal is an essential component of the manufacture of silicone chemicals, accounting for approximately 20% of the cost of production.

In addition, silicon metal is the core material needed for the production of polysilicon, which is most widely used to manufacture solar cells and semiconductors. For the year ended December 31, 2019 sales to polysilicon producers represented approximately 10% of silicon metal revenues. Producers of polysilicon employ processes to further purify the silicon metal and grow ingots from which wafers are cut. These wafers are the base material to produce solar cells, to convert sunlight to electricity. Individual solar cells are soldered together to make solar modules.

Manganese-based alloys

Ferroglobe is among the leading global manganese-based alloys producers based on production capacity. As of December 31, 2019, Ferroglobe maintained approximately 309,000 tons of annual silicomanganese production capacity and approximately 346,000 tons of annual ferromanganese production capacity in our factories in Spain, Norway, and France. During the year ended December 31, 2019, Ferroglobe sold 392,456 tons of manganese-based alloys. For the years ended December 31, 2019, 2018, and 2017, Ferroglobe's revenues generated by manganese-based alloys sales accounted for 27.7%, 23.5% and 20.9%, respectively, of Ferroglobe's total consolidated revenues over 90% of the global manganese-based alloys produced are used in steel production, and all steelmakers use manganese and manganese alloys in their production processes.

Silicomanganese is used as deoxidizing agent in the steel manufacturing process. Silicomanganese is also produced in the form of refined silicomanganese, or silicomanganese AF, and super-refined silicomanganese, or silicomanganese LC.

Ferromanganese is used as a deoxidizing, desulphurizing and degassing agent in steel to remove nitrogen and other harmful elements that are present in steel in the initial smelting process, and to improve the mechanical properties, hardenability and resistance to abrasion of steel. The three types of ferromanganese that Ferroglobe produces are:

- high-carbon ferromanganese used to improve the hardenability of steel;
- medium-carbon ferromanganese, used to manufacture flat and other steel products; and
- low-carbon ferromanganese used in the production of stainless steel, steel with very low carbon levels, rolled steel plates and pipes for the oil industry.

Silicon-based alloys

Ferrosilicon

Ferroglobe is among the leading global ferrosilicon producers based on production output in recent years. During the year ended December 31, 2019, Ferroglobe sold 203,761 tons of ferrosilicon. For the years ended December 31, 2019, 2018 and 2017, Ferroglobe's revenues generated by ferrosilicon sales accounted for 17.0%, 16.0% and 15.3%, respectively, of Ferroglobe's total consolidated revenues.

Ferrosilicon is an alloy of iron and silicon (normally approximately 75% silicon). Ferrosilicon products are used to produce stainless steel, carbon steel, and various other steel alloys and to manufacture electrodes and, to a lesser extent, in the production of aluminum. Approximately 88% of ferrosilicon produced is used in steel production.

Ferrosilicon is generally used to remove oxygen from the steel and as alloying element to improve the quality and strength of iron and steel products. Silicon increases steel's strength and wear resistance, elasticity and scale resistance, and lowers the electrical conductivity and magnetostriction of steel.

Other silicon-based alloys

In addition to ferrosilicon, Ferroglobe produces various different silicon-based alloys, including calcium silicon and foundry products, which comprise inoculants and nodularizers. Ferroglobe produces more than 20 specialized varieties of

foundry products, several of which are custom made for its customers. Demand for these specialty metals is increasing and, as such, they are becoming more important components of Ferroglobe's product offering.

During the year ended December 31, 2019, Ferroglobe sold 91,668 tons of silicon-based alloys (excluding ferrosilicon). For the years ended December 31, 2019, 2018 and 2017, Ferroglobe's revenues generated by silicon-based alloys (excluding ferrosilicon) accounted for 11.3%, 9.5% and 10.8%, respectively, of Ferroglobe's total consolidated revenues.

The primary use for calcium silicon is the deoxidation and desulfurization of liquid steel. In addition, calcium silicon is used to control the shape, size and distribution of oxide and sulfide inclusions, improving fluidity, ductility, and the transverse mechanical and impact properties of the final product. Calcium silicon is also used in the production of coatings for cast iron pipes, in the welding process of powder metal and in pyrotechnics.

The foundry products that Ferroglobe manufactures include nodularizers and inoculants, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Silica fume

For the years ended December 31, 2019, 2018 and 2017, Ferroglobe's revenues generated by silica fume sales accounted for 2.1%, 1.6% and 2.1%, respectively, of Ferroglobe's total consolidated sales.

Silica fume is a by-product of the electrometallurgical process of silicon metal and ferrosilicon. This dust-like material, collected through Ferroglobe factories' air filtration systems, is mainly used in the production of high-performance concrete and mortar. The controlled addition of silica fume to these products results in increased durability, improving their impermeability from external agents, such as water. These types of concrete and mortar are used in large-scale projects such as bridges, viaducts, ports, skyscrapers and offshore platforms.

Services

Energy

The Company sold its Spanish hydroelectric business in 2019. For the years ended December 31, 2019, 2018 and 2017, Ferroglobe recognized a profit/(loss) as a result of the Spanish hydroelectric operations, in the amounts of ($450) thousand, $9,464 thousand and ($5,050) thousand, respectively.

In Spain, Ferroglobe sold all of the power it produces in the wholesale energy market that has been in place in Spain since 1998. Prior to 2013, Ferroglobe benefitted from a feed-in tariff support scheme, pursuant to which Ferroglobe was legally entitled to feed its electric production into the Spanish grid in exchange for a fixed applicable feed-in-tariff over a fixed period, and therefore received a higher price than the market price. However, the new regulatory regime introduced in Spain in 2013 eliminated the availability of the feed-in tariff support scheme for most of Ferroglobe's facilities. Ferroglobe was able to partly mitigate this reduction in prices through the optimization of its power generation such that it operates in peak-price hours, as well as through participation in the "ancillary services" markets whereby Ferroglobe agreed to generate power as needed to balance the supply and demand of energy in the markets in which it operates. See "Item 4.B—Regulatory Matters—Energy and electricity generation" below.

Villar Mir Energía, S.L. ("VM Energía"), a Spanish company controlled by Grupo VM, advised in the day-to-day operations of Ferroglobe's hydroelectric facilities in the Spanish wholesale market under a strategic advisory services contract (during 2019, this service was provided from January 1st to August 30th, date in which FAU was sold). Operating in the Spanish wholesale market requires specialized trading skills that VM Energía provided because of the broad base of both generating facilities and customers that it manages. During the year 2019, the Company sold its hydro-electric facilities in Spain; with this, the advisory agreement was terminated. For more information on the contractual arrangements between Ferroglobe and VM Energía, see "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions" below. Ferroglobe also owns and operates 19.2 megawatts of hydro-electric power capacity in two plants in

France. Given the small size of these operations and the specifics of the regulatory regime under which they operate, the results of operations and financial position with respect to these plants are included within our French operations.

Raw Materials, Logistics and Power Supply

The largest components of Ferroglobe's cost base are raw materials and power used for smelting at our metallurgical manufacturing facilities. In the year ended December 31, 2019, Ferroglobe's power consumption costs, represented approximately 27% of Ferroglobe's total consolidated cost of sales.

The primary raw materials Ferroglobe uses to produce its electrometallurgy products are carbon reductants (primarily coal, but also charcoal, metallurgical and petroleum coke, anthracite and wood) and minerals (manganese ore and quartz). Other raw materials used to produce Ferroglobe's electrometallurgy products include electrodes (consisting of graphite and carbon electrodes and electrode paste), slags and limestone, as well as certain specialty additive metals. Ferroglobe procures coal, manganese ore, quartz, petroleum and metallurgical coke, electrodes and most additive metals centrally under the responsibility of the corporate purchasing department. Some locally sourced raw materials are purchased at a decentralized level (country specific purchasers) under close cooperation with the corporate purchasing department.

Manganese ore

The global supply of manganese ore comprises standard- to high-grade manganese ore, with 35% to 56% manganese content, and low-grade manganese ore, with lower manganese content. Manganese ore production comes mainly from eight countries: South Africa, Australia, China, Gabon, Brazil, Ukraine, India and Ghana. However, the production of high-grade manganese ore is concentrated in Australia, Gabon, South Africa and Brazil.

The vast majority of the manganese ore Ferroglobe purchased in 2019 came from suppliers located in South Africa (57% of total purchases) and Gabon (33% of total purchases). In 2019, Ferroglobe had contractual arrangements with two main suppliers (located in South Africa and Gabon). Ferroglobe also buys manganese ore for the plant at Cee in Spain, which was divested in August 2019. Global manganese ore prices are mainly driven by manganese demand from China and to a lower extent from India. Potential disruption of supply from South Africa, Australia, Brazil or Gabon due to logistical, labor or other reasons may have an impact on the availability and the pricing of manganese ore.

Coal

Coal is the major carbon reductant in silicon and silicon alloys production. Only washed and screened coal with ash content below 10% and with specific physical properties may be used for production of silicon alloys. Colombia and the United States are the best source for the required type of coal and the vast majority of the silicon alloys industry, including Ferroglobe, is dependent on supply from these two countries.

Approximately 70% of the coal Ferroglobe purchased externally in 2019 for its facilities was sourced from one mining supplier in Colombia while the remaining 30% came from the United States, other Colombian mines, as well as from Poland and South Africa. Ferroglobe has a long-standing relationship with the coal washing plants that process Colombian coal in Europe, which price coal using spot, quarterly, semi-annual or annual contracts, based on market outlook. European coal prices, which are denominated in U.S. Dollars, are mainly based on API 2, the benchmark price reference for coal imported into northwest Europe. Prices reflect also currency fluctuation, labor issues and transportation situation in Colombia and South Africa, as well as sea-freights.

Ferroglobe also owns Alden Resources LLC ("Alden") in the United States. Alden provides a stable and long-term supply of low ash metallurgical grade coal by fulfilling a substantial portion of our requirements to our North American operations.

See "—Mining Operations" below for further information.

Quartz

Quartz, also known as quarzite, is a key raw material in the manufacture silicon metal and silicon based alloys.

Ferroglobe has secured access to quartz from its quartz mines in Spain, South Africa, the United States and Canada (see "—Mining Operations"). For the year ended December 31, 2019 approximately 68% of Ferroglobe's total consumption of quartz was self-supplied. Ferroglobe purchases quartz from third-party suppliers on the basis of annual contractual arrangements. Ferroglobe's quartz suppliers typically have operations in the same countries where Ferroglobe factories are located, or in close proximity, which minimizes logistical costs.

Ferroglobe controls quartzite mining operations located in Alabama and a concession to mine quartzite in Saint-Urbain, Québec (operated by a third-party miner). These mines supply our North American operations with a substantial portion of their requirements for quartz.

Other raw materials

Wood is needed for the production of silicon metal and silicon-based alloys. It is used directly in furnaces as woodchips or cut to produce charcoal, which is the major source of carbon reductant for Ferroglobe's plants in South Africa. In South Africa, charcoal is a less expensive substitute for imported coal and provides desirable qualities to the silicon-based alloys it is used to produce. In the other countries where Ferroglobe operates, Ferroglobe purchases wood chips locally or logs for on-site wood chipping operations from a variety of suppliers.

In 2019, the sourcing of the metallurgical coke was predominantly from Russia and Spain, although some quantities were sourced in Poland, Colombia and China.

Petroleum coke, electrode related products, slag, limestone and additive metals are other relevant raw materials Ferroglobe utilizes to manufacture its electrometallurgy products. Procurement of these raw materials is either managed centrally or with each country's raw materials procurement manager or plant manager and the materials purchased at spot prices or under contracts of a year or less.

In 2019, Graphite electrodes volumes decreased as a result of lower production volumes and conversion of furnaces from Si to FeSi in France. The sourcing of graphite electrodes is diversified with supply from European Countries, India, Russia and China. Agreements with suppliers range from six months to several years, and allow Ferroglobe to ensure supply reliability at adequate market prices.

Logistics

Logistical operations are managed centrally and at the local level. Sea-freight operations are centralized at the corporate level, while rail logistics is centralized at country level. Road transportation is managed at plant level with centralized coordination in multi-site countries. Contractual commitments in respect of transportation and logistics match, to the extent possible, Ferroglobe's contracts for raw materials and customer contracts.

Power

In Spain, Ferroglobe mainly acquires energy at the spot price through daily auction processes and is, therefore, exposed to market price volatility. Ferroglobe seeks to reduce its energy costs by stopping production at its factories during times of peak power prices and operating its factories in the hours of the day with lower energy prices. Additionally, Ferroglobe receives a rebate on a portion of its energy costs in Spain and France in exchange for an agreement to interrupt production, and thus power usage, upon request by the grid operator. Ferroglobe uses derivative financial instruments to partly hedge risks related to energy price volatility in Spain.

Ferroglobe has negotiated supply contracts based on market prices with two suppliers for years 2016 to 2019 and is currently negotiating long-term supply contracts with suppliers in the marketplace. A new contract covers 2020 to 2022.

Regulation enacted in 2015 enables FerroPem SAS to benefit from reduced tariffs resulting from its agreeing to interrupt production and respond to surges in demand, as well as receiving compensation for indirect CO2 costs under the EU Emission Trading System (ETS) regulation. These arrangements allow FerroPem SAS to operate competitively on a 12-month basis, but also concentrate production during periods when energy prices are lower if needed. Ferroglobe's production of energy in France through its hydro-electric power plants partially mitigates its exposure to increases in power prices, as an increase in energy prices has a positive impact on Ferroglobe revenues from electricity generation.

In the United States, we attempt to enter into long-term electric supply contracts that value our ability to interrupt load to achieve reasonable rates. Our power supply contracts have, in the past, resulted in stable price structures. In West Virginia, we have a contract with Brookfield Renewable Partners, LP to provide, on average, 45% of our power needs, from a dedicated hydro-electric facility, through December 2021 at a fixed rate. Our needs for non-hydroelectric power in West Virginia, Ohio, and Alabama are primarily sourced through special contracts that provide competitive rates whereas a portion of the power is also priced at market rates. At our Niagara Falls, New York plant, we have been granted a public sector package including 18.4 megawatts of hydro power through December 2021.

In South Africa, energy prices are regulated by the NERSA and price increases are publicly announced in advance.

The level of power consumption of our submerged electric arc furnaces is highly dependent on which products are being produced and typically fall in the following ranges: (i) manganese-based alloys require between 2.0 and 3.8 megawatt hours to produce one ton of product, (ii) silicon-based alloys require between 3.5 and 8 megawatt hours to produce one ton of product and (iii) silicon metal requires approximately 12 megawatt hours to produce one ton of product. Accordingly, consistent access to low cost, reliable sources of electricity is essential to our business.

Mining Operations

Reserves

Reserves are defined by SEC Industry Guide 7 as the part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination. Proven, or measured, reserves are reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes, and grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established. Probable, or indicated, reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance for probable reserves, although lower than that for proven reserves, is high enough to assume continuity between points of observation. Reserve estimates were made by independent third party consultants, based primarily on dimensions revealed in outcrops, trenches, detailed sampling and drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of Ferroglobe's reserve estimates.

The following table sets forth summary information on Ferroglobe's mines which were in production as of December 31, 2019.

Mine	Location	Mineral	Annual capacity kt	Production in 2019 kt	Mining Recovery	Proven reserves Mt[1]	Probable reserves Mt[1]	Mining Method	Reserve grade	Btus per lb.	Life[2]	Expiry date[3]
Sonia	Spain (Mañón)	Quartz	150	108	0.4	1.86	0.8	Open-pit	Metallurgical	N/A	19	2069
Esmeralda	Spain (Val do Dubra)	Quartz	50	27	0.4	0.07	0.13	Open-pit	Metallurgical	N/A	10	2029
Serrabal.	Spain (Vedra & Boqueixón)	Quartz	330	219	0.2	3.75	1.6	Open-pit	Metallurgical	N/A	19	2038
SamQuarz	South Africa (Delmas)	Quartzite	1,000	787	0.7	5.53	18.6	Open-pit	Metallurgical & Glass	N/A	37	2039
Mahale	South Africa (Limpopo)	Quartz	90	88	0.5	—	4.1	Open-pit	Metallurgical	N/A	15	2035
Roodepoort	South Africa (Limpopo)	Quartz	50	7	0.5	—	0.02	Open-pit	Metallurgical	N/A	1	2028
Fort Klipdam	South Africa (Limpopo)	Quartz	100	362	0.6	—	0.2	Open-pit	Metallurgical	N/A	2	2020 (4)
AS&G Meadows Pit	United States (Alabama)	Quartzite	300	257	0.4	3.20	—	Surface	Metallurgical	N/A	11	2027
			2,070	**1,855**		**14**	**25**					
King Mountain	United States (Kentucky)	Coal	180	64	0.7	0.2	—	Surface	Metallurgical	14,000	1	2021
Imperial Hollow	United States (Kentucky)	Coal	181	181	0.7	0.2	—	Surface	Metallurgical	14,000	1	2021
Log Cabin No. 5	United States (Kentucky)	Coal	120	78	0.6	0.7	—	Underground	Metallurgical	14,000	4	2024
			481	**323**		**1.1**	**—**					

(1) The estimated recoverable proven and probable reserves represent the tons of product that can be used internally or sold to metallurgical or glass grade customers. The mining recovery is based on historical yields at each particular site. We estimate our permitted mining life based on the number of years we can sustain average production rates under current circumstances.

(2) Current estimated mine life in years.

(3) Expiry date of Ferroglobe's mining concession.

(4) During 2019, a permit extension was granted until December 2020 with the option of a further 2-year extension that will grant the mine a remaining life until end 2022 where after a new application must be submitted. The perusal for the Mining Right has been stopped as the mine will be depleted on completion of current permit mining area.

Ferroglobe considers its Conchitina and Conchitina Segunda mines as a single mining project legally supported by the formation of Coto Minero, formally approved by the Mining Authority in March 2018. In addition, Ferroglobe currently holds all necessary permits to start production at its Conchitina mines. Although Ferroglobe has not received formal approval from the Spanish Mining Authority over its 2020 Annual Mining Plan, we are not legally prevented from commencing mining operations in the area based on the fully-authorized 2019 Annual Mining Plan.

Reserves for the Conchitina mine are, accordingly, considered to be probable reserves, and the following table sets forth summary information on the Conchitina and Conchitina Segunda mines:

				Recoverable Reserves			
Mine	Location	Mineralization	Mining Recovery	Proven MT[1]	Probable MT[1]	Reserve Grade	Mining Method
Conchitina and Conchitina Segunda	Spain (O Vicedo)	Quartz	0.35	—	0.98	Metallurgical	Open-pit

(1) Estimates of recoverable probable reserves represent the tons of product that can be used internally or which are of metallurgical grade and can be delivered to Ferroglobe's customers.

Ferroglobe has additional mining rights in Spain (Cristina, Trasmonte and Merlán), but none of these mines are currently producing or undergoing mine development activities as the Spanish Mining Authority started cancelling mining rights

for Merlán and Trasmonte in September 2015 and February 2017, respectively. The Spanish Mining Authority started the cancellation process for our mining rights for Cristina in December 2017. Ferroglobe does not consider certain Venezuelan mines to be mining assets (La Candelaria, El Manteco and El Merey) as the minerals are fully-depleted and because it will be difficult to obtain new mining rights at these locations given the current economic and political environment in Venezuela.

Spanish mining concessions

Sonia

The Sonia mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired Cuarzos Industriales S.A.U., which is the owner of the properties currently mined at Sonia, along with the Sonia mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The surface area covered by the Sonia mining concession is 387 hectares. The concession is due to expire in 2069.

Esmeralda

The original Esmeralda mining concession was granted in 1999 to Cuarzos Industriales, S.A.U., the owner of the properties currently mined at Esmeralda, after proper mining research had been conducted and the mining potential of the area had been demonstrated to the relevant public authority. The surface area covered by the Esmeralda mining concession is 84 hectares. The concession is due to expire in 2029.

Serrabal

The Serrabal mining concession was originally granted in 1978 to Rocas, Arcillas y Minerales S.A. Ferroglobe acquired control of this company, which is the owner of the properties currently mined at Serrabal, along with the Serrabal mining concession, in 2000. Rocas, Arcillas y Minerales, S.A. has applied for the renewal of the concession. Pursuant to an interim measure approved by the applicable mining authority, Rocas Arcillas y Minerales S.A. is permitted to continue mining operations in Serrabal indefinitely until a final decision on the renewal of the concession has been made. If the renewal is granted, the concession will expire in 2038. The surface area covered by Serrabal mining concession is 861 hectares.

Conchitina

The Conchitina mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired this company, along with Conchitina mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The Conchitina Segunda mining concession was granted to Cuarzos Industriales S.A.U. in 1997 for a 30-year term after proper mining research had been conducted and the mining potential of the area had been demonstrated. The Conchitina concession expired in 2009 and Cuarzos Industriales S.A.U. applied for its renewal, also requesting the competent authority to consolidate the concession with that of Conchitina Segunda. The legal support for the consolidation request was that both mining rights apply over a unique quartz deposit. Approval was formally granted by the authority in March 2018. Cuarzos Industriales S.A.U. is the owner of the properties currently mined at Conchitina. The surface area covered by Conchitina concessions is 497 hectares.

Cabanetas

The mining right granting process and tax regulations applicable to the Cabanetas limestone quarry slightly differ from those applicable to other Ferroglobe mines in Spain because Cabanetas is classified as a quarry, rather than a mine. Ferroglobe is currently operating the Cabanetas quarry pursuant to a permit resolution, which authorized the extension of the original mining concession, issued in 2013 by the competent mining authority. The extension is for a period of 30 years and, consequently, the concession will expire in 2043. Limestone extracted from the Cabanetas quarry was intended to be used by the Hidro Nitro Española S.A. electrometallurgy plant. However, because new metallurgical techniques require low consumption of this product, most of the Cabanetas limestone is generally sold to the civil engineering and

construction industries. The production level of the Cabanetas quarry has fallen considerably in recent years, mainly due to difficulties in the local construction industry.

The land on which the mining property is located is owned by Mancomunidad de Propietarios de Fincas Las Sierras and the plot containing the mining property is leased to Hidro Nitro Española S.A. pursuant to a lease agreement entered into in 1950, which was subsequently restated in 2000 and due to expire in 2020. The lease agreement may be extended until 2050. To retain the lease, Hidro Nitro Española S.A. pays the landlord an annual fee currently equal to €0.15 per ton of limestone quarried out of the mine. The quarry covers a surface area of approximately 180 hectares. The area affected by the planned exploitation during the current extension of the concession area is 6.9 hectares.

For further information regarding Spanish regulations applicable to mining concessions, as well as environmental and other regulations, see "—Laws and regulations applicable to Ferroglobe's mining operations—Spain."

South African mining rights

SamQuartz

The SamQuarz mining rights were transferred from the original owners, Glass South Africa Holdings (Pty) Ltd and Samancor Limited, to SamQuarz (Pty) Ltd. ("SamQuarz") in 1997. In 2009, the Minister of Mineral Resources converted the then-existing SamQuarz mining rights into new order mining rights due to expire after 30 years in 2039. In 2012, FerroAtlántica acquired control of SamQuarz along with the mining rights. At the end of 2014, SamQuarz mining rights were transferred from SamQuarz to its sole shareholder, Thaba Chueu Mining (Pty) Ltd ("TCM"). During 2017, ownership of the properties currently mined in Delmas were transferred from SamQuarz to TCM. The total surface area covered by SamQuarz mine is 118.1 hectares.

Mahale

Mahale is state-owned land, lawfully occupied by the Mahale community. TCM currently leases the land pursuant to an agreement with the Majeje Traditional Authority and runs mining operations on the area pursuant to mining rights owned by the state and licensed to it. The latest mining right license was granted by the Department of Mineral Resources in December 2014 and registered at the mining titles deeds office in early 2016. The license is for a 20-year period and will expire in 2035. The total surface area covered by Mahale mine is 329.7 hectares. The lease agreement between TCM and the Majeje Traditional Authority will be in force for the entire duration of the mining right or as long as it is economically viable for the lessee to mine. Under the lease agreement, a monthly rent of ZAR 1,500 is paid to the lessor, which is reviewed annually to reflect increases in the consumer price index. A general authorization has been granted to TCM by the Water Affairs Department to allow the company to use the water at the site, provided usage does not exceed 10,000 cubic meters per month.

Roodepoort

The Roodepoort mining right is held by Ferroglobe's subsidiary, Silicon Smelters (Pty.), Ltd. ("Silicon Smelters"), and will expire in 2028. In 2009, Silicon Smelters applied for a conversion of the mining right into a new mining right under the South African Mineral and Petroleum Resources Development Act (the "MPRDA"), which came into force in 2004. The new mining right has been granted and is valid for the continuation of our mining activities at the Roodeport mine until. Silicon Smelters is currently in the process of transferring this mining right to its mining subsidiary, TCM, in order that all licenses and permits in South Africa are held under this entity.

The total surface area covered by Roodepoort mine is 17.6 hectares. The mining area covers the cobble and block areas. The land in which Roodepoort mine is located is owned by Alpha Sand, which also conducts all mining operations as a contractor for Silicon Smelters. An agreement is in place whereby Alpha Sand operates the mine and Silicon Smelters purchases the quartz mined from Alpha Sand based on the quartz requirements of Silicon Smelters and at prices that are reviewed annually on the basis of increases in production costs and diesel fuel. The agreement with Alpha Sand will terminate at the expiry of the mining right or when it is no longer economically viable to mine quartz in the area.

Fort Klipdam

The land on which Fort Klipdam is located is owned by Silicon Smelters. The mining rights application filed by Silicon Smelters was rejected on the basis of the alleged inadequacy of the mine social and labor plan. An appeal has been filed by Silicon Smelters. As the appeal process has been unsuccessful to date, mining operations can only be conducted in areas specified under valid permits that have been obtained on the land. Additional permits were also obtained by the mining contractor on the adjacent property and their materials are brought to Fort Klipdam for processing and stockpiling. A comprehensive mining permit was issued in 2019 that covers the full remaining block quartz area and valid till end 2020, where after it can be extended by 2-years The total surface area covered by the Fort Klipdam farm portion is 640.9 hectares. The mining permits and mining rights only relates to an area of 136.1 hectares.

For further information regarding South African regulations applicable to mining concessions, as well as environmental and other regulations, see "—Laws and regulations applicable to Ferroglobe's mining operations—South Africa."

French mining rights

Soleyron

FerroPem, SAS, a subsidiary of Ferroglobe, owns 7.5 hectares of the overall Soleyron mine area. The Saint-Hippolyte de Montaigu Municipality owns the remaining 12.9 hectares. In February 2015, FerroPem, SA, entered into a lease and royalty agreement with the municipality, which is valid for five years. The effective date of the agreement and the relevant term coincide with the effective date and term of the prefectural authorization renewal, which was granted to FerroPem, SAS in March 2015 and is due to expire in 2020. Pursuant to this agreement, FerroPem, SAS pays to the municipality on an annual basis: (i) a fixed allowance for the lease of the land, and (ii) variable royalties on the basis of tons of quartz produced. In addition, FerroPem, SAS provided financial guarantees through an insurance company for an amount of €146 thousand. Such amount has been defined in the prefectural authorization as the amount needed for the land remediation.

United States and Canadian mining rights

Coal

As of December 31, 2019, we had three active coal mines (two surface mines and one underground mine) located in Knox County, Kentucky. We also had eight inactive permitted coal mines available for extraction located in Kentucky and Alabama. All of our coal mines are leased and the remaining term of the leases range from 2 to 40 years. The majority of the coal production is consumed by the Company's facilities in the production of silicon metal and silicon-based alloys. As of December 31, 2019, we estimate our proven and probable reserves to be approximately 13,000,000 tons with an average permitted life of approximately 35 years at present operating levels. Present operating levels are determined based on a three-year annual average production rate. Reserve estimates were made by our geologists, engineers and third parties based primarily on drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of our reserve estimates.

We currently have two coal processing facilities in Kentucky, one of which is inactive. The active facility processes approximately 720,000 tons of coal annually, with a capacity of 2,500,000 tons. The average coal processing recovery rate is approximately 65%.

Quartzite

We have an open-pit quartz mining operation in Lowndesboro, Alabama. It has wash-plant facilities. We also have a concession to mine quartzite in Saint-Urbain, Québec (operated by a third party miner). These mines supply our North American operations with a substantial portion of their requirements for quartzite.

Mauritania mining rights

In 2013, the Company signed an option to purchase two exploration permits for Quartz over a 2,000 square kilometer area located in northern Mauritania, approximately 250 kilometers from Nouadhibou harbor. After a successful exploration program and the granting of the right to acquire mining rights pursuant to both exploration permits at the Vadel 1 and Vadel 2 Mines respectively, Ferroglobe exercised the purchase option on June 30, 2016. The mining at the Vadel 1 and Vadel 2 Mines are held by Ferroquartz Mauritania SARL, a subsidiary of Ferroglobe, and will expire in 2031. The total surface area covered by Vadel 1 Mine is 195 square kilometers and by Vadel 2 Mine is 240 square kilometers. The construction of the mining facilities was completed during 2017 and the Company has started to test the production at Vadel 2. The Company shipped 12,417 tons from Vadel 2 during 2018. In 2019, Ferroquartz Mauritania SARL's mining operations ceased due to a dispute with its mining contractor. It is likely these operations will be permanently discontinued in 2020 .

Laws and regulations applicable to Ferroglobe's mining operations

Spain

In Spain, mining concessions have an average term of 30 years and are extendable for additional 30-year terms, up to a maximum of 90 years. In order to extend the concession term, the concessionaire must file an application with the competent public authority. The application, which must be filed three years prior to the expiration of the concession term, must be accompanied by a detailed report demonstrating the continuity of mineral deposits and the technical ability to extract such deposits, as well as reserve estimates, an overall mining plan for the term of the concession and a detailed description of extraction and treatment techniques. The renewal process is straightforward for a mining company that has been mining the concession regularly. The main impediments to renewal are a lack of mining activity and legal conflicts. Every year in January, in order to maintain the validity of the mining concession, an annual mining plan must be submitted to the competent public authority. This document must detail the work to be developed during the year.

Regarding the environmental requirements applicable to Ferroglobe's mining operations in Spain, each of Serrabal, Esmeralda, Conchitina and Conchitina Segunda is subject to an "environmental impact statement" (or "EIS"), issued by the relevant environmental authority and specifically tailored to the environmental features of the relevant mine. The EIS requires compliance with high environmental standards and is based on the environmental impact study performed by the mining concession applicant in connection with each mining project. It is the result of a consultation process involving several public administrations, including cultural, archaeology, landscape, urbanistic, health, agriculture, water and industrial administrations. The EIS sets forth all conditions to be fulfilled by the applicant, including in connection with the protection of air, water, soil, flora and fauna, landscape, cultural heritage, restoration and the interaction of such elements. The EIS covers mining activities, auxiliary facilities and heaps carried out in a determined perimeter of each mine and includes a program of surveillance and environmental monitoring. The relevant authority regularly verifies compliance with it.

Sonia is subject to a "restoration plan" which provides for less stringent environmental requirements than an EIS and is mainly aimed at ensuring that the new areas generated as a result of the mining activity are properly restored in an environmentally friendly manner. The restoration plan is submitted by the mining concession applicant for the approval of the relevant authority together with the mining project for the area. Information about the exploitation project, including area of operation, annual production, method and operating system, and designed top and bottom level of the pit is included in the restoration plan.

All mines, with the exception of Cabanetas, also need to obtain from the relevant public administration an authorization for the discharge of the water used at the mine. This authorization is subject to certain conditions, including analyzing the water before any such discharge is made. In addition, when presenting to the competent mining authorities its annual mining plans, Ferroglobe must include an environmental report describing all environmental actions carried out during the year. Authorities are able to oversee such actions upon their annual inspections. Because Cabanetas is classified as a quarry and not as a mine, environmental requirements are generally less stringent and an environmental report is not required. The environmental license for Cabanetas is included in the mining permit and is formalized in the annual work plan and the annual restoration plan approved by the mining authority.

The main recurring payment obligation in connection with Ferroglobe's mines in Spain relates to a tax payable annually, calculated on the basis of the budget included in the relevant annual mining plan provided to the authority. In addition, with the exception of Cabanetas, a small surface tax is paid annually to the administration on the basis of the mine property extension. A levy also applies to water consumption at each mine property, which is paid at irregular intervals whenever the relevant public administration requires it.

South Africa

In South Africa, mining rights are valid for a maximum of 30 years and may be renewed for further periods of up to 30 years per renewal. Prior to granting and renewing a mining right, the competent authority must be satisfied with the technical and financial capacity of the intended mining operator and the mining work program according to which the operator intends to mine. In addition, a species rescue, relocation and re-introduction plan must be developed and implemented by a qualified person prior to the commencement of excavation, a detailed vegetation and habitat and rehabilitation plan must be developed by a qualified person and a permit must be obtained from the South African Heritage Resource Agency prior to the commencement of excavations. The mining right holder must also compile a labor and social plan for its mining operations and comply with certain additional regulatory requirements relating to, among other things, human resource development, employment equity, housing and living conditions and health and safety of employees, and the usage of water, which must be licensed.

It is a condition of the mining right that the holder disposes of all minerals and products derived from exploitation of the mineral at competitive market prices, which means, in all cases, non-discriminatory prices or non-export parity prices. If the minerals are sold to any entity which is an affiliate or non-affiliate agent or subsidy of the mining right holder, or is directly or indirectly controlled by the holder, such purchaser must unconditionally undertake in writing to dispose of the minerals and any products from the minerals and any products produced from the minerals, at competitive market prices. The mining right, a shareholding, an equity, an interest or participation in the right or joint venture, or a controlling interest in a company, close corporation or joint venture, may not be encumbered, ceded, transferred, mortgaged, let, sublet, assigned, alienated or otherwise disposed of without the written consent of the Minister of Mineral Resources, except in the case of a change of controlling interest in listed companies.

Environmental requirements applicable to mining operations in South Africa are mostly set out in the MPRDA. Pursuant to the MPRDA, in order to obtain reconnaissance permissions as well as actual mining rights, applicants must have in place an approved environmental management plan, pursuant to which, among other things, all boreholes, excavations and openings sunk or made during the duration of the mining right must be sealed, closed, fenced and made safe by the mining operator. Further environmental requirements apply in connection with health and safety matters, waste management and water usage. The MPRDA further requires mining right applicants to conduct an environmental impact assessment on the area of interest and submit an environmental management program setting forth, among other things, baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives, and describing the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation, contain or remedy the cause of pollution or degradation and migration of pollutants and comply with any prescribed waste standard or management standards or practices. In addition, applicants must provide sufficient insurance, bank guarantees, trust funds or cash to ensure the availability of sufficient funds to undertake the agreed work programs and for the rehabilitation, management and remediation of any negative environmental impact on the interested areas. Holders of a mining right must conduct continuous monitoring of the environmental management plan, conduct performance assessments of the plan and compile and submit a performance assessment report to the competent authority, the frequency of which must be as approved in the environmental management program, or every two years or as otherwise agreed by the authority in writing. Mine closure costs are evaluated and reported on an annual basis, but are typically only incurred at mine closure.

The mining right holder must also be in compliance with an important governmental regulation called Black Economic Empowerment ("BEE"), a program launched by the South African government to redress certain racial inequalities. In order for a mining right to be granted, a mining company must agree on certain BEE-related conditions with the Department of Mineral and Petroleum Resources. Such conditions relate to, among other things, the company's ownership and employment equity and require the submission of a social and labor plan. Failure to comply with any of these BEE conditions may have an impact on, among other things, the ability of the mining company to retain the mining right or

obtain its renewal upon expiry. In addition, companies subject to BEE must conduct, on an annual basis, a BEE rating audit on several aspects of the business, including black ownership, management control, employment equity, skills development, preferential procurement, enterprise development and socio-economic development. Poor performance on the BEE rating audit may have a negative impact on the company's ability to do business with other companies, to the extent that a company's low rating is likely to reduce the rating of its business partners.

Mining rights are subject to payments of royalties to the tax authority, the South African Revenue Services. Such payments are generally made by June 30 and December 31 each year and upon the approval of the concessionaire's annual financial statements.

France

In France, mining rights are subject to a prefectural authorization. The authorization provides details of all requirements, including environmental requirements, which the mining operator and its subcontractors must comply with to operate the mine. Such requirements mainly concern archaeology, water protection, air pollution, control of noise, visual impact and safety matters. The authorization also contains the requirements relating to the remediation of the land after the end of the mining operations, including the provision of adequate financial guarantees by the mining operator. Mines are regularly inspected by the administration and local environmental commissions, comprising representatives of the relevant municipality, administration, several associations and the mining operator, which must meet at least once a year.

United States

The Coal Mine Health and Safety Act of 1969 and the Federal Mine Safety and Health Act of 1977 impose stringent safety and health standards on all aspects of mining operations. Also, the state of Kentucky, in which we operate underground and surface coal mines, has state mine safety and health regulations. The Mine Safety and Health Administration (the "MSHA") inspects mine sites and enforces safety regulations and the Company must comply with ongoing regulatory reporting to the MSHA. Numerous governmental permits, licenses or approvals are required for mining operations. In order to obtain mining permits and approvals from state regulatory authorities, we must submit a reclamation plan for restoring, upon the completion of mining operations, the mined property to its prior or better condition, productive use or other permitted condition. We are also required to establish performance bonds, consistent with state requirements, to secure our financial obligations for reclamation, including removal of mining structures and ponds, backfilling and regrading and revegetation.

Customers and Markets

The following table details the breakdown of Ferroglobe's revenues by geographic end market for the years ended December 31, 2019, 2018 and 2017.

	Year ended December 31,		
($ thousands)	**2019**	**2018**	**2017**
United States of America	533,764	674,243	547,309
Europe			
Spain	183,969	242,733	244,574
Germany	249,911	359,737	245,152
Italy	99,796	138,796	94,590
Rest of Europe	329,988	487,340	340,877
Total revenues in Europe	863,664	1,228,606	925,193
Rest of the World	217,794	339,153	259,774
Total	**1,615,222**	**2,242,002**	**1,732,276**

Customer base

We have a diversified customer base across our key product categories. We have built long-lasting relationships with our customers based on the breadth and quality of our product offerings and our ability to frequently offer lower-cost and more reliable supply options than our competitors who do not have production facilities located near the customers' facilities or production capabilities to meet specific customer requirements. We sell our products to customers in over 30 countries across six continents, though our largest customer concentration is in the United States and Europe. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years.

For the year ended December 31, 2019, Ferroglobe's ten largest customers accounted for approximately 39.9% of Ferroglobe's consolidated sales. The Company had no customer, that accounted for more than 10% of consolidated sales during the year ended December 31, 2019. During the year ended December 31, 2018, the Company had no customer, that accounted for more than 10% of consolidated sales.

For the year ended December 31, 2019, approximately 53.5% of our metallurgical segment sales were to customers in Europe, approximately 33% were to customers in the United States and approximately 13.5% were to the rest of the world.

Customer contracts

Our contracting strategy seeks to lock in significant revenue while remaining flexible to benefit from any price increases. Our silicon metal, manganese-based ferroalloys and silicon-based ferroalloys are typically sold under annual and quarterly contracts. Historically, we have targeted to contract approximately 50 – 65% of our silicon metal, manganese-based ferroalloys production and silicon-based ferroalloy production in the fourth quarter for the following calendar year. Typically, approximately 50% of contracted production has fixed prices whereas the other 50% are indexed to benchmarks.

The remaining balance of our silicon metal, manganese-based ferroalloys and our silicon-based ferroalloy production are sold under quarterly contracts or on a spot basis. By selling on a spot basis, we are able to take advantage of premiums for prompt delivery. We believe that our diversified contract portfolio allows us to lock in a significant amount of revenues while also allowing us to remain flexible and benefit from unexpected price and demand upticks. Given current spot price and current market dynamics, we are looking to enter into contracts for 2020 with shorter terms in order to benefit from expected price increases.

Sales and Marketing Activities

Ferroglobe generally sells the majority of its silicon products under annual or longer contracts for silicone producers, and between three months to one year for aluminum producing customers. All contracts generally include a volume framework and price formula based on the spot market price and other elements, including production costs and premiums. Ferroglobe also makes spot sales to customers with whom it does not have a contract as well as through quarterly agreements at prices that generally reflect market spot prices. In addition, Ferroglobe sells certain high quality products at prices that are not directly correlated with the market prices for the metals or alloys from which they are composed.

With the exception of the manganese-based business (as further detailed below), the vast majority of Ferroglobe's products are sold directly by its own sales force located in Spain, France, the United States and Germany, as well as in all of the countries in which Ferroglobe operates.

Ferroglobe's Spanish hydro-electric operations delivered all electricity produced to the Spanish national grid for sale in the Spanish wholesale market (until August, 2019).

On February 1, 2018, Ferroglobe completed the acquisition from a wholly-owned subsidiary of Glencore International AG ("Glencore") of a 100% interest in Glencore's manganese alloys plants in Mo i Rana (Norway) and Dunkirk (France). Simultaneously with the acquisition, Glencore and Ferroglobe entered into an exclusive agency arrangement for the marketing of Ferroglobe's manganese alloys products worldwide, and for the procurement of manganese ores to supply

Ferroglobe's plants, in both cases for a period of ten years. For Ferroglobe, the partnership facilitates access to Glencore's global clients in the steel industry, and provides a broader sales and procurement network that will enhance our own capabilities. For our customers and suppliers, it provides access to an extended volume and range of products that will add value to our commercial relationships.

Competition

The most significant competitive factor in the silicon metal, manganese and silicon-based alloys and specialty metals markets is price. Other factors include consistency of the chemical and physical specifications over time and reliability of supply.

The silicon metal, manganese- and silicon-based alloys and specialty metals markets are highly competitive, global markets, in which suppliers are able to reach customers across different geographies, and in which local presence is generally a minor advantage. In the silicon metal market, Ferroglobe's primary competitors include Chinese producers, which have production capacity that exceeds total global demand. Aside from Chinese producers, Ferroglobe's competitors include Elkem, a Norwegian manufacturer of silicon metal, ferrosilicon, foundry products, silica fumes, carbon products and energy, Dow Chemical, an American company specializing, *inter alia*, in silicone and silicon-based technology, Rusal, a Russian company that is a leading global aluminum and silicon metal producer, Rima, a Brazilian silicon metal and ferrosilicon producer, Liasa, a Brazilian producer of silicon, Wacker, a German chemical business which manufactures silicon, and Simcoa Operations, an Australian company specializing in the production of silicon as well as several other smaller companies.

In the manganese and silicon alloys market, Ferroglobe's competitors include Privat Group, a Ukrainian company with operations in Australia, Ghana and Ukraine, Eramet, a French mining and metallurgical group, CHEMK Industrial Group, a Russian conglomerate which is one of the largest silicon-based alloy producers in the world, South 32 (formerly BHP Billiton), a global mining company with operations in Australia and South Africa and Vale, a mining and metals group based in Brazil, Asia Minerals and OM Holdings in Malaysia and Elkem in Norway.

In the silica fumes market, Ferroglobe's competitors include Elkem and Dow.

Ferroglobe strives to be a highly efficient, low-cost producer, offering competitive pricing and engaging in manufacturing processes that capture most of its production by-products for reuse or resale. Additionally, through the vertical integration of its quartz mines in Spain, the United States, Canada and South Africa and its metallurgical coal mines in the United States, Ferroglobe has ensured access to some of the high quality raw materials that are essential in silicon metal, manganese- and silicon-based alloys and specialty metals production processes and has been able to gain a competitive advantage over some of its competitors because it has reduced the contribution of these raw materials to its cost base.

Research and Development (R&D)

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. Set forth below is a description of Ferroglobe's significant ongoing research and development projects.

ELSA electrode

Ferroglobe has internally developed a patented technology for electrodes used in silicon metal furnaces, which it has been able to sell to several major silicon producers globally. This technology, known as the ELSA electrode, improves the energy efficiency in the production process of silicon metal and eliminates contamination with iron. Ferroglobe has granted these producers the right to use the ELSA electrode against payment to Ferroglobe of royalties.

Solar grade silicon

Ferroglobe has sought to produce solar grade silicon metal with a purity above 99.9999% through a new, potentially cost-effective, electrometallurgical process. The traditional chemical process tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by Ferroglobe at an earlier stage at its research and development facilities aims to reduce the costs and energy consumption associated with the production of solar grade silicon.

In 2016, FerroAtlántica entered into a project with Aurinka Photovoltaic Group, S.L. ("Aurinka") for a feasibility study and basic engineering for an upgraded metallurgical grade ("UMG") solar silicon manufacturing plant. On December 20, 2016, Grupo FerroAtlántica, S.A.U., along with certain of its subsidiaries, entered into a joint venture agreement (the "Solar JV Agreement") with Blue Power Corporation, S.L. ("Blue Power") and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. Under the Solar JV Agreement, FerroAtlántica indirectly owned 75% of the operating company formed as part of the joint venture (Ferrosolar Opco Group, S.L.) and 51% of the company formed as part of the joint venture to hold the intellectual property rights and know how contributed by Aurinka and Ferroglobe to the joint venture. See "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions." In furtherance of this project, FerroAtlántica obtained a loan, with a principal amount of approximately €45 million, from the Spanish Ministry of Industry and Energy for the purpose of building the UMG silicon plant. Due to the market environment for solar grade silicon (or polysilicon) worldwide, at the end of 2018 the Company suspended the investment in the project while preserving the technology and know-how in order to be able to finalize the construction of the factory when market circumstances change. In July 2019, the Solar JV Agreement was terminated. See "Item 7.B – Related Party Transactions – Aurinka and the Solar JV, below.

High value powders – Li-ion batteries

Ferroglobe has launched the High Value Powder project, which aims at producing silicon-based, tailor made products for high end applications. Among the various targeted applications, is a particularly attractive market in anodes for Li-ion batteries. In this specific field, Ferroglobe has developed several partnerships and technical collaborations to develop successful research and development solutions to enhance the energy capacity of the anode in Li-ion batteries by adding elemental silicon.

Proprietary Rights and Licensing

The majority of Ferroglobe's intellectual property consists of proprietary know-how and trade secrets. Ferroglobe's intellectual property strategy is focused on developing and protecting proprietary know-how and trade secrets, which are maintained through employee and third-party confidentiality agreements and physical security measures. Although Ferroglobe owns some patented technology, we believe that the Company's businesses and profitability do not rely fundamentally upon patented technology and that the publication implicit in the patenting process may in certain instances be detrimental to Ferroglobe's ability to protect its proprietary information.

Regulatory Matters

Environmental and health and safety

Ferroglobe operates facilities worldwide, which are subject to foreign, national, regional, provincial and local environmental, health and safety laws and regulations, including, among others, those requirements governing the discharge of materials into the environment, the generation, use, storage and disposal of hazardous substances, the extraction and use of water, land use, reclamation and remediation and the health and safety of Ferroglobe's employees. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its regulated activities, which permits may be subject to modification or revocation by such authorities.

Ferroglobe may not be at all times in full compliance with such laws, regulations and permits, although Ferroglobe is not aware of any material past or current noncompliance. Failure to comply with these laws, regulations and permits may

result in the assessment of administrative, civil and criminal penalties or other sanctions by regulators, the imposition of obligations to conduct remediation or upgrade or install pollution or dust control equipment, the issuance of injunctions limiting or preventing Ferroglobe's activities, legal claims for personal injury or property damages, and other liabilities.

Under these laws, regulations and permits, Ferroglobe could also be held liable for any consequences arising out of human exposure to hazardous substances or environmental damage that relates to Ferroglobe's current or former operations or properties. Environmental, health and safety laws are likely to become more stringent in the future. Ferroglobe purchases insurance to cover these potential liabilities, but the costs of complying with current and future environmental, health and safety laws, and its liabilities arising from past or future releases of, or exposure to, hazardous substances, may exceed insured, budgeted or reserved amounts and adversely affect Ferroglobe's business, results of operations and financial condition.

Some environmental laws assess liability on current or previous owners or operators of real property for the cost of removal or remediation of hazardous substances. In addition to cleanup, cost recovery or compensatory actions brought by foreign, national, provincial and local agencies, neighbors, employees or other third parties could make personal injury, property damage or other private claims relating to the presence or release of hazardous substances. Environmental laws often impose liability even if the owner or operator did not know of, or did not cause, the release of hazardous substances. Persons who arrange for the disposal or treatment of hazardous substances also may be responsible for the cost of removal or remediation of these substances. Such persons can be responsible for removal and remediation costs even if they never owned or operated the disposal or treatment facility. In addition, such owners or operators of real property and persons who arrange for the disposal or treatment of hazardous substances can be held responsible for damages to natural resources.

There are a variety of laws and regulations in place or being considered at the international, national, regional, provincial and local levels of government that restrict or are reasonably likely to result in limitations on, or additional costs related to, emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause Ferroglobe to incur material costs to reduce the greenhouse gas emissions from its operations (through additional environmental control equipment or retiring and replacing existing equipment) or to obtain emission allowance or credits, or result in the incurrence of material taxes, fees or other governmental impositions on account of such emissions. In addition, such developments may have indirect impacts on Ferroglobe's operations, which could be material. For example, they may impose significant additional costs or limitations on electricity generators, which could result in a material increase in energy costs.

For a summary of regulatory matters applicable to Ferroglobe's mining operations, see "—Laws and regulations applicable to Ferroglobe's mining operations."

Energy and electricity generation

Ferroglobe operates hydro-electric plants in France, which are subject to energy, environmental, health and safety laws and regulations, including those governing the generation of electricity and the use of water and river basins. These laws and regulations require Ferroglobe to obtain permits from governmental authorities, which may be subject to modification or revocation by these authorities.

Trade

Ferroglobe benefits from antidumping and countervailing duty orders and laws that protect its products by imposing special duties on unfairly traded imports from certain countries. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, there are antidumping and countervailing duties in effect covering silicon metal imports from China. These orders are subject to revision, revocation or rescission as a result of periodic reviews.

In the United States, the U.S. International Trade Commission reached a final affirmative determination in the sunset review of the antidumping duty order on silicon metal from China in May 2018. The Commission determined that

revocation of the order would be likely to lead to continuation or recurrence of material injury to the domestic silicon metal industry. As a result, the U.S. Department of Commerce issued a notice in June 2018 continuing the order for another five years. A sunset review of the antidumping duty order on silicon metal from Russia has been initiated in June 2019. The U.S. International Trade Commission is currently conducting the final phase of its review of the order.

In the European Union, the industry association Euroalliages filed a request with the European Commission on behalf of Ferroglobe's subsidiaries FerroAtlántica and FerroPem for an expiry review of the antidumping measures on ferrosilicon from China and Russia. Based on this request, the European Commission initiated in April 2019 a review to determine whether to maintain the antidumping measures in place and the rates of duty to be imposed.

A sunset (expiry) review of the Canadian antidumping/countervailing duty order covering silicon metal imports from China was concluded August 22, 2019. As a result of that proceeding, the order was continued for a further five-year period with the result that antidumping and countervailing duties continue to apply to imports of silicon metal from China into Canada. The order will be reviewed again in 2024 to determine whether it should be continued for a further five-year period.

Seasonality

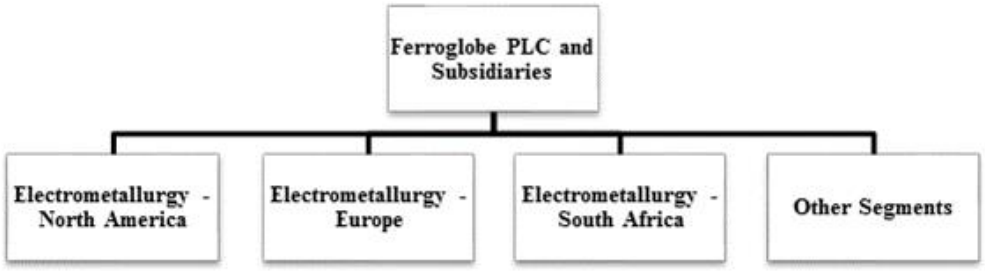
Electrometallurgy

Due to the cyclicality of energy prices and the energy-intensive nature of the production processes for silicon metal, manganese- and silicon-based alloys and specialty metals, Ferroglobe does not operate its electrometallurgy plants during certain periods or times of day when energy prices are at their peak. Demand for Ferroglobe's manganese- and silicon-based alloy and specialty metals products is lower during these periods as its customers also suspend their energy-intensive production processes involving Ferroglobe's products. As a result, sales within particular geographic regions are subject to seasonality.

Energy

Ferroglobe's hydro-electric power generation is dependent on the amount of rainfall in the regions in which its hydropower facilities are located, which varies considerably from season to season.

C. Organizational structure.



For a list of subsidiaries and ownership structure see Note 2 in the Consolidated Financial Statements.

D. Property, Plant and Equipment.

See "Item 4.B.—Information on the Company—Business Overview."

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. Operating Results

Introduction

The following "management's discussion and analysis" should be read in conjunction with the Consolidated Financial Statements of Ferroglobe as of December 31, 2019 and 2018 and for the years ended December 31, 2019, 2018 and 2017, which are included in this annual report. This discussion includes forward-looking statements, which, although based on assumptions that Ferroglobe considers reasonable, are subject to risks and uncertainties which could cause actual events or conditions to differ materially from those expressed or implied by the forward-looking statements. See "Cautionary Statements Regarding Forward-Looking Statements." For a discussion of risks and uncertainties facing Ferroglobe, see "Item 3.D.—Key Information—Risk Factors."

In accordance with IAS 21 — The Effects of Changes in Foreign Exchange Rates, Ferroglobe's consolidated income statements and consolidated statement of financial position have been translated from the functional currency of each subsidiary, which is determined by the primary economic environment in which each subsidiary operates, into the reporting currency of the Company that is U.S. Dollars.

Principal Factors Affecting Our Results of Operations

Sale prices

Ferroglobe's operating performance is highly correlated to sales prices, which are influenced by several different factors that vary across Ferroglobe's segments.

Silicon metal pricing slowly decreased throughout 2019 due to market supply and demand dynamics.

Historically manganese-based alloy prices have shown a significant correlation with the price of manganese ore, but 2019 and 2018 were an anomalies where the manganese ore pricing was high while the manganese-based alloy pricing stayed low, which caused a margin squeeze for Ferroglobe. We anticipate these dynamics to go back to more historical type spreads in 2020. Our customers' businesses were declining for European steel mill production in 2019.

Our Ferrosilicon business pricing likewise continued to decline as we moved through 2019. This was mostly due to oversupply in Europe as this market was coming off of record price levels from the previous year. Again our European steel mill customers' businesses were declining as we moved through 2019.

Under Ferroglobe's pricing policy, which is aimed at reducing dependence on spot market prices, prices applied to its term contracts have a diversity of formulas ranging from prices related to spot market prices to annual or quarterly fixed prices. Ferroglobe sells certain high quality products for which pricing is not directly correlated to spot market prices.

Cost of raw materials

The key raw materials sourced by Ferroglobe are quartz, manganese ore, coal, metallurgical coke, wood and charcoal. Manganese ore is the largest component of the cost base for manganese-based alloys. In 2019, more than 60% of Ferroglobe's total $159.8 million expense with respect to manganese ore fell under an annual commitment, whilst the remaining was purchased on spot basis. Coal meeting certain standards for ash content and other physical properties is used as a major carbon reductant in silicon-based alloy production. In 2019, coal represented a $114.2 million expense for Ferroglobe. Metallurgical coke, which is used for manganese alloy production, represented a total purchase volume of

$38.6 million in 2019. Wood is both an important element for the production of silicon alloys and used to produce charcoal, which is used as a carbon reductant at Ferroglobe's South African subsidiary Silicon Smelters. Ferroglobe's wood expense amounted to $46.1 million in 2019. The FerroAtlántica subsidiaries of Ferroglobe source approximately 59% of their quartz needs from FerroAtlántica's mines in Spain and South Africa, and Globe subsidiaries source approximately 84% of their quartz needs from Globe's mines in the United States and Canada. Total quartz consumption in 2019 represented an expense of $91.7 million.

Power

Power constitutes one of the single largest expenses for most of Ferroglobe's products other than manganese-based alloys. Ferroglobe focuses on minimizing energy prices and unit consumption throughout its operations by concentrating its silicon and manganese-based alloy production during periods when energy prices are lower. In 2019, Ferroglobe's total power consumption was 7,392 gigawatt hours with power contracts that vary across its operations.

In Spain and France, FerroAtlántica receives a rebate on a portion of its energy costs in exchange for an agreement to interrupt production, and thus power usage, upon request. FerroAtlántica has power contracts to partly hedge risks related to energy price volatility in Spain.

In France, FerroPem SAS. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff ("Tarif Vert"), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated supply contracts based on market prices with two suppliers for years 2016 to 2019 and is currently negotiating long-term supply contracts with suppliers in the market place. A new contract covers 2020 to 2022. Regulation enacted in 2015 enables FerroPem SAS to benefit from reduced tariffs resulting from its agreeing to interrupt production and respond to surges in demand, as well as receiving compensation for indirect CO_2 costs under the EU Emission Trading System (ETS) regulation. These arrangements allow FerroPem SAS. to operate competitively on a 12-month basis, but also concentrate production during periods when energy prices are lower if needed.

In the United States, we attempt to enter into long-term electric supply contracts that value our ability to interrupt load to achieve reasonable rates. Our power supply contracts have, in the past, resulted in stable price structures. In West Virginia, we have a contract with Brookfield Renewable Power to provide, on average, 45% of our power needs, from a dedicated hydro-electric facility, through December 2021 at a fixed rate. Our power needs for the non-hydroelectric component of West Virginia, Ohio, and Alabama are primarily sourced through special contracts that provide competitive rates whereas a portion of the power is also priced at market rates. At our Niagara Falls, New York plant, we have been granted a public sector package including 18.4 megawatts and hydro power through to 2028 with the balance being procured from the market.

In South Africa, we have an "evergreen" supply agreement with Eskom, the parastatal electricity supplier, for our Polokwane, eMalahleni, Newcastle (Siltech) and Thaba Chueu mining plants. Eskom's energy prices are regulated by the National Energy Regulator (NERSA) and price increases are publicly announced in advance. A specific agreement has been approved by NERSA in 2018 for silicon production in Polokwane for three furnaces and in eMalahleni for one furnace. In order to promote silicon production in South Africa, Polokwane and eMalahleni have been offered a two year discount over the public tariffs on the electricity consumed to produce silicon. Silicon Metal pricing during 2019 deteriorated to such an extend that the special agreement was terminated during 2019 under Hardship clauses and the Polokwane smelter was stopped completely to wait for an improvement of sales prices and market demand. In eMalaleni, the special pricing agreement was never activated as the plant focused on FeSi production that was and still is much more economical and profitable to produce. The eMalahleni plant also participates in an interuptibility program where curtailments for power to Eskom is compensated on an hourly basis. This effectively has a positive contribution to the overall price paid for electricity. In addition, emphasis is placed to produce maximum products during summer months when power is cheaper and to reduce production over winter periods (June, July and August), to a minimum. Production in evening Peak Hours is also limited if there is no curtailment programmed.

In 2020, the South Africa Government announced that it will allow Private Power Producers to make use of the Eskom network to assist in providing the shortage of power. This will also lead to the establishment of Private Power suppliers in

future that could give better prices than Eskom and negotiations are current under way between Industry, Mining, Eskom and Government to establish a now Industry Flatrate Power Pricing that is expected to be implemented in 2022/23 with a power increase forecast that is fixed for a period of 5-years minimum.

Foreign currency fluctuation

Ferroglobe has a diversified production base consisting of production facilities across the United States, Europe, South America, South Africa and Asia. Ferroglobe production costs are mostly dependent on local factors, with the exception of the cost of manganese ore and coal, which are dependent on global commodity prices. The relative strength of the functional currencies of Ferroglobe's subsidiaries influences its competitiveness in the international market, most notably in the case of Ferroglobe's South African operations, which have historically exported a majority of their production to the U.S. and the European Union. For additional information see "Item 11.—Quantitative and Qualitative Disclosures About Market Risk—Foreign Exchange Rate Risk."

Regulatory changes

See "Item 4.B.—Business Overview—Regulatory Matters."

Critical Accounting Policies

The discussion and analysis of Ferroglobe's financial condition and results of operations is based upon its Consolidated Financial Statements, which have been prepared in accordance with IFRS. The preparation of those financial statements requires Ferroglobe to make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, the disclosure of contingent assets and liabilities and related disclosure at the date of its financial statements. The estimates and related assumptions are based on available information at the date of preparation of the financial statements, on historical experience and on other relevant factors. Actual results may differ from these estimates under different assumptions and conditions. Critical accounting policies are those that reflect significant judgments of uncertainties and potentially result in materially different results under different assumptions and conditions. The principal items affected by estimates are business combinations, goodwill, impairment of long-lived assets, inventories and income taxes. The following are Ferroglobe's most critical accounting policies, because they generally involve a comparatively higher degree of judgment in their application. For a description of all of Ferroglobe's principal accounting policies, see Note 4 to the Consolidated Financial Statements of Ferroglobe included elsewhere in this annual report.

Business combinations

Ferroglobe subsidiaries have completed a number of significant business acquisitions over the past several years. Our business strategy contemplates that we may pursue additional acquisitions in the future. When we acquire a business, the purchase price is allocated based on the fair value of tangible assets and identifiable intangible assets acquired and liabilities assumed. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Goodwill as of the acquisition date is measured as the residual of the excess of the consideration transferred, plus the fair value of any non-controlling interest in the acquiree at the acquisition date, over the fair value of the identifiable net assets acquired. If, after reassessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the excess is recognized immediately in profit or loss as a bargain purchase gain. We generally engage independent third-party appraisal firms to assist in determining the fair value of assets acquired and liabilities assumed. Such a valuation requires management to make significant estimates, especially with respect to intangible assets. These estimates are based on historical experience and information obtained from the management of the acquired companies. These estimates are inherently uncertain and may impact reported depreciation and amortization in future periods, as well as any related impairment of goodwill or other long lived assets.

See Note 5 to the accompanying audited Consolidated Financial Statements for detailed disclosures related to our acquisitions.

Goodwill

Goodwill represents the excess purchase price of acquired businesses over fair values attributed to underlying net tangible assets and identifiable intangible assets. For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units (or groups of cash generating units) that is expected to benefit from the synergies of the combination. A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

The valuation of the Company's cash generating units requires significant judgment in evaluation of, among other things, recent indicators of market activity and estimated future cash flows, discount rates and other factors. The estimates of cash flows, future earnings, and discount rate are subject to change due to the economic environment and business trends, including such factors as raw material and product pricing, interest rates, expected market returns and volatility of markets served, as well as our future manufacturing capabilities, government regulation and technological change. We believe that the estimates of future cash flows, future earnings, and fair value are reasonable; however, changes in estimates, circumstances or conditions could have a significant impact on our fair valuation estimation, which could then result in an impairment charge in the future.

During the year ended December 31, 2019, in connection with our annual goodwill impairment test, an impairment charge of $174,008 thousand was recognized related to the complete impairment of goodwill in Canada and partial impairment of goodwill in the United States, resulting from a decline in future estimated projections and increase of the discount rate which caused the Company to revise its expected future cash flows from its Canadian and United States business operations.

During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis.

Long-lived assets (excluding goodwill)

In order to ascertain whether its assets have become impaired, Ferroglobe compares their carrying amount with their recoverable amount if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, Ferroglobe estimates the recoverable amount of the cash-generating unit to which the asset belongs. Recoverable amount is the higher of fair value and value in use, which is the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under "net impairment losses" in the consolidated income statement. Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment is recognized as "other income" in the consolidated income statement. The basis for depreciation or amortization is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

During 2019 the Company did not recognize any impairment in relation to our solar-grade silicon metal project based in Puertollano, Spain (at December 31, 2018, an impairment of $40,537 thousand was recognized in losses related to property, plant and equipment). At the end of 2018 the Company decided to temporarily suspend investment in the project due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. The Company is preserving the technology and know-how in order to be able to finalize the construction of the factory as soon as market circumstances change. The Company continues to recognize these project assets at $45,599 thousand based on the fair value less costs of disposal. Fair value less costs of disposal related to land and buildings was determined based on recent sales of comparable industrial properties located near the project. Fair value less costs of disposal related to machinery and equipment was determined by assessing the recoverability of the assets to a market participant. Additionally, during 2018 the Company recognized an intangible asset impairment of $13,947 thousand of development expenditures related to the solar project.

Inventories

Cost of inventories is determined by the average cost method. Inventories are valued at the lower of cost or market value. Circumstances may arise (e.g., reductions in market pricing, obsolete, slow moving or defective inventory) that require the carrying amount of our inventory to be written down to net realizable value. We estimate market and net realizable value based on current and future expected selling prices, as well as expected costs to complete, including utilization of parts and supplies in our manufacturing process. We believe that these estimates are reasonable; however, future market price decreases caused by changing economic conditions, customer demand, or other factors could result in future inventory write-downs that could be material.

Income taxes

The current income tax expense incurred by Ferroglobe subsidiaries on an individual basis is determined by applying the applicable tax rate to the taxable profit for the year, calculated on the basis of accounting profit before tax, increased or decreased, as appropriate, by the permanent differences arising from the application of tax legislation and by the elimination of any tax consolidation adjustments, taking into account tax relief and tax credits. The consolidated income tax expense is calculated by adding together the expense recognized by each of the consolidated subsidiaries, increased or decreased, as appropriate, as a result of the tax effect of consolidation adjustments for accounting purposes.

Ferroglobe's deferred tax assets and liabilities include temporary differences measured at the amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities and their tax bases, and tax loss and tax credit carryforwards. These amounts are measured at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled. Deferred tax liabilities are recognized for all taxable temporary differences, except for those arising from the initial recognition of goodwill. Deferred tax assets are recognized to the extent that it is considered probable that Ferroglobe will have taxable profits in the future against which the deferred tax assets can be utilized. The deferred tax assets and liabilities recognized are reassessed at each reporting date in order to ascertain whether they still exist, and the appropriate adjustments are made on the basis of the findings of the analyses performed.

Significant judgment is required in determining income tax provisions and tax positions. Ferroglobe may be challenged upon review by the applicable taxing authorities, and positions taken may not be sustained. The accounting for uncertain income tax positions requires consideration of timing and judgments about tax issues and potential outcomes and is a subjective estimate. In certain circumstances, the ultimate outcome of exposures and risks involves significant uncertainties. If actual outcomes differ materially from these estimates, they could have a material impact on Ferroglobe's results of operations and financial condition. Interest and penalties related to uncertain tax positions are recognized in income tax expense.

Results of Operations — Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

($ thousands)	Year ended December 31, 2019	2018
Sales	1,615,222	2,242,002
Cost of sales	(1,214,397)	(1,446,677)
Other operating income	54,213	45,844
Staff costs	(285,029)	(338,862)
Other operating expense	(225,705)	(277,560)
Depreciation and amortization charges, operating allowances and write-downs	(120,194)	(113,837)
Impairment losses	(175,899)	(58,919)
Net (loss) gain due to changes in the value of assets	(1,574)	(7,623)
(Loss) gain on disposal of non-current assets	(2,223)	14,564
Bargain purchase gain	—	40,142
Operating (loss) profit	**(355,586)**	**99,074**
Finance income	1,380	4,858
Finance costs	(63,225)	(57,066)
Financial derivative gain	2,729	2,838
Exchange differences	2,884	(14,136)
(Loss) profit before tax	**(411,818)**	**35,568**
Income tax (expense) benefit	41,541	(20,459)
(Loss) profit for the year from continuing operations	**(370,277)**	**15,109**
Profit (loss) for the year from discontinued operations	**84,637**	**9,464**
(Loss) profit for the year	**(285,640)**	**24,573**
Loss attributable to non-controlling interests	5,039	19,088
(Loss) profit attributable to the Parent	**(280,601)**	**43,661**

Sales

Sales decreased $626,780 thousand, or 28.0%, from $2,242,002 thousand for the year ended December 31, 2018 to $1,615,222 thousand for the year ended December 31, 2019, due to the market trend that has led to a drop in both volume and average price.

Sales volume decreased across all major products (excluding by-products). Silicon metal sales volume decreased 32.0%, silicon-based alloys sales volume decreased 13.9%, while manganese-based alloys sales volume decreased 7.5%, primarily due to due to the downward trend of the market.

Average selling prices of silicon metal, silicon-based alloys and manganese-based alloys decreased year over year. The average selling price for silicon metal decreased by 14.9% to $2,252/MT in 2019, as compared to $2,647/MT in 2018; the average selling price for silicon-based alloys decreased by 2.1% to $1,983/MT in 2019, as compared to $2,026/MT in 2018 and the average selling price for manganese-based alloys decreased by 8.4% to $1,140/MT in 2019, as compared to $1,244/MT in 2018. The decrease in average selling prices reflects a downward pricing trend in the markets for silicon metal, silicon-based alloys, and manganese-based alloys.

Cost of sales

Cost of sales decreased $232,280 thousand, or 16.1%, from $1,446,677 thousand for the year ended December 31, 2018 to $1,214,397 thousand for the year ended December 31, 2019, primarily due to a decrease in sales volumes, particularly Silicon metal, which decreased by 112,886 MT.

Costs of sales for plants in North America, which produce silicon-metal and silicon-based alloys, were from 56% in 2018 to 66.5% in 2019, as a percentage of sales. Continued increases in energy costs and an increase in the purchase price of manganese ore impacted costs for manganese-based alloys in Europe.

Other operating income

Other operating income increased $8,369 thousand, or 18.3%, from $45,844 thousand for the year ended December 31, 2018 to $54,213 thousand for the year ended December 31, 2019, primarily due to an increase in the use of CO_2 in the production process, supported by government grants.

Staff costs

Staff costs decreased $53,834 thousand, or 15.9%, from $338,862 thousand for the year ended December 31, 2018 to $285,029 thousand for the year ended December 31, 2019, primarily due to the closure costs associated with the Niagara and Selma facilities at the end of 2018 and the whole of 2019. Additionally staff costs decreased as a result of the furnace shut down, mainly in the last quarter of 2019.

Other operating expense

Other operating expense decreased $51,855 thousand, or 18.7%, from $277,560 thousand for the year ended December 31, 2018 to $225,705 thousand for the year ended December 31, 2019, primarily due to a decrease in variable costs associated with sales. As a result, there is a decrease in royalties and taxes on coal, maintenance related to the revision of the furnace due to closed furrnaces and lower production, shipping, freight, and storage costs associated with the decrease in sales volume. Additionally, other operating expenses decreased due to the closure of the Selma and Niagara plants for the whole of 2019, as well as the planned closure of furnaces during the second half of 2019.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $6,357 thousand or 5.6%, from $113,837 thousand for the year ended December 31, 2018 to $120,194 thousand for the year ended December 31, 2019, primarily due to additions by $39,420 thousand, mainly driven by the addition of $34,039 thousands in Advances and Property, Plant and Equipment in Construction distributed among the different entities of the group.

Impairment losses

Impairment losses increased $116,980 thousand, or 198.5%, from a loss of $58,919 thousand for the year ended December 31, 2018 to a loss of $175,899 thousand for the year ended December 31, 2019. During the year ended December 31, 2019, the Company has determined that the value of goodwill with respect to the Company's US and Canadian operations has been impaired. Accordingly, we have recorded total impairment charges of $174.008 thousand, with $143.200 thousand allocated to Ferroglobe's US operations and $30.808 thousand allocated to the Canadian operations, additionally, other impairment losses for $5 thousand has been recorded in North Amercia segment.

During the year ended December 31, 2018, the Company recognized an impairment of $40,537 thousand of property, plant and equipment and an impairment of $13,947 thousand of intangible assets related to the Company's solar grade silicon metal production facility located in Puertollano, Spain due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. Additionally during the year ended December 31, 2018, the Company recognized an impairment of $2,309 thousand of property, plant and equipment and an impairment of $2,126 thousand of intangible assets at the Company's Mangshi facility located in China.

Net (loss) gain due to changes in the value of assets

Net (loss) gain due to the changes in the value of assets in 2019 and 2018 primarily relate to the remeasured fair value of the Company's timber farms in South Africa and valuation of shares in Pampa Energy in Argentina as of December 31, 2019 and 2018.

(Loss) gain on disposal of non-current assets

The loss on disposal of non-current assets for the year ended December 31, 2019 relates primarily to the sale of Ultra Core Polska, Z.o.o., a subsidiary of the Company, for a net loss of $821 thousand. The gain on disposal of non-current assets for the year ended December 31, 2018 relates primarily to a gain on disposal of hydro-electric plant assets of $11,747 thousand.

Bargain purchase gain

During the year ended December 31, 2018, the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France SAS. The acquisition resulted in a bargain purchase gain of $40,142 thousand as a result of the acquisition date fair value of the net assets acquired in excess of the purchase consideration. Subsequent changes in the value of contingent consideration relating to this acquisition are presented in cost of sales.

Finance income

Finance income decreased $3,478 thousand, or 71.6%, from $4,858 thousand for the year ended December 31, 2018 to $1,380 thousand for the year ended December 31, 2019. This is primarily due to the a lower volume of accounts receivables assets sold to securitization program in 2019 compared 2018 and, due to the consolidation of Ferrous Receivables DAC, the accounts receivable securitization vehicle, since the end of the third quarter 2019, where the finance income has subsequently been eliminated in the consolidation process.

Finance costs

Finance costs increased $6,159 thousand, or 10.8%, from $57,066 thousand for the year ended December 31, 2018 to $63,225 thousand for the year ended December 31, 2019. The increase is mainly due to an increase in interests on leases due to the application of IFRS16, due to an increase in interests in credit facilities mainly driven for the issuance cost allocated as finance expenses for the repayment of "Revolving Credit Facility" and other finance cost incurred for the process of refinancing, partially offset by a decrease in securitization expenses as result of less volume of accounts receivables assets sold in 2019 compared to 2018.

Financial derivative gain (loss)

Financial derivative gains of $2,729 thousand in 2019 and financial derivative gain of $2,838 thousand in 2018. The gains are related to the portion of the notional amount of the cross currency swap, in relation to the senior Notes, that is not designated as a cash flow hedge.

Exchange differences

Exchange differences decreased $17,020 thousand, from income of $14,136 thousand for the year ended December 31, 2018 to a loss of $2,884 thousand for the year ended December 31, 2019, primarily due to the fluctuation of foreign exchange rates, mainly the exchange rate between the Euro and the U.S. Dollar.

Income tax (expense) benefit

Income tax expense decreased $62,000 thousand, or 303%, from an income tax expense of $20,459 thousand for the year ended December 31, 2018 to an income tax benefit of $41,541 thousand for the year ended December 31, 2019 mainly due to the losses reported for most of the entities of the group in 2019.

Profit (loss) for the year from discontinued operations

The Company´s Spanish hydro-electric assets were disposed of through the sale of FAU in August 2019. Accordingly, the results of Spanish energy business are presented as discontinuing operations for the year ended December 31, 2019 and the consolidated income statement for the prior years ended 2018 and 2017 have been restated to reclassify the results of the Spanish hydro-electric assets within profit (loss) for the year from discontinued operations.

Profit increased $75,174 thousand, or 794.4%, from an income of $9,463 thousand for the year ended December 31, 2018 to an income of $84,637 thousand for the year ended December 31, 2019, mainly due the profit registered on the sale of Spanish hydro-electric plants of $85,103 thousand.

Segment operations

Operating segments are based upon the Company's management reporting structure. As such, we report our results in accordance with the following segments:

- Electrometallurgy – North America;
- Electrometallurgy – Europe;
- Electrometallurgy – South Africa; and
- Other Segments.

Electrometallurgy – North America

	Year ended December 31,	
($ thousands)	**2019**	**2018**
Sales	551,500	710,716
Cost of sales	(366,711)	(394,044)
Other operating income	10,418	4,943
Staff costs	(87,954)	(115,555)
Other operating expense	(60,105)	(77,670)
Depreciation and amortization charges, operating allowances and write-downs	(72,251)	(69,009)
Impairment losses	(174,013)	—
Loss on disposal of non-current assets	(1,601)	(208)
Operating (loss) profit	**(200,717)**	**59,173**

Sales

Sales decreased $159,216 thousand, or 22.4%, from $710,716 thousand for the year ended December 31, 2018 to $551,500 thousand for the year ended December 31, 2019, primarily due to a 9.3% decrease in the average selling price of silicon metal due to worsening market conditions in the current year than in the prior year and a 35.4% decrease in sales volumes of silicon metal due to closure of the Company's Selma facility and to the market volume reduction that has affected to other plants. There was a 5.5% decrease in the average selling price of silicon-based alloys (calcium silicon, magnesium ferrosilicon, and different grades of ferrosilicon) mainly due to decreased sales of ferrosilicon (FeSi 75%) in 2019 and a 14.2% decrease in sales volumes of silicon-based alloys. The North American segment additionally added sales of manganese-based alloys, that were produced by our European plants, to its sales mix contributing additional revenue of $89,202 thousands in 2019 ($30,574 thousand in 2018).

Cost of sales

Cost of sales decreased $27,333 thousand, or 6.9%, from $394,044 thousand for the year ended December 31, 2018 to $366,711 thousand for the year ended December 31, 2019. The decrease is primarily due to a decrease in metric tons of silicon metal sold partially due to the closure of the Selma facility and a decrease in metric tons of silicon-based alloys sold due to a decrease in customer specific requirements.

Staff costs

Staff costs decreased $27,601 thousand, or 23.9%, from $115,555 thousand for the year ended December 31, 2018 to $87,954 thousand for the year ended December 31, 2019, primarily due to a decrease in U.S. head count needed following the closure of the the Niagara and Selma facilities at the end of 2018. It has also been affected by the temporary shut-down of some plants in the second half of 2019.

Other operating expense

Other operating expense decreased $17,565 thousand, or 22.6%, from $77,670 thousand for the year ended December 31, 2018 to $60,105 thousand for the year ended December 31, 2019, primarily due to shipping, freight, and storage costs associated with the decrease in sales volume.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $3,242 thousand, or 4.7%, from $69,009 thousand for the year ended December 31, 2018 to $72,251 thousand for the year ended December 31, 2019, primarily due to $9,926 thousand of capital expenditures during 2019.

Impairment losses

During the year ended December 31, 2019, the Company recognized an impairment charge of $174,013 thousand related to the complete impairment of goodwill in Canada ($30,618 thousnad) and partial impairment of goodwill in the United States ($143,395 thousand), resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian and United States business operations. The impairment charge is recorded within the Electrometallurgy – North America reportable segment.

Loss on disposal of non-current assets

The loss of $1,601 thousand for the year ended December 31, 2019 relates primarily to the disposal of certain property plant, and equipment in the U.S.

Electrometallurgy – Europe

	Year ended December 31,	
($ thousands)	**2019**	**2018**
Sales	1,049,576	1,447,973
Cost of sales	(868,654)	(1,059,474)
Other operating income	47,672	39,817
Staff costs	(145,712)	(177,047)
Other operating expense	(142,929)	(146,143)
Depreciation and amortization charges, operating allowances and write-downs	(39,844)	(34,974)
Impairment losses	(465)	—
Net (loss) gain due to changes in the value of assets	—	(7)
Gain (loss) on disposal of non-current assets	180	(8,369)
Bargain purchase gain	—	40,142
Operating (loss) profit	**(100,176)**	**101,918**

Sales

Sales decreased $398,397 thousand or 27.5%, from $1,447,973 thousand for the year ended December 31, 2018 to $1,049,576 thousand for the year ended December 31, 2019, primarily due decreases in both volume and average price. Foreign exchange differences unfavorably impacted sales by $57,641 thousand.

Cost of sales

Cost of sales decreased $190,820 thousand, or 18.0%, from $1,059,474 thousand for the year ended December 31, 2018 to $868,654 thousand for the year ended December 31, 2019. Cost of sales decreased due to lower sales volumes. Foreign exchange differences had an additional favorable impact of $ 47,965 thousand.

Other operating income

Other operating income increased $7,855 thousand, or 19.7%, from $39,817 thousand for the year ended December 31, 2018 to $47,672 thousand for the year ended December 31, 2019, primarily due to an increase in the use of CO_2 granted by MINER (government) in the production process.

Staff costs

Staff costs decreased $31,335 thousand or 17.7%, from $177,047 thousand for the year ended December 31, 2018 to $145,712 thousand for the year ended December 31, 2019. It is mainly driven by a decrease due to lower overtime costs following the temporary idling of furnaces in a number of facilities. There was a favorable foreign exchange impact, which decreased Euro-denominated costs by $8,002 thousand.

Other operating expense

Other operating expense decreased $3,214 thousand, or 2.2%, from $146,143 thousand for the year ended December 31, 2018 to $142,929 thousand for the year ended December 31, 2019, primarily due to shipping, freight, and storage costs associated with the decrease in sales volume.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $4,870 thousand, or 13.9%, from $34,974 thousand for the year ended December 31, 2018 to $39,844 thousand for the year ended December 31, 2019. The increase is due to IFRS 16 implementation in 2019.

Gain (loss) on disposal of non-current assets

The amount reflected during the year ended December 31, 2019 is mainly due to sales in the subsidiary FerroPem. During the year ended December 31, 2018, the loss on disposal of non-current assets in the Europe segment reflects the loss on the parent's investment in intercompany subsidiaries of Other segments. The loss in the Europe segment partially offsets the gain on disposal of non-current assets in Other segments such that the net gain between the two segments primarily represents the net gain on disposal of Spanish hydro-electric assets of $11,747 thousand included within Other segments.

Bargain purchase gain

During the year ended December 31, 2018, the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge and Ferroglobe Manganèse France. The acquisition resulted in a bargain purchase gain of $40,142 thousand as a result of the acquisition date fair value of the net assets acquired in excess of the purchase consideration. Subsequent changes in the value of contingent consideration relating to this acquisition are presented in cost of sales.

Electrometallurgy – South Africa

($ thousands)	Year ended December 31, 2019	2018
Sales	136,292	208,543
Cost of sales	(108,823)	(137,177)
Other operating income	1,323	3,420
Staff costs	(20,333)	(23,735)
Other operating expense	(19,457)	(26,353)
Depreciation and amortization charges, operating allowances and write-downs	(6,459)	(5,526)
Net (loss) gain due to changes in the value of assets	(530)	(7,616)
Loss on disposal of non-current assets	—	(261)
Operating (loss) profit	**(17,987)**	**11,295**

Sales

Sales decreased $72,251 thousand, or 34.6%, from $208,543 thousand for the year ended December 31, 2018 to $136,292 thousand for the year ended December 31, 2019, primarily due to decrease in sales volumes, as a result of the temporary shut-down of the Polokwane plant in 2019. Average selling prices also decreased. There was an unfavorable foreign exchange difference impact, which decreased sales by $12,613 thousand.

Cost of sales

Cost of sales decreased $28,354 thousand, or 20.7%, from $137,177 thousand for the year ended December 31, 2018 to $108,823 thousand for the year ended December 31, 2019, primarily due to a sales decrease. A favorable foreign exchange impact decreased cost of sales by $10,071 thousand. Costs of sales for plants in South Africa increased from 66% in 2018 to 79% in 2019, as a percentage of sales, due to continued increases in energy costs.

Other operating income

Other operating income decreased $2,097 thousand, or 61.3%, from $3,420 thousand for the year ended December 31, 2018 to $1,323 thousand for the year ended December 31, 2019, primarily due to an decrease in sales of scrap.

Staff costs

Staff costs decreased $3,402 thousand, or 14.3%, from $23,735 thousand for the year ended December 31, 2018 to $20,333 thousand for the year ended December 31, 2019, due to the staffing adjustments and employee separation costs in connection with the temporary shut-down of Polokwane plant during 2019. Foreign exchange differences have decreased staff costs by $1,882 thousand.

Other operating expense

Other operating expense decreased $6,896 thousand, or 26.2%, from $26,353 thousand for the year ended December 31, 2018 to $19,457 thousand for the year ended December 31, 2019, primarily due to lower variable, selling, and administrative costs during 2019 as the Polokwane plant was temporary idled in 2019. Foreign exchange rate movements further decreased other operating expense by $1,801 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $933 thousand, or 16.9%, from $5,526 thousand for the year ended December 31, 2018 to $6,459 thousand for the year ended December 31, 2019, mainly driven by the transfers in Property, Plant and Equipment.

Net (loss) gain due to changes in the value of assets

Net (loss) gain due to the changes in the value of assets in 2019 and 2018 primarily relate to the remeasured fair value of the Company’s timber farms in South Africa as of December 31, 2019 and 2018.

Other segments

($ thousands)	Year ended December 31, 2019	2018
Sales	43,147	62,075
Cost of sales	(35,923)	(43,194)
Other operating income	19,413	16,666
Staff costs	(31,030)	(22,525)
Other operating expense	(27,406)	(46,489)
Depreciation and amortization charges, operating allowances and write-downs	(1,640)	(4,328)
Impairment losses	(1,421)	(58,919)
Net (loss) gain due to changes in the value of assets	(1,044)	—
Loss (gain) on disposal of non-current assets	(802)	23,402
Operating (loss) profit	**(36,706)**	**(73,312)**

Sales

Sales decreased $18,928 thousand, or 30.5%, from $62,075 thousand for the year ended December 31, 2018 to $43,147 for the year ended December 31, 2019, primarily due to a $12,254 thousand decrease of sales of energy related to the sale of subsidiary Hidro Nitro Española, S.A. (hydro-electric plants in Aragon, Spain). These hydro facilities were sold as of December 31, 2018. Sales of silicon-based alloys at the Company's Argentinian facility, Globe Metales S.A., decreased $4,237 thousand and sales of silia fume and ferrosilicon in Ferroatlántica de México, S.A. de C.V.decreased by $1,454 thousand.

Cost of sales

Cost of sales decreased $7,271 thousand, or 16.8%, from $43,194 thousand for the year ended December 31, 2018 to $35,923 thousand for the year ended December 31, 2019, primarily due to an decrease in sales volumes of silicon-based alloys at the Company's Argentinian facility, Globe Metales S.A.

Other operating income

Other operating income increased $2,747 thousand, or 16.5%, from $16,666 thousand for the year ended December 31, 2018 to $19,413 thousand for the year ended December 31, 2019, primarily due to a chargeback of services by Ferroglobe to its subsidiaries.

Staff costs

Staff costs increased $8,504 thousand, or 37.8%, from $22,525 thousand for the year ended December 31, 2018 to $31,030 thousand for the year ended December 31, 2019, primarily due to redundancy payments linked for the closure of the London headquarters in 2019 and the departure costs of the CFO and CEO in the third and last quarter of 2019 respectively. In addition, there was an adjustment of $3,175 thousand to the employee pension plan provision in Venezuela.

Other operating expense

Other operating expense decreased $19,083 thousand, or 41.0%, from $46,489 thousand for the year ended December 31, 2018 to $27,406 for the year ended December 31, 2019, primarily due to the the sale of Ferroalantica, S.A.U., and the internal efforts to reduce costs in the normal course of business during the second half of the year. Ganzi has ceased operating and was wound up at the end of December 31, 2018 and Hidro Nitro Española, S.A. was sold at the end of December 31, 2018.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $2,688 thousand, or 62.1%, from $4,328 thousand for the year ended December 31, 2018 to $1,640 thousand for the year ended December 31, 2019, primarily due to the sale of subsidiary Hidro Nitro Española, S.A. (hydro-electric plants in Aragon, Spain).

Impairment losses

Impairment losses for the year ended December 31, 2019 of $1,421 thousand relates to a leasehold provision associated with the closure of the London office. Impairment losses registered in 2018 were mainly related to Solar assets.

(Loss) gain on disposal of non-current assets

During the year ended December 31, 2019, the loss on disposal of non-current assets for the year ended December 31, 2019 relates primarily to the sale of Ultra Core Polska, Z.o.o., a subsidiary of the Company, for a net loss of $821 thousand. In 2018, the loss in the Europe segment partially offsets the gain on disposal of non-current assets in Other segments such that the net gain between the two segments primarily represents the net gain on disposal of hydro-electric plant assets of $11,747 thousand included within Other segments.

Results of Operations — Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

	Year ended December 31,	
($ thousands)	**2018**	**2017**
Sales	2,242,002	1,732,276
Cost of sales	(1,446,677)	(1,043,275)
Other operating income	45,844	18,100
Staff costs	(338,862)	(300,035)
Other operating expense	(277,560)	(234,399)
Depreciation and amortization charges, operating allowances and write-downs	(113,837)	(100,402)
Impairment losses	(58,919)	(31,641)
Net (loss) gain due to changes in the value of assets	(7,623)	7,504
Gain (loss) on disposal of non-current assets	14,564	(4,316)
Bargain purchase gain	40,142	—
Other losses	—	(2,613)
Operating profit (loss)	**99,074**	**41,199**
Finance income	4,858	2,409
Finance costs	(57,066)	(59,969)
Financial derivative gain (loss)	2,838	(6,850)
Exchange differences	(14,136)	8,214
Profit (loss) before tax	**35,568**	**(14,997)**
Income tax (expense) benefit	(20,459)	14,225
Profit (loss) for the year from continuing operations	**15,109**	**(772)**
Profit (loss) for the year from discontinued operations	9,464	(5,050)
Profit (loss) for the year	**24,573**	**(5,822)**
Loss attributable to non-controlling interests	19,088	5,144
Profit (loss) attributable to the Parent	**43,661**	**(678)**

Sales

Sales increased $509,726 thousand, or 29.4%, from $1,732,276 thousand for the year ended December 31, 2017 to $2,242,002 thousand for the year ended December 31, 2018, primarily due to the acquisition of manganese-based alloy plants in France and Norway, which accounted for $230,297 thousand in 2018.

Sales volume increased across all major products (excluding by-products). Silicon metal sales volume increased 8.2%, silicon-based alloys sales volume increased 10.1%, while manganese-based alloys sales volume increased 54.8%, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018.

Average selling prices of silicon metal and silicon-based alloys increased year over year while average selling prices of manganese-based alloys decreased. The average selling price for silicon metal increased by 16.6% to $2,647/MT in 2018, as compared to $2,270/MT in 2017; the average selling price for silicon-based alloys increased by 14.7% to $1,845/MT in 2018, as compared to $1,608/MT in 2017; and the average selling price for manganese-based alloys decreased by 6.3%

to $1,244/MT in 2018, as compared to $1,327/MT in 2017. The increase in average selling prices reflects an upward pricing trend in the markets for silicon metal and silicon-based alloys, while the market for manganese-based alloys remains challenging.

Cost of sales

Cost of sales increased $403,402 thousand, or 38.7%, from $1,043,275 thousand for the year ended December 31, 2017 to $1,446,677 thousand for the year ended December 31, 2018, primarily due to an increase in sales volumes, particularly manganese-based alloys which increased by 150,239 MT due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018.

Costs of sales for plants in North America, which produce silicon-metal and silicon-based alloys, were comparable in 2018 to 2017, accounting for 56% as a percentage of sales. Continued increases in energy costs and an increase in the purchase price of manganese ore impacted costs for manganese-based alloys in Europe.

Other operating income

Other operating income increased $27,744 thousand, or 153.3%, from $18,100 thousand for the year ended December 31, 2017 to $45,844 thousand for the year ended December 31, 2018, primarily due to receiving business interruption insurance proceeds of $5,098 thousand, government grant income of $6,873 thousand, sales of greenhouse gas emission credits of $4,685 thousand, as well as operating income related to the use of CO_2 in the production process.

Staff costs

Staff costs increased $38,827 thousand, or 12.9%, from $300,035 thousand for the year ended December 31, 2017 to $338,862 thousand for the year ended December 31, 2018, primarily due to the restart of the Selma, Alabama facility in September 2017 and closure costs associated with the Niagara and Selma facilities at the end of 2018. Additionally staff costs increased due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $15,300 thousand to staff costs in 2018. Further, there was an increase in compensation that is dependent on production levels.

Other operating expense

Other operating expense increased $43,161 thousand, or 18.4%, from $234,399 thousand for the year ended December 31, 2017 to $277,560 thousand for the year ended December 31, 2018, primarily due to shipping, freight, and storage costs associated with the increase in sales volume, as well as the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $14,329 thousand to other operating expenses in 2018.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $13,435 thousand or 13.4%, from $100,402 thousand for the year ended December 31, 2017 to $113,837 thousand for the year ended December 31, 2018, primarily due to new assets placed in service related to hydro-electric plants as well as the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed to $7,916 thousand to depreciation.

Impairment losses

Impairment losses increased $27,278 thousand, or 86.2%, from a loss of $31,641 thousand for the year ended December 31, 2017 to a loss of $58,919 thousand for the year ended December 31, 2018. During the year ended December 31, 2018, the Company recognized an impairment of $40,537 thousand of property, plant and equipment and an impairment of $13,947 thousand of intangible assets related to the Company’s solar grade silicon metal production facility located in Puertollano, Spain due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. Additionally during the year ended December 31, 2018, the Company recognized an impairment of $2,309 thousand of property, plant and equipment and an impairment of $2,126 thousand of intangible assets at the Company’s Mangshi facility located in China.

During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

Net (loss) gain due to changes in the value of assets

Net (loss) gain due to the changes in the value of assets in 2018 and 2017 primarily relate to the remeasured fair value of the Company's timber farms in South Africa as of December 31, 2018 and 2017.

Gain (loss) on disposal of non-current assets

The gain on disposal of non-current assets for the year ended December 31, 2018 relates primarily to a gain on disposal of of subsidiary Hidro Nitro Española, S.A. (hydro-electric plants in Aragon, Spain) assets of $11,747 thousand. The net loss of $4,316 thousand for the year ended December 31, 2017 relates primarily to the disposals of certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination, but were subsequently disposed of during scheduled furnace overhauls in 2017.

Bargain purchase gain

During the year ended December 31, 2018, the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge and Ferroglobe Manganèse France. The acquisition resulted in a bargain purchase gain of $40,142 thousand as a result of the acquisition date fair value of the net assets acquired in excess of the purchase consideration.

Other losses

Other losses during the year ended December 31, 2017 is primarily related to an adjustment of $2,608 thousand to the carrying amount of property, plant and equipment at hydro-electric plants in Spain that were previously classified as held for sale. An expense was recorded equivalent to the depreciation that would have been charged if the business had not been classified as held for sale.

Finance income

Finance income increased $2,449 thousand, or 101.7%, from $2,409 thousand for the year ended December 31, 2017 to $4,858 thousand for the year ended December 31, 2018, primarily due to the accounts receivable securitization program being in operation for a full year in 2018 compared to five months in 2017. The securitization program resulted in interest income on subordinated loan notes of $3,403 thousand in 2018 compared to $1,935 thousand in 2017.

Finance costs

Finance costs decreased $2,903 thousand, or 4.8%, from $59,969 thousand for the year ended December 31, 2017 to $57,066 thousand for the year ended December 31, 2018. The impact of a full year of interest expense on the senior unsecured Notes and full year of finance costs from the accounts receivable securitization program were offset by a decrease in interest on loans and credit facilities and lower debt factoring costs.

Financial derivative gain (loss)

Financial derivative gain of $2,838 thousand in 2018 and financial derivative loss of $6,850 thousand in 2017 both resulted from the cross currency swap entered into in May 2017. The gain or loss is related to the portion of the notional amount of the cross currency swap that is not designated as a cash flow hedge.

Exchange differences

Exchange differences increased $22,350 thousand, from income of $8,214 thousand for the year ended December 31, 2017 to a loss of $14,136 thousand for the year ended December 31, 2018, primarily due to the fluctuation of foreign exchange rates, mainly the exchange rate between the Euro and the U.S. Dollar.

Income tax (expense) benefit

Income tax expense increased $34,684 thousand, or 243.8%, from an income tax benefit of $14,225 thousand for the year ended December 31, 2017 to an income tax expense of $20,459 thousand for the year ended December 31, 2018. The tax benefit for the year ended December 31, 2017 is related to the impact of U.S. tax reform which resulted in an income tax benefit of $31,200 thousand representing the remeasurement of the Company's U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018, which was offset by income tax expense on taxable income.

Profit (loss) for the year from discontinued operations

Our Spanish hydro-electric operations were determined to be discontinued and classified as held for sale in June 2019. In August 2019, the Company sold them via the sale of FAU. Accordingly, the results of Spanish energy business are presented as discontinuing operations for the year ended December 31, 2019 and the consolidated income statement for the prior years ended 2018 and 2017 have been restated to reclassify the results of the Company's Spanish hydroelectric assets within profit (loss) for the year from discontinued operations.

Profit increased $14,513 thousand, or 287.4%, from a loss of $5,050 thousand for the year ended December 31, 2017 to an income of $9,463 thousand for the year ended December 31, 2018.

Segment operations

During 2017, upon further evaluation of the management reporting structure as a result of the integration of the operations of FerroAtlántica and Globe we have concluded that our Venezuela operations are no longer significant as an operating and reportable segment due to the decision to significantly reduce these operations in 2016. As such, in 2017 we have included our Venezuela operations as part of "Other Segments". The comparative prior periods have been restated to conform to the 2017 reportable segment presentation.

Operating segments are based upon the Company's management reporting structure. As such, we report our results in accordance with the following segments:

- Electrometallurgy – North America;
- Electrometallurgy – Europe;
- Electrometallurgy – South Africa; and
- Other Segments.

Electrometallurgy – North America

($ thousands)	Year ended December 31, 2018	2017
Sales	710,716	541,143
Cost of sales	(394,044)	(303,096)
Other operating income	4,943	2,701
Staff costs	(115,555)	(90,802)
Other operating expense	(77,670)	(68,537)
Depreciation and amortization charges, operating allowances and write-downs	(69,009)	(66,789)
Impairment losses	—	(30,618)
Loss on disposal of non-current assets	(208)	(3,718)
Operating profit (loss)	**59,173**	**(19,716)**

Sales

Sales increased $169,573 thousand, or 31.3%, from $541,143 thousand for the year ended December 31, 2017 to $710,716 thousand for the year ended December 31, 2018, primarily due to a 16.5% increase in the average selling price of silicon metal due to better market conditions in the current year than in the prior year and a 7.6% increase in sales volumes of silicon metal due to increased production from the restart of the Company's Selma, Alabama facility in September 2017. There was a 71.8% increase in the average selling price of silicon-based alloys (calcium silicon, magnesium ferrosilicon, and different grades of ferrosilicon) mainly due to increased sales of higher purity ferrosilicon (which have higher selling prices) in 2018 and a 17.5% increase in sales volumes of silicon-based alloys. The North American segment additionally added sales of manganese-based alloys, that were produced by our European plants, to its sales mix contributing additional revenue of $30,574 thousands in 2018.

Cost of sales

Cost of sales increased $90,948 thousand, or 30.0%, from $303,096 thousand for the year ended December 31, 2017 to $394,044 thousand for the year ended December 31, 2018. The increase is primarily due to an increase in metric tons of silicon metal sold partially due the restart of the Selma facility, an increase in metric tons of silicon-based alloys sold due to an increase in customer specific requirements, as well as the addition of manganese-based alloys sales to the sales mix, which added $29,797 thousand to cost of sales in 2018.

Staff costs

Staff costs increased $24,753 thousand, or 27.3%, from $90,802 thousand for the year ended December 31, 2017 to $115,555 thousand for the year ended December 31, 2018, primarily due to an increase in U.S. head count needed for the restart of our Selma, Alabama facility in September 2017 and closure costs associated with the Niagara and Selma facilities at the end of 2018, as well as an increase in compensation that is dependent on production levels.

Other operating expense

Other operating expense increased $9,133 thousand, or 13.3%, from $68,537 thousand for the year ended December 31, 2017 to $77,670 thousand for the year ended December 31, 2018, primarily due to shipping, freight, and storage costs associated with the increase in sales volume.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $2,220 thousand, or 3.3%, from $66,789 thousand for the year ended December 31, 2017 to $69,009 thousand for the year ended December 31, 2018, primarily due to $32,440 thousands of capital expenditures during 2018.

Impairment losses

During the year ended December 31, 2018, in connection with our annual goodwill impairment test, no impairment charge was recognized. During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

Loss on disposal of non-current assets

The loss of $3,718 thousand for the year ended December 31, 2017 relates primarily to the disposals certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination but were subsequently disposed of during scheduled furnace overhauls in 2017.

Electrometallurgy – Europe

	Year ended December 31,	
($ thousands)	**2018**	**2017**
Sales	1,447,973	1,083,200
Cost of sales	(1,059,474)	(690,589)
Other operating income	39,817	12,681
Staff costs	(177,047)	(147,595)
Other operating expense	(146,143)	(107,130)
Depreciation and amortization charges, operating allowances and write-downs	(34,974)	(27,404)
Net (loss) gain due to changes in the value of assets	(7)	—
(Loss) gain on disposal of non-current assets	(8,369)	301
Bargain purchase gain	40,142	—
Other losses	—	(13,604)
Operating profit (loss)	**101,918**	**109,860**

Sales

Sales increased $364,773 thousand or 33.7%, from $1,083,200 thousand for the year ended December 31, 2017 to $1,447,973 thousand for the year ended December 31, 2018, primarily due to a $230,297 thousand increase in sales of manganese-based alloys as a result of the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018. The increase in volume was offset by a 13% decrease in average selling prices of manganese-based alloys. Foreign exchange favorably impacted sales by $47,946 thousand.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing increased 14%, increased 13% and decreased 5%, respectively, primarily due to the market index pricing in Europe. The sales volume of primary products increased of 5% for the year ended December 31, 2018 compared to the year ended December 31, 2017.

Cost of sales

Cost of sales increased $368,885 thousand, or 53.4%, from $690,589 thousand for the year ended December 31, 2017 to $1,059,474 thousand for the year ended December 31, 2018, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, resulting in an increase in cost of sales of $210,629 thousand. Cost of sales further increased by $68,495 thousand due to higher sales volumes and increased by $74,453 thousand due to higher costs of raw materials and energy. Foreign exchange differences had an additional negative impact of $15,308 thousand.

Other operating income

Other operating income increased $27,136 thousand, or 214.0%, from $12,681 thousand for the year ended December 31, 2017 to $39,817 thousand for the year ended December 31, 2018, primarily due to government grant income of $6,873

thousand, sales of greenhouse gas emission credits of $4,685 thousand, as well as operating income related to the use of CO_2 in the production process. The Company additionally received insurance proceeds of $5,098 thousand relating to a business interruption claim at plants located in France. There was a favorable foreign exchange impact, which increased Euro-denominated income by $568 thousand.

Staff costs

Staff costs increased $29,452 thousand or 20.0%, from $147,595 thousand for the year ended December 31, 2017 to $177,047 thousand for the year ended December 31, 2018, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $15,300 thousand to staff cost in 2018. The remainder of the increase is attributable to financial performance based compensation in France. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $7,398 thousand.

Other operating expense

Other operating expense increased $39,013 thousand, or 36.4%, from $107,130 thousand for the year ended December 31, 2017 to $146,143 thousand for the year ended December 31, 2018, primarily due to shipping, freight, and storage costs associated with the increase in sales volume, as well as the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $14,329 thousand to other operating expenses in 2018.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $7,570 thousand, or 27.6%, from $27,404 thousand for the year ended December 31, 2017 to $34,974 thousand for the year ended December 31, 2018, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $7,916 thousand to depreciation in 2018. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $1,216 thousand.

(Loss) gain on disposal of non-current assets

During the year ended December 31, 2018, the loss on disposal of non-current assets in the Europe segment reflects the loss on the parent's investment in intercompany subsidiaries of Other segments. The loss in the Europe segment partially offsets the gain on disposal of non-current assets in Other segments such that the net gain between the two segments primarily represents the net gain on disposal of hydro-electric plant assets of $11,747 thousand included within Other segments. Refer to Gain (loss) on disposal of non-current assets in the Results of Operations section above for an explanation of the Company's Gain (loss) on disposal of non-current assets on a consolidated basis.

Bargain purchase gain

During the year ended December 31, 2018, the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge and Ferroglobe Manganèse France. The acquisition resulted in a bargain purchase gain of $40,142 thousand as a result of the acquisition date fair value of the net assets acquired in excess of the purchase consideration.

Other losses

Other losses during the year ended December 31, 2017 in the European segment reflects the losses on the parent's investment in intercompany subsidiaries which eliminate during consolidation of all segments. Refer to Other losses in the Results of Operations section above for an explanation of the Company's Other losses on a consolidated basis.

Electrometallurgy – South Africa

($ thousands)	Year ended December 31, 2018	2017
Sales	208,543	122,504
Cost of sales	(137,177)	(81,744)
Other operating income	3,420	2,868
Staff costs	(23,735)	(23,495)
Other operating expense	(26,353)	(24,462)
Depreciation and amortization charges, operating allowances and write-downs	(5,526)	(5,788)
Net (loss) gain due to changes in the value of assets	(7,616)	7,222
Loss on disposal of non-current assets	(261)	(138)
Operating profit (loss)	**11,295**	**(3,033)**

Sales

Sales increased $86,039 thousand, or 70.2%, from $122,504 thousand for the year ended December 31, 2017 to $208,543 thousand for the year ended December 31, 2018, primarily due to a 219% increase in silicon metal sales volumes, as a result of furnaces 1 and 3 of Polokwane plant being idle during 2017 and operational in 2018. Average selling prices of silicon metal increased 5% and average selling prices of silicon-based alloys increased 16% while sales volumes of silicon metal increased 219% and sales volumes of silicon-based alloys increased 12%. There was a positive foreign exchange impact, which increased sales by $5,443 thousand.

Cost of sales

Cost of sales increased $55,433 thousand, or 67.8%, from $81,744 thousand for the year ended December 31, 2017 to $137,177 thousand for the year ended December 31, 2018, primarily due to a 219% increase in silicon metal sales volumes from 2017 to 2018 and a 12% in silicon-based alloy sales volumes. An unfavorable foreign exchange impact increased cost of sales by $3,431 thousand.

Other operating income

Other operating income increased $552 thousand, or 19.2%, from $2,868 thousand for the year ended December 31, 2017 to $3,420 thousand for the year ended December 31, 2018, primarily due to an increase in sales of scrap. There was also a favorable foreign exchange impact, which increased other operating income by $161 thousand.

Staff costs

Staff costs increased $240 thousand, or 1.0%, from $23,495 thousand for the year ended December 31, 2017 to $23,735 thousand for the year ended December 31, 2018, due to the staffing adjustments and employee separation costs in connection with the idling of Polokwane plant during 2017. Foreign exchange impact more than offset the higher costs in local currency in 2017 and increased staff costs by $1,073 thousand.

Other operating expense

Other operating expense increased $1,891 thousand, or 7.7%, from $24,462 thousand for the year ended December 31, 2017 to $26,353 thousand for the year ended December 31, 2018, primarily due to higher variable, selling, and administrative costs during 2018 as the Polokwane plant was idled or operating at a reduced production level in 2017. Foreign exchange rate movements further increased other operating expense by $1,039 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $262 thousand, or 4.5%, from $5,788 thousand for the year ended December 31, 2017 to $5,526 thousand for the year ended December 31, 2018 primarily attributable to a depreciation true-up partially offset by an unfavorable foreign exchange impact that increased depreciation and amortization by $365 thousand.

Net (loss) gain due to changes in the value of assets

Net (loss) gain due to the changes in the value of assets in 2018 and 2017 primarily relate to the remeasured fair value of the Company's timber farms in South Africa as of December 31, 2018 and 2017.

Other segments

($ thousands)	Year ended December 31, 2018	2017
Sales	62,075	50,782
Cost of sales	(43,194)	(33,496)
Other operating income	16,666	15,520
Staff costs	(22,525)	(37,923)
Other operating expense	(46,489)	(50,428)
Depreciation and amortization charges, operating allowances and write-downs	(4,328)	(430)
Impairment losses	(58,919)	(1,007)
Gain (loss) on disposal of non-current assets	23,402	(818)
Other losses	—	(2,625)
Operating (loss) profit	**(73,312)**	**(60,425)**

Sales

Sales increased $11,293 thousand, or 22.2%, from $50,782 thousand for the year ended December 31, 2017 to $62,075 for the year ended December 31, 2018, primarily due to an increase of $6,973 thousand in sales of silicon-based alloys at the Company's Argentinian facility, Globe Metales S.A.

Cost of sales

Cost of sales increased $9,698 thousand, or 29%, from $33,496 thousand for the year ended December 31, 2017 to $43,194 thousand for the year ended December 31, 2018, primarily due to an increase in sales volumes of silicon-based alloys at the Company's Argentinian facility, Globe Metales S.A., which resulted in a $5,282 thousand increase in cost of sales.

Other operating income

Other operating income increased $1,146 thousand, or 7.4%, from $15,520 thousand for the year ended December 31, 2017 to $16,666 thousand for the year ended December 31, 2018, primarily due to a chargeback of services by Ferroglobe to its subsidiaries. The increase was offset by a decrease of income generated from mutual fund investments held at the Company's Argentinian facility, Globe Metales S.A., as these investments were sold during the year.

Staff costs

Staff costs decreased $15,398 thousand, or 40.6%, from $37,923 thousand for the year ended December 31, 2017 to $22,525 thousand for the year ended December 31, 2018, primarily as a result of reduced costs and favorable foreign exchange of $4,201 thousand at our facility in Venezuela. The decrease is also attributable to share-based compensation income on liability settled outstanding share-based awards of $3,886 thousand as a result of a decline in the stock price over the twelve month period ended December 31, 2018 as well as lower discretionary remuneration based on financial performance.

Other operating expense

Other operating expense decreased $3,939 thousand, or 7.8%, from $50,428 thousand for the year ended December 31, 2017 to $46,489 for the year ended December 31, 2018, primarily due to the accrual of $12,444 thousand for accrual of contingent liabilities in 2017. The decrease was offset by an increase in other operating expenses of $4,619 at the Manghsi facility related to impairment of assets.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $3,898 thousand, or 906.5%, from $430 thousand for the year ended December 31, 2017 to $4,328 thousand for the year ended December 31, 2018, primarily due to additions to property, plant and equipment associated with the Company's solar project initiative.

Impairment losses

Impairment losses for the year ended December 31, 2018 of $58,919 thousand relates to impairment of fixed assets and intangible assets at the Company's solar grade silicon metal production facility located in Puertollano, Spain and the Company's Mangshi facility located in China. Refer to the Results of Operations section above for an explanation of the Company's Impairment losses.

Gain (loss) on disposal of non-current assets

The gain included in Other segments offsets the loss included in the Europe segment such that the net gain after offsetting the loss between segments primarily represents the gain on disposal of hydro-electric plant assets of $11,747 thousand. Refer to Gain (loss) on disposal of non-current assets in the Results of Operations section above for an explanation of the Company's Gain (loss) on disposal of non-current assets on a consolidated basis.

Other losses

Other losses during the year ended December 31, 2017 is primarily related to an adjustment of $2,608 thousand to the carrying amount of property, plant and equipment at subsidiary Hidro Nitro Española, S.A. (hydroelectric plants in Aragon, Spain) that were previously classified as held for sale. An expense was recorded equivalent to the depreciation that would have been charged if the business had not been classified as held for sale.

Effect of Inflation

Management believes that the impact of inflation was not material to Ferroglobe's results of operations in the years ended December 31, 2019, 2018 and 2017, although we experienced the impact of Venezuelan inflation in 2019, 2018 and 2017 on FerroVen, S.A.'s production costs in these years, which resulted in a loss of competitiveness. FerroVen, S.A. was idled in August 2018.

Cyclical Nature of the Industry and Movement in Market Prices, Raw Materials and Input Costs

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets from late 2014 to late 2017. During the second half of 2018 and throughout 2019, we experienced the most dramatic decline in prevailing prices of our products, which adversely affected our results. Any decline in the global silicon metal, manganese- and silicon-based alloys industries, including as a result of the COVID-19 pandemic, could have a material adverse effect on our business, results of operations and financial condition.

B. Liquidity and Capital Resources

Sources of Liquidity

Ferroglobe's primary sources of long-term liquidity are its senior unsecured notes with a $350,000 thousand aggregate principal at an interest rate of 9.375%, due on March 1, 2022, ("the Notes"), and a US Dollar-denominated NorthAmerican asset-based loan with an aggregate principal amount of $100,000 thousand maturing on October 11, 2024 ($58,049 thousand drawn down as of December 31, 2019).

On October 11, 2019, Ferroglobe closed the aforementioned $100,000 thousand North-American asset-based loan, (the "ABL Revolver"), with Globe Specialty Metals, Inc., and QSIP Canada ULC, each a subsidiary of the Company, as borrowers and PNC Bank, as lender. Ferroglobe PLC was not required to provide a guarantee of this facility, but entered into a Non-Recourse Pledge Agreement with the lender in respect of its shares in Globe Speciliaty Metals, Inc. The Revolving Credit Facility was immediately repaid using the proceeds from the ABL Revolver and existing cash and cash equivalents of the group. The Company is seeking to optimize its working capital, including a European accounts receivable securitization program whereby up to $150,000 thousand of trade receivables can be sold. This accounts receivable securitization program provided $58,339 thousand of upfront cash consideration as at December 31, 2019.

Ferroglobe's primary short-term liquidity needs are to fund its capital expenditure commitments and operational needs and service its existing debt. Ferroglobe's long-term liquidity needs primarily relate to debt repayment. Ferroglobe's core objective with respect to capital management is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it participates, while keeping the cost of capital at competitive levels.

For the year ended December 31, 2019, operating activities generated a negative cash flow of ($74,227) thousand, compared to $73,777 thousand in 2018 and $150,375 thousand in 2017. Investing activities generated a total of $165,910 thousand of cash in 2019, compared to a use of $85,875 thousand in 2018 and an use of $74,818 thousand in 2017. Financing activities resulted in a total outflow of $180,972 thousand in cash in 2019, compared to an inflow of $53,303 thousand in 2018 and an outflow of $113,397 thousand in 2017. See "Cash Flow Analysis" below for additional information.

As of December 31, 2019 and 2018, Ferroglobe had cash, restricted cash and cash equivalents of $123,175 thousand (of which $28,323 thousand is restricted cash) and $216,647 thousand, respectively. Cash and cash equivalents are primarily held in U.S. Dollars and Euros.

As of December 31, 2019, Ferroglobe's total gross financial debt was $606,361 thousand as compared to $645,390 thousand as of December 31, 2018. As of December 31, 2019, gross financial debt comprised debt instruments of $354,951 thousand ($352,595 in 2018), bank borrowings of $158,999 thousand ($141,012 in 2018), $25,872 thousand of finance leases ($66,471 thousand in 2018), and other financial liabilities of $66,539 thousand ($85,312 thousand in 2018).

Working Capital Position

Taking into account generally expected market conditions, but subject to the uncertainties created by the COVID-19 pandemic, Ferroglobe anticipates that cash flow generated from operations will be sufficient to fund its operations, including its working capital requirements, and to make the required principal and interest payments on its indebtedness during the next 12 months.

As of December 31, 2019, Ferroglobe's working capital position (defined as inventories and trade and other receivables less trade and other payables) was $473,956 thousand.

Capital Expenditures

Ferroglobe incurs capital expenditures in connection with expansion and productivity improvements, production plants maintenance and research and development projects. Capital expenditures are funded through cash generated from operations and financing activities. Ferroglobe's capital expenditures for the years ended December 31, 2019, 2018 and 2017 were $32,445 thousand, $106,136 thousand and $74,616 thousand, respectively. Principal capital expenditures during these periods were primarily for maintenance and improvement works at Ferroglobe's plants and mines. Subject to the uncertainties created by the COVID-19 pandemic, we expect our capital expenditures for 2020 to equal approximately $40,010 thousand. We have the ability to reduce our capital expenditures by, as needed, idling individual electrometallurgical manufacturing facilities. During 2019, the Company has decreased its capital expenditures, driven mainly to a drop in investment in the solar project, $7,159 thousand in 2019 compared to $32,740 thousand in 2018. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by a loan obtained from the Spanish Ministry of Industry and Energy. See "Item 4.B. —Information on the Company—Business Overview—Research

and Development (R&D)—Solar grade silicon" and "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions." See also "—Tabular Disclosure of Contractual Obligations" for disclosure regarding future committed capital expenditures.

Cash Flow Analysis — Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

The following table summarizes Ferroglobe's primary sources (uses) of cash for the years ended December 31, 2019 and 2018:

($ thousands)	Year ended December 31, 2019	2018
Cash and cash equivalents at beginning of period	216,647	184,472
Cash flows from operating activities	(74,227)	73,777
Cash flows from investing activities	165,910	(85,875)
Cash flows from financing activities	(180,972)	53,303
Exchange differences on cash and cash equivalents in foreign currencies	(4,183)	(9,030)
Cash, restricted cash and cash equivalents at end of period	123,175	216,647
Cash, restricted cash and cash equivalents at end of period from statement of financial position	123,175	216,647

Ferroglobe paid nil dividends during the year ended December 31, 2019 and paid $20,642 thousand for the year ended December 31, 2018.

Cash flows from operating activities

Cash flows from operating activities decreased $148,004 thousand, from a positive cash generated of $73,777 thousand for the year ended December 31, 2018, to a cash consumed of ($74,227) thousand for the year ended December 31, 2019. Operating profits decreased significantly, driven by a decrease in sales volumes, decline pricing for silicon metal and silicon-based alloys.

Income taxes paid decreased $32,819 thousand, reflecting payments on account for a less profitable year, while interest increased $15 thousand.

Cash flows from investing activities

Cash flows from investing activities increased $251,785 thousand from an outflow of $85,875 thousand for the year ended December 31, 2018 to an inflow of $165,910 thousand for the year ended December 31, 2019. Capital expenditures decreased during the year ended December 31, 2019 to $32,445 thousand from $106,136 thousand during the year ended December 31, 2018. Also, the effect of consolidating the accounts receivable securitization entity meant that an amount equal to $9,088 was included in cash flows from investing activities. Additional cash inflows were the proceeds from the disposal of certain non-core assets, including $177,627 thousand from the sale of subsidiary FerroAtlántica, S.A.U. and $8,668 thousand from the sale of timber farm plantations in South Africa and $3,018 thousand from other asset sales.

Cash flows from financing activities

Cash flows from financing activities decreased $234,275 thousand, from an inflow of $53,303 thousand for the year ended December 31, 2018 to an outflow of $180,972 thousand for the year ended December 31, 2019. On October 11, 2019, the Revolving Credit Facility was repaid $134,570 and replaced with the ABL Revolver. The ABL Revolver had a balance of $62,835 thousand at December 31, 2019. The Company has not factoring without recourse arrangements for other receivables as of December, 31 2019. On August 30, 2019, the hydro-lease was repaid $55,352 thousand.

Cash Flow Analysis — Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

The following table summarizes Ferroglobe's primary sources (uses) of cash for the years ended December 31, 2018 and 2017:

	Year ended December 31,	
($ thousands)	**2018**	**2017**
Cash and cash equivalents at beginning of period	184,472	196,982
Cash flows from operating activities	73,777	150,375
Cash flows from investing activities	(85,875)	(74,818)
Cash flows from financing activities	53,303	(113,397)
Exchange differences on cash and cash equivalents in foreign currencies	(9,030)	25,330
Cash, restricted cash and cash equivalents at end of period	216,647	184,472
Cash, restricted cash and cash equivalents at end of period from statement of financial position	216,647	196,931

Ferroglobe paid dividends of $20,642 thousand during the year ended December 31, 2018 and paid nil for the year ended December 31, 2017

Cash flows from operating activities

Cash flows from operating activities decreased $76,598 thousand, from $150,375 thousand for the year ended December 31, 2017, to $73,777 thousand for the year ended December 31, 2018. Despite weaker performance in the second half of the year, 2018 was a strong year for the Company. Operating profits increased significantly, driven by an increase in sales volumes, improved pricing for silicon metal and silicon-based alloys and a significant contribution from the energy business. Nevertheless, cash flows from operating activities fell by almost half, primarily attributable to the increase in working capital necessary to sustain the newly acquired manganese alloy businesses in France and Norway. Additionally, 2017 operating cash flows benefited from the replacement of the Company's European invoice factoring facility with a much larger accounts receivable securitization program that also included the United States and Canada.

Income taxes paid increased $9,644 thousand, reflecting payments on account for a more profitable year, while interest increased $3,888 thousand, mainly due to a full year of interest on the senior Notes.

Cash flows from investing activities

Cash flows from investing activities decreased $11,057 thousand from an outflow of $74,818 thousand for the year ended December 31, 2017 to an outflow of $85,875 thousand for the year ended December 31, 2018. Capital expenditures increased during the year ended December 31, 2018 to $106,136 thousand from $74,616 thousand during the year ended December 31, 2017, which included increased spend on the solar grade silicon pilot plant in Puertollano, Spain. In 2018, the Company invested $20,379 thousand to acquire 100% of the share capital of Glencore's manganese alloy businesses in France and Norway. These outflows were partially offset by proceeds from the disposal of certain non-core assets, including $20,533 thousand from the sale of subsidiary Hidro Nitro Española, S.A. (hydro-electric plants in Aragon, Spain) and $12,734 thousand from the sale of timber farm plantations in South Africa and $6,861 thousand from other asset sales.

Cash flows from financing activities

Cash flows from financing activities increased $166,700 thousand, from an outflow of $113,397 thousand for the year ended December 31, 2017 to an inflow of $53,303 thousand for the year ended December 31, 2018. In 2018, the Company increased bank borrowings, with $135,919 thousand of principal drawn under the Revolving Credit Facility at December 31, 2018 and $6,102 thousand received from the short-term factoring of certain non-trade receivables. These inflows were partially offset by the repayment of loans from Spanish government agencies of $33,096 thousand, $20,100 thousand paid out under the share repurchase program and the payment of $20,642 thousand in dividends to shareholders.

Capital resources

Ferroglobe's core objective is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it operates, while keeping the cost of capital at competitive levels. In addition to cash flows from continuing operations, the Company's main sources of capital resources are its senior Notes with an aggregate principal value of $350,000 thousand and the ABL Revolver with an aggregate principal amount of $100,000 thousand.

Payments of dividends, distributions and advances by Ferroglobe's subsidiaries will be contingent upon their earnings and business considerations and may be limited by legal, regulatory and contractual restrictions. For instance, the repatriation of dividends from Ferroglobe's Venezuelan and Argentinean subsidiaries have been subject to certain restrictions and there is no assurance that further restrictions will not be imposed. Additionally, Ferroglobe's right to receive any assets of its subsidiaries as an equity holder of such subsidiaries, upon their liquidation or reorganization, will be effectively subordinated to the claims of such subsidiaries' creditors, including trade creditors.

Details and description of Ferroglobe's debt instrument and ABL Revolver are described in Notes 16 and 18 of the Consolidated Financial Statements.

C. Research and Development, Patents and Licenses, etc.

For additional information see "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)."

D. Trend Information

We discuss in Item 5.A. above and elsewhere in this annual report, trends, uncertainties, demands, commitments or events for the year ended December 31, 2019 that we believe are reasonably likely to have a material adverse effect on our revenues, income, profitability, liquidity or capital resources or to cause the disclosed financial information not to be necessarily indicative of future operating results or financial conditions.

E. Off-Balance Sheet Arrangements

We do not have any outstanding off-balance sheet arrangements.

F. Tabular Disclosure of Contractual Obligations

The following table sets forth Ferroglobe's contractual obligations and commercial commitments with definitive payment terms that will require significant cash outlays in the future, as of December 31, 2019.

		Payments Due by Period			
($ thousands)	**Total**	**Less than 1 year**	**1 - 3 years**	**3 - 5 years**	**More than 5 years**
Long and short term debt obligations	688,618	83,866	534,459	60,780	9,513
Capital expenditures	15,635	15,635	—	—	—
Leases	28,641	10,161	12,510	5,059	911
Power purchase commitments[1]	346,687	125,031	221,656	—	—
Purchase obligations[2]	33,032	33,032	—	—	—
Total	**1,112,613**	**267,725**	**768,625**	**65,839**	**10,424**

(1) Represents minimum charges that are enforceable and legally binding, and do not represent total anticipated purchases. Minimum charges requirements expire after providing one year notice of contract cancellation.

(2) The Company has outstanding purchase obligations with suppliers for raw materials in the normal course of business. The disclosed purchase obligation amount represents commitments to suppliers that are enforceable and legally binding and do not represent total anticipated purchases of raw materials in the future.

The table above also excludes certain other obligations reflected in our consolidated balance sheet, including estimated funding for pension obligations, for which the timing of payments may vary based on changes in the fair value of pension plan assets and actuarial assumptions. We expect to contribute approximately $1,159 thousand to our pension plans for the year ended December 31, 2020.

G. Safe Harbor

This annual report contains forward-looking statements within the meaning of Section 27A of the U.S. Securities Act and Section 21E of the U.S. Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. See "Cautionary Statements Regarding Forward-Looking Statements."

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors, Senior Management and Employees

The following table lists each of our executive officers and directors, their respective ages and positions as of the date of this annual report and their respective dates of appointment. The business address of all our directors and senior management is our business address as set forth in "Item 4.A.—Information on the Company—History and Development of the Company."

Name	Age	Position	Date of appointment
Javier López Madrid	55	Director and Executive Chairman	February 5, 2015
Marco Levi	60	Director and Chief Executive Officer	January 10, 2020
Beatriz García-Cos Muntañola	56	Chief Financial Officer and Principal Accounting Officer	October 17, 2019
José María Alapont	69	Director	January 24, 2018
Donald G. Barger, Jr.	77	Director	December 23, 2015
Bruce L. Crockett	76	Director	December 23, 2015
Stuart E. Eizenstat	77	Director	December 23, 2015
Manuel Garrido y Ruano	54	Director	May 30, 2017
Greger Hamilton	53	Director	December 23, 2015
Juan Villar-Mir de Fuentes	58	Director	December 23, 2015

Other than employment agreements between Ferroglobe and each of Javier López Madrid, Marco Levi and Beatriz García-Cos Muntañola, there are no service contracts between the officers and directors listed in the table above, on the one hand, and us or any of our subsidiaries on the other, providing for benefits upon termination of employment.

There are no family relationships between our executive officers and directors, except that Javier López Madrid is married to the sister of Juan Villar-Mir de Fuentes.

Set forth below is a brief biography of each of our executive officers and directors.

Javier López Madrid

Javier López Madrid has been Executive Chairman of the Company since December 31, 2016 and Chairman of our Nominations Committee since January 1, 2018. He was first appointed to the Board on February 5, 2015 and was the Company's Executive Vice-Chairman from December 23, 2015 until December 31, 2016.

He has been Chief Executive Officer of Grupo VM since 2008, is a member of the World Economic Forum, Group of Fifty and a member of the Board of several non profit organizations. He is the founder and largest shareholder of Financiera Siacapital and founded Tressis, Spain's largest independent private bank.

Mr. López Madrid holds a Masters in law and business from ICADE University.

Marco Levi

Marco Levi was appointed Chief Executive Officer of the Company on January 10, 2020 and appointed to its Board of Directors on January 15, 2020. Dr Levi previously served as President and CEO of Alhstrom-Munksjö Oyj, a global fiber materials company listed in Finland, where he led a successful transformation of the business by refocusing its product portfolio towards value-added specialty products. Prior to that, Dr. Levi was Senior Vice President and Business President of the $3 billion emulsion polymers division of chemicals manufacturer Styron, including during the period in which Styron was acquired by Bain Capital from Dow Chemical Company. Dr. Levi previously had spent over twenty-two years at Dow in various departments and roles, ultimately serving as general manager of the emulsion polymers business.

Dr Levi is also a Non-Executive Director of Schweitzer-Mauduit International, Inc, the leading global performance materials company, listed on the New York Stock Exchange. Dr Levi holds a doctorate in industrial chemistry from the Università degli Studi di Milano, Statale,in Italy.

Beatriz García-Cos Muntañola

Beatriz García-Cos Muntañola was appointed as Chief Financial Officer and Principal Accounting Officer on October 17, 2019.

Before joining Ferroglobe, Ms. García-Cos served as Group CFO at Bekaert NV, a leading, global steel wire transformation company, listed on the Brussels Stock Exchange, where she focused on setting and executing financial strategy, as well as leading numerous strategic projects centered on business growth and enhanced operational efficiency. Prior to Bekaert NV, she was the Chief Financial Officer of the mining division of Trafigura Beheer BV, one of the largest physical commodities trading groups. Before that, she was Finance Director, EMEA and LATAM, for Vestas Wind Systems A.S, the Danish publicly-listed multinational and world's largest wind turbine manufacturer. Prior to that role, she was Finance Manager for PPG Industries Inc, a leading diversified manufacturing company listed on the New York Stock Exchange.

Ms García-Cos holds an MA in Economics and Business Administration from the University of Barcelona and graduated from the Advanced Management Program of IESE, in Spain.

José María Alapont

José María Alapont was appointed to our Board of Directors as a Non-Executive Director on January 24, 2018 and to our Audit Committee and Compensation Committee on May 16, 2018. Mr. Alapont was appointed on January 16, 2019 as our Senior Independent Director and Chairman of our Corporate Governance Committee.

Mr. Alapont holds a number of other Board appointments. Since 2017, he has been a member of the Board of Directors of Ashok Leyland Ltd and is also a member of its Investment and Technology Committee Since 2018, he has been a member of its Nomination and Remuneration Committee and joined its Audit Committee in 2019. Mr Alapont has also been a Board Director of Navistar Inc. and a member of its Finance Committee since 2016 and Chair of its Nomination and Governance Committee since 2018. He has been a member of the Board of Directors of Hinduja Investments and Project Services Ltd since 2016 and of Hinduja Automotive Ltd since 2014.

Mr. Alapont was formerly President and Chief Executive Officer of Federal-Mogul Corporation, the automotive powertrain and safety components supplier, from March 2005 to 2012, Chairman of its Board from 2005 to 2007 and Board director from 2005 to 2013. Prior to that, he was Chief Executive and a Board Director of Fiat Iveco, S.p.A., a leading global manufacturer of commercial trucks, buses, defense and other specialized vehicles from 2003 to 2005. Prior to 2003, he held Executive, Vice President and President positions for more than 30 years at other leading global vehicle manufacturers and suppliers, such as Ford Motor Company, Delphi Corporation and Valeo S.A. His non-executive experience also includes being member of the Board of Directors of the Manitowoc Company Inc. from 2016 to 2018 and

a Board Director of Mentor Graphics Corp. from 2011 to 2012. He was a member of the Davos World Economic Forum from 2000 to 2011.

Mr. Alapont holds an Industrial Engineering degree from the Technical School of Valencia and a Philology degree from the University of Valencia in Spain.

Donald G. Barger Jr.

Donald G. Barger, Jr, was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He has served as the Chairman of our Compensation Committee and a member of our Nominations Committee since January 1, 2018. From December 23, 2015 to December 31, 2017, he was the Chair of our Nominating and Corporate Governance Committee and a member of our Compensation Committee.

Mr Barger was a member of the Board of Directors of Globe from December 2008 until the closing of the Business Combination and Chairman of Globe's Audit Committee and Compensation Committee. He had a successful 36-year business career in manufacturing and services companies, including as Vice President and Chief Financial Officer of YRC Worldwide Inc. (formerly Yellow Roadway Corporation) from 2000 to 2007 and as advisor to the CEO from 2007 until his retirement in 2008. He was Vice President and Chief Financial Officer of Hillenbrand Industries, a provider of services and products for the health care and funeral services industries, from 1998 to 2000. He was Vice President of Finance and Chief Financial Officer of Worthington Industries, Inc., a diversified steel processor, from 1993 to 1998 and a member of the Board of Directors of Gardner Denver, Inc. and a member on its Audit Committee for his entire 19-year tenure until the company's sale in July 2013, serving as chair of the Audit Committee for 17 of those years. He served on the Board of Directors of Quanex Building Products Corporation for sixteen years, retiring in February 2012. He served on its Audit Committee for 14 years and was its Chair for most of that time.

Mr. Barger has a Bachelor of Science degree from the U.S. Naval Academy and an MBA from the University of Pennsylvania.

Bruce L. Crockett

Bruce L. Crockett was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He has been a member of our Audit Committee from that date and has served on our Compensation Committee since January 1, 2018.

Mr. Crockett holds a number of other Board and governance roles. He has been Chairman of the Invesco Mutual Funds Group Board of Directors and a member of its Audit, Investment and Governance Committees, serving on the board since 1991, as Chair since 2003 and on the Board of predecessor companies from 1978. Since 2013, he has been a member of the Board of Directors and, since 2014, Chair of the Audit Committee of ALPS Property & Casualty Insurance Company. He has been Chairman of, and a private investor in, Crockett Technologies Associates since 1996. He is a life trustee of the University of Rochester.

Mr. Crockett was a member of the Board of Directors of Globe from April 2014 until the closing of the Business Combination, as well as a member of Globe's Audit Committee. He was formerly President and Chief Executive Officer of COMSAT Corporation from 1992 until 1996 and its President and Chief Operating Officer from 1991 to 1992, holding a number of other operational and financial positions at COMSAT from 1980, including that of Vice President and Chief Financial Officer. He was a member of the Board of Directors of Ace Limited from 1995 until 2012 and of Captaris, Inc. from 2001 until its acquisition in 2008 and its Chairman from 2003 to 2008.

Mr. Crockett holds an A.B. degree from the University of Rochester, B.S. degree from the University of Maryland, an MBA from Columbia University and an Honorary Doctor of Law degree from the University of Maryland.

Stuart E. Eizenstat

Stuart E. Eizenstat was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He has been a member of the Company's Corporate Governance Committee since January 1, 2018 and was appointed to our Nominations Committee on May 16, 2018.

Mr. Eizenstat has been a Senior Counsel at Covington & Burling LLP in Washington, D.C. and Head of its international practice since 2001. He has served as a member of the Advisory Boards of GML Ltd. since 2003 and of the Office of Cherifien de Phosphates since 2010. He was a trustee of BlackRock Funds from 2001 until 2018.

Mr. Eizenstat was a member of Board of Directors of Globe from 2008 until the closing of the Business Combination and Chair of its Nominating Committee. He was a member of the Board of Directors of Alcatel-Lucent from 2008 to 2016 and of United Parcel Service from 2005 to 2015. He has had an illustrious political and advisory career, including serving as Special Adviser to Secretary of State Kerry on Holocaust-Era Issues from 2009 to 2017 and Special Representative of the President and Secretary of State on Holocaust Issues during the Clinton administration from 1993 to 2001. He was Deputy Secretary of the United States Department of the Treasury from July 1999 to January 2001, Under Secretary of State for Economic, Business and Agricultural Affairs from 1997 to 1999, Under Secretary of Commerce for International Trade from 1996 to 1997, U.S. Ambassador to the European Union from 1993 to 1996 and Chief Domestic Policy Advisor in the White House to President Carter from 1977 to 1981. He is the author of "Imperfect Justice: Looted Assets, Slave Labor, and the Unfinished Business of World War II"; "The Future of the Jews: How Global Forces are Impacting the Jewish People, Israel, and its Relationship with the United States" and "President Carter: The White House Years."

Mr. Eizenstat holds a B.A. in Political Science, cum laude and Phi Beta Kappa, from the University of North Carolina at Chapel Hill, a J.D. from Harvard Law School and nine honorary doctorate degrees and awards from the United States, French, German, Austrian, Belgian and Israeli governments.

Manuel Garrido y Ruano

Manuel Garrido y Ruano was appointed to our Board of Directors as a Non-Executive Director on May 30, 2017. He was a member of our Nominating and Corporate Governance Committee from May 30, 2017 until December 31, 2017, when he was appointed to our Corporate Governance Committee.

Mr. Garrido y Ruano has been Chief Financial Officer of Grupo Villar Mir since 2003 and a member of the Board or on the steering committee of a number of its subsidiaries in the energy, financial, construction and real estate sectors. He is Professor of Communication and Leadership of the Graduate Management Program at CUNEF in Spain. Mr. Garrido y Ruano was a member of the steering committee of FerroAtlántica until 2015, having previously served as its Chief Financial Officer from 1996 to 2003. He worked with McKinsey & Company from 1991 to 1996, specializing in restructuring, business development and turnaround and cost efficiency projects globally.

Mr. Garrido y Ruano holds a Masters in Civil Engineering with honors from the Universidad Politecnica de Madrid and an MBA from INSEAD.

Greger Hamilton

Greger Hamilton was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He was a member of our Compensation Committee from that date until December 31, 2017. He has been Chairman of our Audit Committee since December 23, 2015 and a member of our Corporate Governance Committee since January 1, 2018.

Mr. Hamilton has been Managing Partner of Ovington Financial Partners Ltd since 2009. He is cofounder of the BrainHealth Club and has been a member of its Board of Directors since 2016. From 2009 to 2014, Mr. Hamilton was a partner at European Resolution Capital Partners, where he assisted in the restructuring of international banks in 16 countries, and managing director at Goldman Sachs International from 1997 to 2008. He began his career at McKinsey and Company, where he worked from 1990 to 1997.

Mr. Hamilton holds a B.A. in Business Economics and International Commerce from Brown University.

Juan Villar-Mir de Fuentes

Juan Villar-Mir de Fuentes was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015.

Mr. Villar-Mir de Fuentes has been Vice Chairman of Inmobiliaria Espacio, S.A since 1996 and Vice Chairman of Grupo Villar Mir, S.A.U. since 1999. He has been a member of the Board of Directors of Obrascon Huarte Lain, S.A. since 1996, a member of the Audit Committee and, later, its Compensation Committee and its Chairman since 2016. He was a Board director and member of the Compensation Committee of Inmobiliaria Colonial, S.A from June 2014 to May 2017. He also was a member of the Board of Directors and of the Compensation Committee of Abertis Infraestructuras, S.A. between 2013 and 2016.

Mr. Villar-Mir de Fuentes is Patron and member of the Patronage Council of Fundación Nantik Lum and Fundación Princesa de Gerona.

Mr. Villar-Mir holds a Bachelor's Degree in Business Administration and Economics and Business Management.

B. Compensation

Compensation of executive officers and directors

The table below sets out the remuneration earned by our directors during the year ended December 31, 2019:

($ thousands)	Salary & Fees	Benefits	Pension	Annual Bonus	Long - Term Incentives	Total
Executive Directors						
Javier López Madrid	707,842	175,612	141,568	—	295,772	1,320,794
Pedro Larrea Paguaga[1]	605,811	200,219	121,162	—	220,120	1,147,312
Marco Levi[2]	—	—	—	—	—	—
Non-Executive Directors						
José María Alapont	215,134	9,565	—	—	—	224,699
Donald G. Barger, Jr.	128,814	28,696	—	—	—	157,510
Bruce L. Crockett	131,365	31,247	—	—	—	162,612
Stuart E. Eizenstat	104,582	19,769	—	—	—	124,351
Manuel Garrido y Ruano	104,582	13,392	—	—	—	117,974
Greger Hamilton	160,876	1,913	—	—	—	162,789
Javier Monzón[3]	36,118	3,826	—	—	—	39,944
Pierre Vareille[4]	48,897	5,739	—	—	—	54,636
Juan Villar-Mir de Fuentes	89,277	7,652	—	—	—	96,929

[1] Mr. Larrea Paguaga stepped down from the Board on 10 January 2020.
[2] Dr. Levi was appointed to the Board on January 15, 2020.
[3] Mr. Monzón stepped down from the Board on May 13, 2019.
[4] Mr. Vareille stepped down from the Board on May 14, 2019.

Javier López Madrid holds 154,703 options granted on June 1, 2017 and 113,121 options granted on March 21, 2018 (at target performance in each case). Pedro Larrea Paguaga holds 115,134 options granted on June 1, 2017 and 84,187 options granted on March 21, 2018 (at target performance in each case). Maximum opportunity for each award is 200% of target. On March 14, 2019 Javier López Madrid was granted 342,329 options and Pedro Larrea Paguaga was granted 254,769 options (at target performance in each case). As with prior grants, the maximum opportunity for each award is twice target. The awards granted in 2019 were discounted by a significant percentage to take account of the fall in the Company's share price in 2018 and 2019, with a discount of 50% applied to awards granted to executive directors, and a cap at 400% of

each of the above participants' "normal" award level was also introduced for all 2019 awards. The value reflected in the table above is for the number of shares expected to vest at an average fair value at the date of grant to executive directors of $2.74. This average fair value differs from the average fair value at grant of $2.69 disclosed for the 2019 grant in Note 21 to the financial statements because in Note 21 the fair value reflects the average discount for all participants in the 2019 grant, including but not limited to executive directors.

All of these options were granted under the rules of the Company's Equity Incentive Plan 2016, are over ordinary shares in the capital of the Company and have a strike price of nil. The options vest and become exercisable three years from the date of grant, to the extent that performance conditions are satisfied, and subject to continued service with the Company, remain exercisable until the tenth anniversary of their grant date.

Remuneration policy

In June 2019, our shareholders approved the remuneration policy applicable to executive directors and non-executive directors of the Company as set out in the directors' remuneration report within our U.K. annual report for the year ended December 31, 2018 (the "Policy"), as required by the UK Companies Act 2006 and the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013. The Policy was approved on June 28, 2019 and applied with immediate effect.

The overall aim of our remuneration strategy is to provide appropriate incentives that reflect our high-performance culture and values to maximize returns for our shareholders. In summary, we aim to:

- attract, retain and motivate high-caliber, high-performing employees;
- encourage strong performance and engagement, both in the short and the long term, to enable us to achieve our strategic objectives;
- link a very significant proportion of pay to performance conditions measured over both the short-term and longer term;
- set fixed pay levels at or around market norms to allow for a greater proportion of total remuneration opportunity to be in variable pay; and
- create strong alignment between the interests of shareholders and executives through both the use of equity in variable incentive plans and the setting of shareholding guidelines for directors.

Consistent with this remuneration strategy, in relation to the Company's executive directors, the Policy provides, in summary, that:

- executive director salaries are set at a rate commensurate with the individual's role, responsibilities and experience, having regard to broader market rates. Salaries are reviewed annually, when Company performance, individual performance, changes in responsibility, levels of increase for the broader employee population and market salary levels will be taken into account. No maximum salary is set under the Policy;
- executive directors may receive a cash allowance in lieu of contribution to a pension, up to a maximum of 20% of base salary per annum, which may include contributions to a U.S. tax-qualified defined contribution 401(k) plan;
- executive directors may receive other market competitive benefits such as medical cover, life assurance and income protection insurance and, where appropriate, relocation allowances (with the Compensation Committee to review relocation allowances annually);

- executive directors are provided with directors' and officers' liability insurance and an indemnity to the fullest extent permitted by the UK Companies Act 2006;

- executive directors are eligible for an annual bonus, which normally has a maximum bonus opportunity of 200% of annual base salary but could have a maximum bonus opportunity of up to 500% of annual base salary in exceptional circumstances. No more than 25% of the maximum bonus payable for each performance condition will be payable for threshold performance. Any bonus award will be subject to the achievement of quantitative and qualitative performance conditions as determined by the Compensation Committee each year (at least two-thirds of the bonus will be based on financial metrics with the balance based on non-financial metrics). Normally any bonus earned in excess of the target amount will be deferred for three years into shares in the Company and the executive director may be granted an additional long-term incentive award of equal value (at maximum) to the amount of annual bonus deferred. Recovery and recoupment provisions apply to all bonus awards for misstatement, error or gross misconduct. The Company may also award retention bonuses, payable in addition to or instead of any annual bonus, if it considers it necessary to retain key executives in situations where the individual might otherwise leave and his or her retention Is critical. The grant, terms and payment of any retention bonus are at the discretion of the Committee. Any retention bonus would normally count towards the 500% salary limit referred to above;

- executive directors are eligible to be granted an award under the Company's long-term incentive plan, at the discretion of the Compensation Committee. Any awards granted would normally vest three years after the date of grant. All long-term incentive awards granted are subject to the achievement of performance targets, determined by the Compensation Committee for each grant. If an award is granted, the annual target award limit will not normally be higher than 300% of salary (save that, in recruitment, appointment and retention situations, it could be up to 500% of salary) and maximum vesting is normally 200% of target (both measures based on the face value of shares at the date of grant). Recovery and recoupment provisions apply to all long-term incentive awards for misstatement, error or gross misconduct;

- the Company has share ownership guidelines in place under which it recommends that executive directors hold a number of shares in the Company equivalent to 200% of base salary; and

- when determining the remuneration package for a new executive director, the Compensation Committee expects to apply the Policy set out above but may, in some circumstances, need to take account of other relevant factors, such as that individual's existing employment and their personal circumstances.

The Company's executive directors are Mr. López Madrid, who has served as Executive Chairman since December 2017 and as a Director since December 2015, and receives a base salary of £555,000 per annum, and Dr. Marco Levi who serves as Chief Executive Officer and Director and receives a base salary of €600,000 per annum. Mr Larrea served as Chief Executive Officer and Director during the year under review in which he received a base salary of £475,000 per annum. The salaries of Mr. López Madrid and Dr Levi have remained unchanged since their respective executive appointments.

In relation to the Company's non-executive directors, the Policy provides, in summary, that:

- Non-executive directors are paid a basic fee. Supplementary fees are paid for additional responsibilities and activities such as membership of a main Board committee or assuming chairmanship of a committee. Travel fees may be paid to reflect additional time incurred in travelling to meetings.

- Currently, non-executive directors receive a base fee of £70 thousand per annum, with supplemental fees being payable if that non-executive director is also the senior independent director (£35,000 per annum), a member of the Audit Committee (£17,500 per annum), a member of the Compensation Committee (£15,500 per annum), a member of the Corporate Governance Committee (£12,000 per annum) or a Committee Chairman (two times membership fee). Non-executive directors receive a travel fee of either £3,500 (for intercontinental travel) or £1,500 (for continental travel) per meeting. Members of the Nominations Committee receive a fee of £1,500 for each meeting, with a maximum set at £10,000 per annum. Where the Chair of the Nominations Committee is also

an executive director, he or she is paid no fee for their chairmanship. Non-executive director fee levels are reviewed periodically, with reference to time commitment, knowledge, experience and responsibilities of the role as well as market levels in comparable companies both in terms of size and sector. No maximum fee level or prescribed annual increase is set under the Policy;

- reasonable expenses incurred by the non-executive directors in carrying out their duties may be reimbursed by the Company including any personal tax payable by the non-executive director as a result of reimbursement of those expenses. The Company may also pay an allowance in lieu of expenses if it deems this appropriate;

- non-executive directors are provided with directors' and officers' liability insurance and an indemnity to the fullest extent permitted by the UK Companies Act 2006.

C. Board Practices

Board composition and election of Directors

As of the date of this annual report, our Board of Directors consists of nine directors, of whom two are executive directors and seven are non-executive directors. The maximum and minimum number of directors is eleven and two respectively. Subject to the approval of the Nominations Committee, the Chief Executive Officer is nominated as a director by the Board of Directors. Of the directors, three are Grupo VM nominees, namely Javier López Madrid, Manuel Garrido y Ruano and Juan Villar Mir. The remaining non-executive directors are independent.

All directors will stand for re-election at the Company's annual general meeting on June 17, 2020. Any director not so elected or re-elected will stand down. No new executive directors may be appointed without the approval of a majority of Grupo VM nominees and a majority of independent directors.

Director independence

Under the Articles of Association, as in effect since October 26, 2017, a director is considered independent if he or she is "independent" as defined in the NASDAQ rules and, while Grupo VM and its Affiliates own 10% or more of the Company's shares, is independent from Grupo VM and its Affiliates. The Board reviewed the independence of its then directors in December 2015 and concluded that each of Messrs. Barger, Crockett, Eizenstat and Hamilton met the independence requirements of the NASDAQ rules. Messrs. López Madrid, Garrido y Ruano and Villar Mir are GVM Nominees and are not considered to be independent. The independence of Mr. Alapont was confirmed by the Nominations Committee in 2018 prior to his recommendation to the Board for appointment.

Certain approvals of the Board of Directors

Pursuant to the Articles of Association, as in effect since October 26, 2017, the approval of certain matters by our Board of Directors requires the approval of more than a simple majority of directors present.

So long as Grupo VM or its Affiliates owns 10% or more of our outstanding shares, any transaction, agreement or arrangement between Grupo VM or any of its Affiliates or Connected Persons (as defined in the articles of association)

and the Company or any of its Affiliates (or any amendment, waiver or repeal of any such transaction, agreement or arrangement) requires the approval of a majority of independent, non-conflicted directors.

No new executive directors may be appointed without the approval of a majority of GVM Nominees and a majority of independent directors.

Committees of the Board of Directors

During the year ended December 31, 2019, our Board of Directors had four standing committees: an Audit Committee, a Compensation Committee, a Corporate Governance Committee and a Nominations Committee.

Audit Committee

During the period from January 1, 2019 to the resignation of Mr. Vareille on May 14, 2019, our Audit Committee consisted of four directors: Messrs. Alapont, Crockett, Hamilton (as Chair) and Vareille. During the period from May 14, 2019 to December 31, 2019, our Audit Committee had three members: Messrs. Alapont, Crockett and Hamilton (as Chair). Mr. Hamilton served as Chairman of the Committee throughout the year under review and meets the requirements as an "audit committee financial expert" under the rules of the SEC and qualifies as a financially sophisticated audit committee member as required by the NASDAQ rules relating to audit committees. Our Board has determined that each of these directors satisfies the enhanced independence requirements for audit committee members required by Rule 10A-3 under the U.S. Exchange Act, and is financially literate as that phrase is used in the additional audit committee requirements of the NASDAQ rules.

Our Audit Committee has responsibility to: (1) oversee our accounting and financial reporting processes and the audits of our financial statements; (2) monitor and make recommendations to the Board regarding the auditing and integrity of our consolidated financial statements; (3) be directly responsible for the qualification, selection, retention, independence, performance and compensation of our independent auditors, including resolution of disagreements between management and the auditors regarding financial reporting, for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for us, and have the auditors report directly to the Committee; and (4) provide oversight in respect of our internal audit and accounting and financial reporting processes. The Audit Committee meets at least four times a year. Additional meetings may occur as the Audit Committee or its chair deem advisable.

Compensation Committee

During the period from January 1, 2019 to the resignation of Mr. Vareille on May 14, 2019, our Compensation Committee consisted of four directors: Messrs. Alapont, Barger (as Chair), Crockett, and Vareille. During the period from May 14, 2019 to December 31, 2019, our Compensation Committee had three members: Messrs. Alapont, Barger (as Chair) and Crockett. Mr. Barger served as its Chairman throughout the year under review. Our Board has determined that each of these directors meets the heightened independence requirements of compensation committee members under SEC rules.

Our Compensation Committee has responsibility to: (1) evaluate and recommend to the Board for approval the compensation of our directors, executive officers and key employees; (2) oversee directly or indirectly all compensation programs involving the use of our stock; (3) produce a report annually on executive compensation for inclusion in our proxy statement for our annual meeting of shareholders; (4) produce a report annually in compliance with remuneration reporting requirements (i.e., a directors' remuneration report), in each case in accordance with applicable rules and regulations; and (5) produce, review on an ongoing basis and update as needed, a directors' remuneration policy. The Compensation Committee meets with such frequency, and at such times, and places and whether in person or electronically/telephonically as it determines is necessary to carry out its duties and responsibilities, but shall meet at least four times annually.

Nominations Committee

From January 1, 2019 to May 15, 2018 our Nominations Committee consisted of four directors: Messrs. López Madrid (as Chair), Barger, Eizenstat and Monzón. Following the resignation of Mr. Monzón on May 13, 2019, our Nominations Committee has consisted of three directors: Messrs. López Madrid (as Chair), Barger and Eizenstat.

Our Nominations Committee has responsibility to review and provide guidance to the Board about the composition of the Board as follows: (a) subject to the provisions of the Articles of Association where a different arrangement may be prescribed, identifying and recommending to the Board for nomination individuals qualified to become Board members, consistent with qualification standards and other criteria approved by the Board for selecting directors; (b) reviewing and providing guidance on the independence of nominees, consistent with applicable laws, NASDAQ requirements and the Articles of Association, and monitoring and ensuring that independent non-executive directors continue to meet these applicable independence requirements; and (c) reviewing and providing guidance on other nominating issues that the Board desires to have reviewed by the Committee.

Corporate Governance Committee

From January 1, 2019 to January 16, 2019, our Corporate Governance Committee consisted of four directors: Messrs. Stuart Eizenstat, Manuel Garrido y Ruano, Greger Hamilton and Javier Monzón. From January 1, 2019, to January 16, 2019, Javier Monzón was Chair of the Committee. On January 16, 2019, he stepped down from the Committee and its chairmanship and Mr Alapont was appointed in his place. Since that date, our Corporate Governance Committee has consisted of four directors: Messrs. Alapont (as Chair), Eizenstat, Garrido y Ruano and Hamilton.

Our Corporate Governance Committee has responsibility to review and provide guidance to the Board and respond to the Board's requests about governance related matters including: (a) reviewing and providing guidance on the organization of the Board and its committee structure; (b) reviewing and providing guidance on the self-evaluation procedures of the Board and its committees; (c) reviewing and providing guidance on a conflicts register; (d) reviewing and providing guidance on the Company's code of conduct; (e) reviewing and providing guidance on the Company's insider trading policy; (f) reviewing and providing guidance on proposed changes to the Articles; (g) reviewing and making recommendations to the Board on non-executive directors' compensation reviewing and agreeing the terms of non-executive directors' letters of appointment; and (h) considering succession planning, taking into account the challenges and opportunities facing the Company and the skills and expertise needed on the Board in the future, recommending to the Board plans for succession for both executive and non-executive directors.

Senior Independent Director

In October 2017, the Board established the role of Senior Independent Director, to provide a sounding board for the Chairman and to serve as intermediary for the other directors where necessary. In the year under review, Mr. Monzón served as Senior Independent Director from January 1, 2019 to January 16, 2019, when he stepped down from the role and Mr. Alapont was appointed in his place. Mr. Alapont has been our Senior Independent Director since January 16, 2019.

Corporate governance policy

In October 2017, the Board adopted a corporate governance policy ("the Corporate Governance Policy") under which, while Grupo VM has the right under the shareholders agreement in place between it and the Company to require that at least three members of the Board shall be persons proposed by it to the Nominations Committee, there shall be at least five directors on the Board who are independent within the meaning of the Company's Articles of Association. Under this policy the number of independent directors reduces as Grupo VM's rights to propose persons for nomination to the Board also reduce, it being the Board's policy that at all times, there is a majority of directors on the Board who are independent as so defined. The Corporate Governance Policy was reviewed by the Board and renewed for a period of up to eighteen months from February 2019.

Board policy

In 2015, we adopted a Board policy which provides certain practical principles relating to (i) the functioning of the Board; and (ii) the principles under which we will undertake our core management and overall supervision tasks from our London headquarters (the "Board Policy"). As set out in the Board Policy, we provide management and other services (including, but not limited to, administration, financial, commercial and technical services) to Globe, FerroAtlántica and any other subsidiaries from time to time.

D. Employees

As of December 31, 2019, 2018 and 2017, on a consolidated basis, the number of employees, across the Ferroglobe Group was 3,462, 4,368 and 4,049 respectively, excluding temporary employees. We believe our relations with our employees are generally good and we have not experienced any significant labor disputes or work stoppages.

The following tables show the number of our full-time employees as of December 31, 2019, 2018 and 2017 on a consolidated basis broken down based on business segment and geographical location:

	2019	2018	2017
North America	847	1,079	1,121
Spain	561	857	900
France	1,119	1,183	1,040
South Africa	358	568	489
Rest of the world	577	681	499
Total number of employees	**3,462**	**4,368**	**4,049**

Collective bargaining agreements ("CBAs") are in force among our operations in Spain, France, South Africa, Norway, the United States and Venezuela. We have experienced union activity and strikes in the past. For example, in 2014, there was a strike at our South African subsidiary that reduced production for seven days. Additionally, we have also experienced employee strikes in France from time to time. In 2017, there were two one-day strikes at one of our Spanish plants (Cee) without any significant impact on production volume. In France there has been a 3-day strike in most of the plants, in February 2019, before reaching an agreement about the annual salary increase and then there have been other strikes linked to some French government policy changes (i.e. pension reform). See "Item 3.D.—Key Information—Risk Factors—We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business."

To improve the structure of our labor relations in Spain, a national collective agreement ("NCA") was entered into on February 2, 2018 with four out of the five trade unions representing over 70% of our workforce there. This NCA regulates matters such as wage increases, annual working time, professional training, gender equality and disciplinary actions until December 31, 2020 and was put into effect at the Boo, Monzón and Sabón plants, the Madrid office and the mining facilities in Spain, where it will operate in conjunction with the relevant site-specific CBAs. The salary increases set out in the NCA came into effect on execution of the relevant site-specific agreement and applied retroactively from January 1, 2018. The NCA provides a labor relation framework which establishes common parameters for all the work sites and is complementary to the site specific CBAs. The manufacturing plant at Sabón entered into a new site-specific agreement on March 20, 2018; the Boo plant did so on March 22nd, 2018; subsidiary Rocas, Arcillas y Minerales, S.A. did so on April 13th , 2018; subsidiary Cuarzos Industriales S.A.U. on April 13rd, 2018; subsidiary Hidro Nitro Española S.A. did so on May 4th, 2018; the Madrid office did so on June 27th, 2018 and the Cee plant did so on October 17th, 2018. All the aforementioned local CBAs will expire at the same time as the NCA for reasons of consistency.

In order to manage costs, a salary freeze for 2020 has been implemented in Spain with the agreement of four out of five trade unions representing 80% of union membership there.

Our research and development employees based in Sabón and employed by FerroAtlántica I+D have no site-specific collective bargaining agreement, being governed instead by that in force at of the Sabón plant.

The collective bargaining agreement for Silicio Ferrosolar expired on December 31, 2017, and, at present, the negotiations to renew it have not started yet. Until a new collective bargaining agreement is signed, the expired agreement remains effective, except for those provisions which are stated to be valid only during the period between the start and the expiry date. For example, provisions relating to salary increases are no longer effective beyond the expiry date.

In France, all employees at FerroPem SAS plants at Anglefort, Chateau-Feuillet, Les Clavaux, Laudun, Montricher, and Pierrefitte and the Chambéry office are covered by the French national Collective Chemistry Agreement. This agreement has no expiration date. The “Accord d´intéressement,” which is an employee incentive bonus scheme whereby an incentive bonus is distributed according to a profit-sharing formula defined in the agreement, was signed on June 7, 2016 and the “Accord de participation,” which is a compulsory profit-sharing agreement under French law, was signed on December 13, 2017; a new agreement is due to be negotiated in 2020. In France there is an obligatory annual negotiation with the Company work council, mainly to set the salary increases. Other relevant subjects could be also addressed this negotiation, if necessary. The agreement for 2019 was reached in February. Negotiations in respect of 2020 are underway.

Further, an agreement on professional equality was signed in May 2019 (equality between men and women, personal and professional life, right to digital disconnection, employability of disabled workers).

Employees at Ferroglobe Manganèse France SAS are also covered by the French national Collective Chemistry Agreement. An “Accord d’intéressement” was entered into in March 2018, for 3 years and shall terminate December 31, 2020. Employees also benefit from an individual bonus scheme (called PN10) and from a compulsory profit-sharing agreement (“Accord de participation”) signed in 2007, with two addendums signed in 2009 and in 2010, and no expiration date.

At Ferroglobe Mangan Norge AS (“FMN”), three trade unions are represented among the employees. There is a collective bargaining agreement in place for all three. This agreement is due to be renegotiated in April 2020. However, annual salary negotiations will take place as using in May-June 2020. The unions represented at FMN are Industry and Energy (IE – for operators), Tekna (an engineers union), and FLT (a supervisors union).

In South Africa no labor disputes or strikes occurred in 2019. The wage agreement concluded in 2018 and which expires June 30, 2019, was not renewed. The Polokwane plant was closed in July 2019 and most employees were furloughed without any dispute. Forty employees remain as part of the care and maintenance team and this may be reduced further when all remaining product stock is sold. At the Emalahleni plant, the current wage agreement will remain in force until June 30, 2021. At Thaba Chueu Mining (Pty.) Ltd., the most recent wage agreement expired in 29 February 29, 2020 and a new agreement has not been concluded.

Hourly employees at the Selma, Alabama facility are covered by a collective bargaining agreement with the Industrial Division of the Communications Workers of America under a contract that will expire on April 30, 2022. Hourly employees at the Alloy, West Virginia, Niagara Falls, New York and Bridgeport, Alabama facilities are covered by collective bargaining agreements with The United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union under contracts running through March 20, 2022, July 31, 2022, and March 31, 2022, respectively. However, in 2019, the Selma and Niagara facilities were shut down. The facility in Bridgeport was briefly shut down until January of 2020.

Union employees in Argentina work under a contract valid until May 2020.

Union employees at the Bécancour plant in Québec are covered by a Union Certification held by CEP, Local 184. The corresponding collective bargaining agreement at the Bécancour facility runs through April 30, 2021, following negotiations completed in 2017.

In the People's Republic of China ("PRC"), at our Yonvey plant, where operations were restarted in 2017, there is a labor union committee, supervised by the local labor union and required by it to enter into annual agreements on matters such as collective representation, collective salary negotiation and the protection of women's rights. The collective salary agreement in force at Yonvey will remain in effect until February 2020, when it will be needed to be renewed. Labor dues at Yonvey have been paid by reference to actual headcount at the site.

At our Mangshi facility in PRC, the collective agreement in force expired in March 2016 and has not been renewed as the plant is not currently operative.

E. Share Ownership

The following table and accompanying footnotes show information regarding the beneficial ownership of our shares as of May 29, 2020 by:

- each named executive officer;
- each of our directors; and
- all executive officers and directors as a group.

Shares that may be acquired by an individual or group within 60 days of May 29, 2020, pursuant to the exercise of options, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table.

	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Directors and Executive Officers:		
Javier López Madrid (1)	66,797	*
Marco Levi	—	—
Beatriz Garcia Cos Muntanola	—	—
José María Alapont	15,000	*
Donald G. Barger, Jr.	20,636	*
Bruce L. Crockett	6,000	*
Stuart E. Eizenstat	36,624	*
Manuel Garrido y Ruano	870	*
Greger Hamilton	5,425	*
Juan Villar-Mir de Fuentes	—	—
Directors and Executive Officers as a Group	**151,352**	*

* Less than one percent (1%)

(1) Includes 24,297 shares issuable upon exercise of options over ordinary shares within 60 days of May 29, 2020. There is no strike price for the exercise of these options which expire on November 24, 2026. The options referred to above were issued under the Ferroglobe PLC Equity Incentive Plan (EIP) under which awards may be made to selected employees of the Company. Awards under the EIP have been made to members of senior management, including to Mr. López Madrid on the terms set out in "– Compensation" above

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth certain information regarding beneficial ownership of shares by each stockholder known by us to be the beneficial owner of more than 5% of our shares.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Percentage of ownership is based on 169,159,910 shares outstanding (excluding those held in Treasury) on May 29, 2020.

	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Grupo Villar Mir, S.A.U.	91,125,521	53.8 %
Adage Capital Partners. L.P.	13,341,392	7.9 %

As reported on Schedule 13G, filed on February 19, 2016, Adage Capital Partners, L.P., Adage Capital Partners GP, L.L.C. and Adage Capital Advisors, L.L.C. (together, the "Adage Entities") beneficially owned 8,920,075 shares of the Company, constituting 5.2% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 9, 2017, the Adage Entities beneficially owned 7,687,487 shares of the Company, constituting 4.5% of the then outstanding shares. As reported on Schedule 13G, filed on April 23, 2018, the Adage Entities beneficially owned 8,928,342 shares of the Company, constituting 5.2% of the then outstanding shares. As reported on Schedule 13G/A, filed on 13 February 2019, the Adage Entities beneficially owned 13,341,392 shares of the Company, constituting 7.9% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 12, 2020, the Adage Entities beneficially owned 14,241,392 shares of the Company, constituting 8.42% of the then outstanding shares.

As reported on Schedule 13G, filed on February 16, 2016, Alan Kestenbaum beneficially owned 8,840,938 shares of the Company, constituting 5.1% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 14, 2017, Alan Kestenbaum beneficially owned 6,502,363 shares of the Company, constituting 3.8% of the then outstanding shares.

The Company's shareholders do not have different voting rights.

As of May 29, 2020, Ferroglobe had four record holders in the United States, holding all of our outstanding shares. One of these shareholders is Cede & Co. The shares held by Cede & Co as record holder are held for underlying beneficial holders holding in 'street name'.

B. Related Party Transactions

The following includes a summary of material transactions with any: (i) enterprises that directly or indirectly through one or more intermediaries, control or are controlled by, or are under common control with us, (ii) associates, (iii) individuals owning, directly or indirectly, an interest in the voting power of the Company, that gives them significant influence over us, and close members of any such individual's family, (iv) key management personnel, including directors and senior management of such companies and close members of such individuals' families or (v) enterprises in which a substantial interest in the voting power is owned, directly or indirectly, by any person described in (iii) or (iv) or over which such person is able to exercise significant influence.

Grupo VM shareholder agreement

On November 21, 2017, we entered into an amended and restated shareholder agreement with Grupo VM (the "Grupo VM Shareholder Agreement"), as amended on January 23, 2018, that contains various rights and obligations with respect to Grupo VM's Ordinary Shares, including in relation to the appointment of directors and dealings in the Company's shares. It sets out a maximum number of directors (the "Maximum Number") designated by Grupo VM (each, a "Grupo VM Director") dependent on the percentage of share capital in the Company held by Grupo VM. The Maximum Number is

three, if Grupo VM's percentage of the Company's shares is greater than 25%; two if the percentage is greater than 15% but less than 25%; and one if the percentage is greater than 10% but less than 15%. As at the date of the Grupo VM Shareholder Agreement, the Board of Directors of the Company has three Grupo VM Directors.

Under the Grupo VM Shareholder Agreement, Grupo VM has the right to submit the names of one or more director candidates (a "Grupo VM Nominee") to the Nominations Committee for consideration to be nominated or appointed as a director as long as it holds 10% or more of Company's shares. If the Nominations Committee does not recommend a Grupo VM Nominee for nomination or appointment or if the requisite approval of the Board of Directors is not obtained in accordance with the Articles, Grupo VM shall, in good faith, and as promptly as possible but in all cases within thirty days, submit the names of one or more additional (but not the same) Grupo VM Nominees for approval. Grupo VM shall continue to submit the names of additional (but not the same) Grupo VM Nominees until such time as the favorable recommendation of the Nominations Committee and requisite approval of the Board of Directors are obtained. On December 23, 2015, Grupo VM designated Javier López Madrid to serve as the Executive Vice-Chairman of the Board in connection with the closing of the Business Combination. Upon the resignation of Alan Kestenbaum as Executive Chairman of the Board, Mr. López Madrid was appointed as Executive Chairman of the Board effective December 31, 2016. Mr. López Madrid is also the Chairman of the Nominations Committee.

The Board of Directors are prohibited from filling a vacancy created by the death, resignation, removal or failure to win re-election (a "Casual Vacancy") of a Grupo VM Director other than with a Grupo VM Nominee. Grupo VM shall have the right to submit a Grupo VM Nominee for appointment to fill a Casual Vacancy only if the Casual Vacancy was created by the death, resignation, removal or failure to win re-election of a Grupo VM Director. Grupo VM does not have the right to submit a Grupo VM Nominee for appointment to fill a Casual Vacancy if the number of Grupo VM Directors equals or exceeds the Maximum Number. In connection with any meeting of shareholders to elect directors, the number of Grupo VM Nominees in the slate of nominees recommended by the Board of Directors must not exceed the Maximum Number.

Subject to certain exceptions, Grupo VM has preemptive rights to subscribe for up to its proportionate share of any shares issued in connection with any primary offerings. The Grupo VM Shareholder Agreement (i) also restricts the ability of Grupo VM and its affiliates to acquire additional shares and (ii) contains a standstill provision that limits certain proposals and other actions that can be taken by Grupo VM or its affiliates with respect to the Company, in each case, subject to certain exceptions, including prior Board approval. The Grupo VM Shareholder Agreement also restricts the manner by which, and persons to whom, Grupo VM or its affiliates may transfer shares. On February 3, 2016, during an in person meeting of our Board, the Board approved the purchase of up to 1% of the shares by Javier López Madrid in the open market pursuant to Section 5.01(b)(vi) of the Grupo VM Shareholder Agreement.

The Grupo VM Shareholder Agreement will terminate on the first date on which Grupo VM and its affiliates hold less than 10% of the outstanding Shares.

AK shareholder agreement

On December 23, 2015, we entered into a separate shareholder agreement with Mr. Kestenbaum and certain of his affiliates (the "AK Shareholder Agreement") that contained various rights and obligations with respect to their shares. Pursuant to the AK Shareholder Agreement, Mr. Kestenbaum was appointed as Executive Chairman of the Board on December 23, 2015 in connection with the closing of the Business Combination. Mr. Kestenbaum resigned as Executive Chairman of the Ferroglobe Board of Directors, effective December 31, 2016.

Under the AK Shareholder Agreement, except with respect to a contested election for directors (other than Grupo VM Nominees), that occurs after the fifth anniversary of the closing of the Business Combination, so long as Mr. Kestenbaum and his affiliates own at least 1% of the total issued and outstanding shares, Mr. Kestenbaum and his affiliates are obliged to vote their shares to cause the election or reelection, as applicable, of the Grupo VM Nominees and the other persons nominated by the Board for election of directors. In the case of a contested election for directors that occurs from and after the fifth anniversary of the closing of the Business Combination, Mr. Kestenbaum and his affiliates may vote their shares with respect to the election of directors (other than the Grupo VM Nominees) in any manner with respect to such contested election for directors. Mr. Kestenbaum and his affiliates must always vote in favor of the Grupo VM Nominees.

The AK Shareholder Agreement also provides that Mr. Kestenbaum will enter into a "gain recognition agreement" with the IRS if he is treated as a "five-percent transferee shareholder" of the Company following the Business Combination, and will enter into subsequent "gain recognition agreements" with respect to actions or transactions taken by the Company or its affiliates, as required under applicable law.

The AK Shareholder Agreement will terminate upon the aggregate total issued and outstanding shares owned by Mr. Kestenbaum and his affiliates falling below 1%; provided that the tax covenants and indemnification obligation will survive until such time as set forth in the AK Shareholder Agreement.

Registration rights agreement

On December 23, 2015, we entered into a registration rights agreement with Grupo VM and Mr. Kestenbaum pursuant to which we granted certain registration rights to each of Grupo VM and Mr. Kestenbaum.

Agreements with executive officers and key employees

We have entered into agreements with our executive officers and key employees. See "Item 6.A.—Directors, Senior Management and Employees—Directors, Senior Management and Employees."

VM Energía and Energya VM

Under two contracts entered into in April 2013 between each of FerroAtlántica S.A.U., ("FAU") a wholly-owned subsidiary of FerroAtlántica, and Hidro Nitro Española and VM Energía, a Spanish company wholly-owned by Grupo VM, VM Energia provided strategic advisory services on the day-to-day operations of FerroAtlántica Group's hydro-electric plants. VM Energía's services under these contracts included the provision of advisory services in relation to any economic, technical and administrative aspect of FerroAtlántica Group's energy operations, the preparation of periodic reports assessing the main risks associated with the energy market and analyzing the performance of each hydro-electric power plant, the provision of advisory services in connection with changes in the applicable energy regulatory framework and related assistance in dealing with the competent energy authorities. For these services FAU and Hidro Nitro Española paid VM Energía a monthly remuneration calculated as a percentage of the revenues made each month by FerroAtlántica Group's hydro-electric power plants. For the fiscal years ended December 31, 2017 and 2016, FAU and Hidro Nitro Española made transactions under these contracts to VM Energía of $2,435 thousand and $2,880 thousand, respectively. The contracts had five-year terms and expired on January 1, 2018. As of February 2018, an agreement was entered into between FAU and VM Energía or the provision of technical, economic and regulatory advisory services in respect of the hydro-power assets in Galicia for a twelve month term, renewing annually for up to 36 months. For the fiscal year ended December 31, 2018, FAU made transactions under this agreement to VM Energía of $534 thousand. VM Energía was not legally deemed to be a direct or indirect operator of the hydro-electric power plants owned by FAU in spite of the services provided to FAU under these strategic advisory services agreements. Hidro Nitro Española was sold ("the HNE Disposal") and is no longer a direct or indirect subsidiary of the Company with effect from December 31, 2018. On August 30, 2019 the whole of the issued share capital of FAU was sold to investment vehicles affiliated with TPG Sixth Street Partners (the "FAU Disposal") and FAU is no longer a direct or indirect subsidiary of the Company with effect from August 30, 2019. All of the assets of FAU as at the date of the FAU Disposal were transferred as part of this transaction, including the hydroelectric power plants in Galicia and associated contracts, including the advisory services agreement with VM Energía. For the period during the fiscal year to December 31, 2019 that FAU was a subsidiary of the Company, FerroAtlántica made transactions under this agreement to VM Energía of $340

Under an agreement made on March 10, 2014 between FAU and VM Energía, VM Energía provided FAU with advisory services in connection with the construction in Galicia, Spain of hydro-power plants. The construction of these assets was completed in March 2018 and VM Energía continued to provide services during a two-year warranty period running into 2020. For the fiscal years ended December 31, 2019, 2018 and 2017, FAU's obligations to make payments to VM Enérgia under this agreement amounted to $34 thousand, $129 thousand and $265 thousand, respectively. This agreement was terminated in January 2019.

Under contracts entered into with FAU on June 22, 2010 and December 29, 2010 (assigned to FerroAtlántica de Boo, S.L.U. ("FAU Boo") and to FerroAtlántica de Sabon, S.L.U. ("FAU Sabon") in August 2019 in anticipation of the FAU Disposal), and with Hidro Nitro Española on December 27, 2012 (assigned to FerroAtlántica del Cinca when Hidro Nitro Española was sold in December 2018), VM Energía supplies the energy needs of the Boo, Sabón and Monzón electrometallurgy facilities, as a broker for FAU (now FAU Boo or FAU Sabon, as appropriate) and Hidro Nitro Española (now FerroAtlántica del Cinca) in the wholesale power market. The contracts allow FAU (now FAU Boo or FAU Sabon, as appropriate) and Hidro Nitro Española (now FerroAtlántica del Cinca) to buy energy from the grid at market conditions without incurring costs normally associated with operating in the complex wholesale power market, as well as to apply for fixed price arrangements in advance from VM Energía, based on the energy markets for the power, period and profile applied for. The contracts have a term of one year, which can be extended by the mutual consent of the parties to the contract. The contracts were renewed in January 2019 and will renew annually for up to three years unless terminated. The relevant contracting party within the Ferroglobe group pays VM Energía a service charge in addition to paying for the cost of energy purchase from the market. For the fiscal year ended December 31, 2019, FAU Boo, FAU Sabon and FerroAtlantica del Cinca's obligations to make payments to VM Energía under their respective agreements for the purchase of energy plus the service charge amounted to $27,355 thousand, $16,939 thousand and $20,736 thousand, respectively. For the period from January 1, 2019 to August 30, 2019 FAUs obligations to make payments to VM Energía under their respective agreements for the purchase of energy plus the service charge amounted to $376. For the fiscal years ended December 31, 2018, 2017 and 2016, FAUs and Hidro Nitro Española's and (since July 2018) FerroAtlantica del Cinca's obligations to make payments to VM Energía under their respective agreements for the purchase of energy plus the service charge amounted to $99,939 thousand, $94,049 thousand and $69,083 thousand, respectively. These contracts are similar to contracts FerroAtlántica signs with other third-party brokers. Deposit guarantees of $2,224 thousand on each were provided to VM Energía in respect of the provision of energy to the Boo and Sabon facilities under agreements entered into on October 20, 2010 in the case of Boo and January 19, 2011 in the case of Sabon. These deposit guarantee agreements terminated on December 31, 2018. In January 2018, FAU entered into an energy swap agreement with Enérgya VM Generación, S.L. ("Enérgya VM"), a Spanish company wholly-owned by VM Energía, in connection with the energy supply agreements for the plants; this agreement was transferred out of the Ferroglobe group of companies as a consequence of the FAU Disposal in August 2019. A similar agreement dated January 25, 2016 expired in 2016.

Under contracts entered into with Rocas, Arcillas y Minerales SA ("RAMSA") on December 3, 2010 and with Cuarzos Industriales SA ("CISA") on April 27, 2012, VM Energía supplied the energy needs of the mining facilities operated by those companies, as a broker for RAMSA and CISA in the wholesale power market. RAMSA and CISA are both subsidiaries of the Company operating in the mining sector. For the fiscal years ended December 31, 2018, 2017 and 2016, RAMSA's obligations to make payments to VM Enérgia under this agreement amounted to $526 thousand, $371 thousand and $297 thousand, respectively; and CISA's obligations to make payments to VM Enérgia under this agreement amounted to $277 thousand, $256 thousand and $227 thousand, respectively. These agreements superseded in 2019 by agreements entered into as of 15 March 2019 between VM Energía and each of RAMSA and CISA pursuant to which VM Energía provides equivalent intermediary services for term of one year, renewing annually. For the fiscal year to December 2019, RAMSA was obliged to make payments to VM Energía of $454 thousand under its agreements then in force with VM Energía and CISA was obliged to make payments to VM Energía of $222 thousand under its agreements then in force with VM Energía.

Additionally, for the fiscal year ended December 31, 2019, 2018 and 2017, Enérgya VM invoiced other subsidiaries of FerroAtlántica for a total amount of $89 thousand, $80 thousand and $32 thousand, respectively. No additional sums were invoiced in the fiscal year to December 31, 2016.

Under contracts dated June 30, 2012, Enérgya VM arranged for the sale of energy produced by FAU and Hidro Nitro Española's hydroelectric plants. Pursuant to the contracts, Enérgya VM provided energy market brokerage services and represented FerroAtlántica subsidiaries before the applicable energy market operator, the system operator and the Spanish National Markets and Competition Commission. FAU and Hidro Nitro Española paid Enérgya VM a monthly remuneration calculated as a percentage of the sales made each month by their hydroelectric power plants. These contracts came to an end in 2017 and have not been renewed. In January 2018, control and representation contracts were entered into between FAU Hidro Nitro Española and Enérgya VM, under which Energya VM represented FAU or Hidro Nitro Española (as appropriate) in delivering energy from the relevant FerroAtlántica's hydro plants to the energy markets in the period to 2020. For the fiscal years ended December 31, 2018, 2017 and 2016, Hidro Nitro Española invoiced Enérgya

VM for the sales made by its hydroelectric plant for a total amount of $11,874 thousand, $7,419 thousand and $5,154 thousand, respectively and FAU invoiced to Enérgya VM for the sales made by its hydroelectric plant for a total amount of $31,898 thousand, $9,803 thousand and $15,398 thousand, respectively. For the period from January 1, 2019 to completion of the FAU Disposal on August 30, 2019 when FAU ceased to be part of the Ferroglobe group of companies, FAU invoiced Enérgya VM for the sales made by its hydroelectric plants for a total amount of $12,635 thousand.

For the fiscal years ended December 31, 2018, 2017 and 2016, Hidro Nitro Española's obligations to make payments to Enérgya VM under these agreements amounted to $46 thousand, $111 thousand and $110 thousand, respectively. For the period from January 1, 2019 to August 30, 2019 and for the fiscal years ended December 31, 2018, 2017 and 2016, FAU's obligations to make payments to Enérgya VM under these agreements amounted to $117 thousand, $224 thousand, $114 thousand and $391 thousand, respectively. Following each of the disposal of HNE Disposal on December 31, 2018 and the FAU Disposal on August 30, 2019 the arrangements between Hidro Nitro Española and Energya VM in relation to the sale of energy services from or to the hydro plants owned by Hidro Nitro Española and the arrangements between FAU and and Energya VM in relation to the sale of energy services from or to the hydro plants owned by FAU are no longer related party transactions.

Under an agreement dated May 29, 2018 between FAU and Enérgya VM, Enérgya VM supplies electricity for auxiliary services to FAU's hydropower plants in Galicia, Spain. For the period from January 1, 2019 to August 30, 2019 and for the fiscal year ended December 31, 2018, FAU's obligations to make payments to Energya VM under this agreement amounted to $66 thousand and $43 thousand, respectively. Following the FAU Disposal, the arrangements between FAU and Energya VM in relation to the supply of energy for auxiliary services at the hydropower plants owned by FAU in Galicia, Spain are no longer related party transactions

Additionally, for the period from January 1, 2019 to August 30, 2019 and for the fiscal years ended December 31, 2018, 2017 and 2016, Enérgya VM invoiced FAU for energy supplies to auxiliary facilities for a total amount of $1 thousand, $42 thousand, $8 thousand and $7 thousand, respectively under contracts entered into in 2014. Following the FAU Disposal, the arrangements between FAU and Energya VM in relation to the supply of energy for auxiliary facilities are no longer related party transactions.

Espacio Information Technology, S.A.

Espacio Information Technology, S.A. ("Espacio I.T."), a Spanish company wholly-owned by Grupo VM, provides information technology and data processing services to Ferroglobe PLC and certain of its direct and indirect subsidiaries: FAU (until shortly prior to the FAU Disposal when such services were assigned to Grupo FerroAtlántica de Servicios, S.L.U. ("Servicios")), FerroAtlántica de Mexico, Silicon Smelters (Pty), Ltd. and FerroPem, SAS pursuant to several contracts.

Under a contract entered into on January 1, 2004, Espacio I.T. provided FAU with information processing, data management, data security, communications, systems control and customer support services. The contract was assigned to Servicios shortly prior to the FAU Disposal; it has a one-year term, subject to automatic yearly renewal, unless terminated with notice provided three months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $641 thousand, exclusive of VAT and subject to inflation adjustment. For the period from January 1, 2019 to August 13, 2019 when the contract was assigned to Servicios and for the fiscal years ended December 31, 2018 and 2017 FerroAtlántica's obligations to make payments to Espacio I.T. under this agreement amounted to $1,101 thousand, $954 thousand and $889 thousand, respectively. For the period from August 14, 2019 to December 31, 2019, Servicios's obligations to make payments to Espacio IT under this agreement amounted to $552 thousand.

Under a contract entered into on January 1, 2006, Espacio I.T. provides FerroPem, SAS with information processing, data management, data security, communications, systems control and customer support services. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice provided three months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $826 thousand, exclusive of VAT and subject

to inflation adjustment. For the fiscal years ended December 31, 2019, 2018 and 2017, FerroPem, SAS made obligations to make payments to Espacio I.T. under this agreement amounted to $866 thousand, $960 thousand and $911 thousand, respectively.

Under a contract entered into on June 26, 2014, Espacio I.T. provides FerroAtlántica de Mexico with information processing, data management, data security, communications, systems control and customer support services. The contract has a two-year term, subject to automatic renewal every two years, unless terminated with notice six months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $20 thousand, exclusive of VAT and subject to inflation adjustment and adjustment based on the level of production of the previous year. For the fiscal years ended December 31, 2019, 2018 and 2017 FerroAtlántica de Mexico's obligations to make payments to Espacio I.T. under this agreement amounted to $19 thousand, $20 thousand and $19 thousand, respectively.

Under a contract entered into on January 1, 2009, Espacio I.T. provides Silicon Smelters (Pty), Ltd. with services including the maintenance and monitoring of the company's network, servers, applications, and user workstations, as well as standard software licenses. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice three months prior to the scheduled renewal. The base yearly amount due under the contact is $266 thousand, subject to inflation adjustment. For the fiscal years ended December 31, 2109, 2018 and 2017, Silicon Smelters (Pty), Ltd.'s obligations to make payments to Espacio I.T. under this agreement amounted to $254 thousand, $334 thousand and $295 thousand, respectively.

Under a contract entered into on May 2, 2016, Espacio I.T. provides the Company with services including the maintenance and monitoring of its network, servers, applications, and user workstations, as well as standard software licenses at Quebec Silicon. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice three months prior to the scheduled renewal. The base yearly amount due under the contract is $148 thousand, subject to inflation adjustment. For the fiscal years ended December 31, 2019, 2018 and 2017, payments made under this contract to Espacio I.T. were $138 thousand, $144 thousand and $113 thousand, respectively.

Espacio I.T. also provides development services to FerroAtlántica under a contract dated July 21, 2017 for enhancements to Gesindus, FerroAtlántica's ERP system, and hosting services in connection with the company's document management system under a contract dated February 22, 2017, both on an ongoing basis. FerroAtlántica had transactions with Espacio I.T. under the former contract for the Gesindus development services for the fiscal years ended December 31, 2019, 2018 and 2017 of $9 thousand, $58 thousand and $131 thousand, respectively, and under the latter contract for the hosting services for the fiscal years ended December 31, 2019, 2018 and 2017 of $197 thousand, $133 thousand and $205 thousand, respectively.

Under a contract dated November 23, 2015 Espacio I.T. provided development services to FerroAtlántica for separate enhancements to Gesindus. For the fiscal years ended December 31, 2017 and 2016, FerroAtlántica paid Espacio I.T. $182 and $531 thousand, respectively, for these services which were terminated in 2017. From September 2016 to August 2019, Espacio I.T. procured for FerroAtlántica and managed its individual user and server licenses from Microsoft, on preferential terms and without charging any commission or mark-up in cost. There was no contract currently in place in relation to these arrangements and the amounts invoiced in connection with this arrangement in the fiscal years ended December 31, 2019, 2018 and 2017 were $1,161 thousand, $1,017 thousand and $326 thousand, respectively. Since August 2019, arrangements have been in place to procure these licenses from Microsoft directly or via other non-related parties. Espacio I.T. also provides Grupo FerroAtlántica with IT outsourcing services in connection with the Mangshi facility in China and provided Hidro Nitro Española with IT services, for neither of which is there a formal contract in place. The amounts invoiced in connection with these services for the fiscal years ended December 31, 2018, 2017 and 2016, $58 thousand, $88 thousand and $171 thousand, respectively paid by Grupo FerroAtlántica and $227 thousand, $232 thousand, $224 thousand, and $224 thousand, respectively paid by Hidro Nitro Española (or in the case of 2019 and 2018, by FerroAtlántica del Cinca).

For the fiscal years ended December 31, 2019, 2018 and 2017 Espacio I.T. and other subsidiaries of Grupo VM involved in the provision of IT services invoiced FAU and other subsidiaries of Grupo FerroAtlántica and Ferroglobe PLC in a total amount of $144 thousand, $302 thousand and $534 thousand, respectively.

In April 2016, the Ferroglobe Board approved a proposal to obtain certain information technology services from Espacio I.T., for a minimum term of five years, at an annual base payment of $360 thousand and requiring an initial investment of $1.7 million during 2016. While the project to which these services relate may proceed at a later date, the timeline for the procurement of these services has not been established and the investment not yet been made. No payments have been made to Espacio I.T. during 2019 in relation to these proposed arrangements.

In June 2018, FerroAtlántica signed a contract with Espacio I.T. for the development of a new Gesindus environment for its new subsidiary, FerroAtlántica del Cinca. The amounts invoiced in connection with this arrangement in fiscal year ended December 31, 2018 were $52 thousand. This contract concluded in December 2018 and no amounts were invoiced in respect of it in the year ended December 31, 2019.

Other agreements with Grupo VM

Under the terms of a loan agreement entered into on 24 July 2015 between FerroAtlántica and Inmobiliaria Espacio, S.A. ("IESA"), the ultimate parent of Grupo VM, FerroAtlántica extended to IESA a credit line for treasury purposes of up to $20 million, of which $2.9 million (the "Loan") remains outstanding. The credit line runs year on year for a maximum period of 10 years and amounts outstanding under it (including the Loan) bear interest annually at the rate equal to the EURIBOR three month rate plus 2.75 percentage points. The availability of the credit line may be cancelled at the end of any year or at any time by IESA.

In 2017, FAU received the payment of $6.3 million in discharge of the consideration due from Grupo VM in respect of Grupo VM's purchase of 2,497 shares in Alloys International Limited, a former subsidiary of FAU, under and in accordance with the terms of a share sale and purchase agreement entered into June 30, 2016.

Calatrava RE, a Luxembourg affiliate of Grupo VM, is a reinsurer of the Company's global marine and property insurance programs. The property and marine cargo insurances are placed with Mapfre Global Risks S.A. with whom the Company contracts for the provision of this insurance. In the period to April 2018, Calatrava RE was a reinsurer of the Company's third party liability insurance, arranged through QBE, with whom the Company contracted for the provision of this insurance. In April 2018, the Company moved to another insurer for its third party liability cover globally, which ended Calatrava RE's participation in this program. There are no contracts directly in place directly between the Company and Calatrava RE.

On April 2, 2012 FAU entered into a lease agreement with Torre Espacio Castellana S.A ("Torre Espacio"), then a Grupo VM company, of the office premises occupied by FerroAtlántica on the 45th floor south of the Torre Espacio building in Madrid. This lease runs until 2023 and the rent payable under it is $507 thousand per annum. On August 9, 2007, FAU entered into a lease agreement with Torre Espacio of the office premises on the 49th floor of the Torre Espacio building in Madrid and parking facilities occupied or used by FerroAtlántica there. This lease runs until 2023 and the rent payable under it is $1,056 thousand per annum. In August 2019 the leases made with FAU were assigned to Servicios in anticipation of the FAU Disposal. On October 1, 2019, Servicios entered into a lease agreement with Torre Espacio of office premises on the 45th floor north of the Torre Espacio building in Madrid. This lease runs for three years, renewing annually for a further three years thereafter unless terminated and the rent payable under it is $222 thousand per annum. The whole of Grupo VM's interest in Torre Espacio Castellana S.A was sold to a third party in 2015. Torre Espacio Gestión SLU, a wholly owned subsidiary of Grupo VM, manages the premises which are the subject of the leases on behalf of Torre Espacio, including collecting rents and other payments under the terms of the leases from FerroAtlántica on behalf of Torre Espacio.

Aurinka and the Solar JV

Javier López Madrid, the Company's Executive Chairman and a member of the Board, currently owns approximately 100% of the outstanding share capital of Financiera Siacapital which, in turn, holds a 31.33% interest in Aurinka International, S.L. ("Aurinka Int") and a 31.33% interest in Blue Power. Blue Power is a party to the Solar JV entered into by FerroAtlántica group with Aurinka Photovoltaic Group, S.L. ("Aurinka PV"). Aurinka PV is almost 100% owned by Aurinka Value, S.L., a company which also owns a 31.66% interest in Aurinka Int. Blue Power owns certain intellectual property contributed to the joint venture and provided certain technology consulting services to it, as summarized below.

The remaining equity interests in Blue Power and Aurinka Value, S.L. are owned by third party outside investors. In July 2019 certain changes were made to the terms of the Solar JV to effect its unwinding, as a result of which FerroAtlántica group acquired 100% of the share capital of the operating company set up as part of the joint venture to build and operate the pilot plant for the Solar JV ("OpCo") and FerroAtlántica group's wholly owned subsidiary, Silicio Ferrosolar, S.L.U. ("SFS") disposed of 1% of its interest in the research and development company ("R&DCo") formed to license or develop and own certain intellectual property used in connection with the Solar JV. These changes are described further below.

In 2016, FAU entered into a project with Aurinka PV for a feasibility study and basic engineering for a UMG solar silicon manufacturing plant. Purchases under this project were approximately $3.4 million for 2016.

On December 20, 2016, FerroAtlántica and its wholly owned subsidiaries, FAU and SFS entered into the Solar JV Agreement with Blue Power and Aurinka PV providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. The entry into the joint venture pursuant to the Solar JV Agreement was subject to certain conditions precedent, including the satisfactory completion of an *ex-ante* verification procedure in relation to the ability of the technology to be contributed to the joint venture by Blue Power to meet certain technical and cost parameters and the authorization of the joint venture by Ferroglobe PLC, Blue Power and Aurinka PV's management bodies. All these conditions precedent were met during 2017 and the Solar JV Agreement became fully binding.

Under the Solar JV Agreement, FerroAtlántica indirectly owned 75% of OpCo , which owns certain assets comprising, among others, constructions at Sabón and a UMG solar silicon plant at Puertollano, Spain. SFS owned 51% of R&DCo, the company formed as part of the joint venture to hold certain intellectual property rights and know-how contributed by Blue Power and SFS. R&DCo licensed such intellectual property rights and know-how to OpCo. Pursuant to the Solar JV Agreement, FerroAtlántica and other subsidiaries committed to incur capital expenditure, subject to the approval of the joint venture board, in connection with the joint venture of up to a maximum of $133,000 thousand over an initial phase of up to 2 years. During the fiscal years ended December 31, 2018 and 2017, FerroAtlántica and other subsidiaries paid Aurinka PV $4,252 thousand and $3,611 thousand, respectively, in connection with the project. Further investment in the joint venture was to be determined as the joint venture progressed. In connection with the Solar JV Agreement, FAU obtained a loan of approximately $50,000 thousand ("the REINDUS Loan") from the Spanish Ministry of Industry and Energy ("the Ministry") for the purpose of building and operating the UMG solar silicon plant. In November 2018, FAU agreed to transfer to OpCo certain assets which had been acquired with the proceeds of the REINDUS Loan and used exclusively by OpCo in connection with the joint venture in consideration of OpCo assuming liability for the REINDUS Loan. The request for this novation was formally submitted to the Ministry in November 2018. On September 25, 2017, OpCo entered into an agreement with Caiz Salceda SLU ("Salceda"), a company ultimately owned by members of the Villar Mir family (who are related to Javier Lopez Madrid by marriage), under which Salceda agrees to construct on its land and lease to the OpCo and to operate and maintain for a term of 25 years a pilot plant for power generation from photovoltaic panels produced with UMG solar silicon, in return for ownership of all power generated at the plant. On June 13, 2016, SFS entered into a loan agreement with Blue Power under which SFS advanced a principal sum of over $9,000 thousand to Blue Power in connection with the project. As at December 31, 2016 the amount outstanding under the loan agreement was $9,845 thousand. On February 24, 2017, the loan was novated to OpCo as part of a capital injection by Blue Power to OpCo and on August 1, 2019 the loan was novated to FerroAtlantica.

In July 2019, the Solar JV was unwound on the following terms:

- FerroAtlántica acquired the whole of the share capital of OpCo for €1;
- Aurinka PV acquired 1% of SFS's interest in the share capital of R&DCo for €1, such that, following such disposal, R&DCo is owned as to 50% by SFS and, following the disposal of its 49% shareholding by Blue Power to Aurinka PV, 50% by Aurinka PV;
- SFS agreed to sell certain patents to R&DCo for €1;
- arrangements were made between;
    - Aurinka PV and OpCo pursuant to which Aurinka PV will continue to maintain the Puertollano plant for a monthly fee of $33.6 thousand and for a maximum term expiring on December 31, 2020. Amounts paid pursuant to these arrangements in the fiscal year ended December 31, 2019 totalled $404;
    - Aurinka PV and FerroAtlántica, FAU and Opco for the payment by the latter of the sum of $2,800 thousand and the grant by Opco to Aurinka of an option to purchase certain equipment with a book value of

approximately $6,721 thousand for the sum of $1,120 thousand, in satisfaction of any claim Aurinka PV might otherwise have in relation to the termination of the Solar JV;

- Aurinka PV and FerroAtlántica, Silicio and Opco for the marketing and promotion of the sale of the OpCo and SFS's rights in R&DCo, including a right of first refusal to Aurinka PV to purchase such assets owned by Opco on equivalent terms to those offered by a third party buyer during the period ending December 31, 2020 and a right of first refusal to Aurinka PV to purchase the 50% shares in R&DCo owned by SFS.

- save as set out above, all arrangements in place with Blue Power or Aurinka PV in relation to OpCo or R&DCo and any rights or claims which Aurinka PV or Blue Power might have in relation thereto were brought to an end.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

We have included the Consolidated Financial Statements as part of this annual report. See "Item 18.—Financial Statements."

Legal proceedings

In the ordinary course of our business, Ferroglobe is subject to lawsuits, investigations, claims and proceedings, including, but not limited to, contractual disputes and employment, environmental, health and safety matters. Although we cannot predict with certainty the ultimate resolution of lawsuits, investigations, claims and proceedings, we do not believe any currently-pending legal proceeding to which Ferroglobe is a party will have a material adverse effect on our business, results of operations, or financial condition.

Shareholder litigations

On January 22, 2019, a claimed shareholder plaintiff, Lance Treankler, filed a putative class action complaint against Ferroglobe PLC, former CEO Pedro Larrea and former CFO Phillip Murnane in the U.S. District Court for Southern District of New York in Manhattan, seeking money damages for alleged violations of U.S. securities laws. Plaintiff alleges, inter alia, that certain of the Company's public disclosures prior to its November 26, 2018 third quarter earnings press release were materially false or misleading when made and failed to disclose material adverse facts about the Company's business, operations, and prospects. On March 19, 2019, another claimed shareholder plaintiff, Jam-Wood Holdings LLC, filed a substantially identical complaint in the same court, which was consolidated with the Treankler action, with Mr. Treankler serving as lead plaintiff. In September 2019, the Company moved to dismiss the operative complaint in the consolidated action for failure to state a valid claim. The motion is fully briefed and a decision is pending.

In December 2019, another claimed shareholder plaintiff, Paul Mikula, filed a shareholder derivative action in New York state court against the Company's current and certain former directors, asserting derivative claims for breach of fiduciary duty, corporate waste and unjust enrichment, based on factual allegations substantially similar to those made in the Treankler litigation. The defendants believe plaintiff's allegations are of no merit and intend to move to dismiss the case.

Asbestos-related claims

Certain employees of FerroPem, SAS, then known as Pechiney Electrometallurgie, S.A. ("PEM"), may have been exposed to asbestos at its plants in France in the decades prior to FerroAtlántica Group's purchase of that business in December 2004. During the period in question, PEM was wholly-owned by Pechiney Bâtiments, S.A., which had certain indemnification obligations to FerroAtlántica pursuant to the 2004 Share Sale and Purchase Agreement under which our FerroAtlántica acquired PEM. As of the date of this annual report, approximately 96 such employees have "declared" asbestos-related injury to the French social security agencies, based either on the occurrence of work accidents ("accident

du travail") or on administrative recognition of an occupational disease ("maladie professionelle"). Of these, approximately 75 cases are closed, approximately 21 are pending before the French social security agencies or courts and, of the latter, 12 include assertions of "inexcusable negligence" ("faute inexcusable") which, if upheld, may lead to material liability on the part of FerroPem. Other employees may declare further asbestos-related injuries in the future, and may likewise assert inexcusable negligence. Litigation against, and material liability on the part of, FerroPem will not necessarily arise in each case, and to date a majority of such declared injuries have been minor and have not led to significant liability on Ferropem's part. Whether material liability will arise is determined case-by-case, often over a period of years, depending on, inter alia, the evolution of the claimant's asbestos-related condition, the possibility that the claimant was exposed while working for other employers and, where asserted, the claimant's ability to prove inexcusable negligence on PEM's part. Because of these and other uncertainties, no reliable estimate can be made of FerroPem's eventual liability in these matters, with exception of three grave cases that were litigated through the appeal process and in which claimants' assertions of inexcusable negligence were upheld against FerroPem. Liabilities in respect to asbestos-related claims have been recorded at December 31, 2019 at an estimated amount of $1,166 thousand.

Environmental matters

On August 31, 2016, the U.S. Department of Justice (the "DOJ") requested a meeting with GMI to discuss potential resolution of a July 1, 2015 NOV/FOV that GMI received from the U.S. Environmental Protection Agency (the "EPA") alleging certain violations of the Prevention of Significant Deterioration ("PSD") and New Source Performance Standards provisions of the Clean Air Act associated with a 2013 project performed at GMI's Beverly facility. Specifically, the July 2015 NOV/FOV alleges violations of the facility's existing operating and construction permits, including allegations related to opacity emissions, sulfur dioxide and particulate matter emissions, and failure to keep necessary records and properly monitor certain equipment. On October 27, 2016, GMI met with the DOJ and the EPA to discuss the alleged violations, GMI's preliminary assessment of those alleged violations, and its possible defenses to the NOV/FOV. As a result of that meeting, GMI has agreed to the authorities' request that GMI prepare an assessment of Best Available Control Technologies ("BACT") that could be applicable to the facility under the federal PSD program, to conduct a ventilation study to assess emissions at the facility, and to continue discussions with the government regarding an appropriate resolution of the NOV/FOV by consent. In February 2017, the EPA formally issued a request under Section 114 of the Clean Air Act, requiring GMI to conduct a ventilation study that GMI had previously agreed to conduct. On January 4, 2017, GMI received a second NOV/FOV dated December 6, 2016, arising from the same facts as the July 2015 NOV/FOV and subsequent EPA inspections. The second NOV/FOV alleges opacity exceedances at certain units, failure to prevent the release of particulate emissions through the use of furnace hoods at a certain unit, and the failure to install Reasonably Available Control Measures (as defined) at certain emission units at the Beverly facility. As part of the ongoing consent process to resolve the NOVs/FOVs, the authorities could demand that GMI install additional pollution control equipment or implement other measures to reduce emissions from the facility, as well as pay a civil penalty. GMI's environmental consultants have completed the ventilation study and a Ventilation Evaluation Report documenting the same, which GMI provided to the EPA on October 6, 2017. Since that time, GMI and the authorities have continued negotiations regarding potential resolution of the NOV/FOVs, which negotiations are ongoing. At this time, however, GMI is unable to determine the extent of potential injunctive relief or the amount of civil penalty a negotiated resolution of this matter may entail. Should the DOJ and GMI be unable to reach a negotiated resolution of the NOVs/FOVs, the authorities could institute formal legal proceedings for injunctive relief and civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April 2013 to the present.

Matters pertaining to Mr. López Madrid

The legal proceedings described below are pending in Spain in which Mr. López Madrid has been called as "investigado" by a Spanish criminal investigative court. At the conclusion of criminal investigatory proceedings, the relevant Spanish court may determine to withdraw the investigation without issuing formal charges, excuse certain parties previously called "investigado" on the basis that there is insufficient evidence to issue formal charges, or issue formal charges or indictments against specific named parties.

On October 25, 2012, Mr. López Madrid was called as "investigado" along with several other directors of Bankia, S.A. and Banco Financiero y de Ahorros, S.A. ("BFA"), by a Spanish court investigating whether they were involved in the misrepresentation of the financial condition of Bankia, S.A. in connection with its initial public offering. The public prosecutor did not file formal charges against Mr. López Madrid and asked the Court for the termination of the proceedings regarding Mr. López Madrid. However, in Spanish criminal proceedings private parties (such as political parties, unions or private investors) can also accuse "investigados" in a proceeding and, in the case at hand, some of the private accusing parties did include Mr. López Madrid in their accusation briefs and therefore Mr. López Madrid is deemed an accused party. As publicly announced, Mr. López Madrid and his family were themselves damaged as a result of the initial public offering as they invested in shares and lost approximately 20 million euros. Mr. López Madrid has advised the Company that he vehemently denies the allegations against him in this matter. On November 26, 2018, the Spanish court commenced a trial on the aforementioned private party accusations, which concluded on October 1, 2019. The court's issuance of verdicts is pending.

On June 10, 2014, a physician (the "Physician"), who had previously treated Mr. López Madrid's family, was called as "investigado" in connection with criminal allegations that the Physician had harassed Mr. López Madrid, his family and his associates through anonymous phone calls and messages making false accusations and serious threats, which were received daily over a period of several months. On September 24, 2014, Mr. López Madrid was called as "investigado" by a Spanish investigative court in connection with criminal allegations that he had sexually harassed the Physician. The court dismissed the complaint of the Physician, although subsequent investigations are being conducted by an appeal court. The criminal proceedings against the Physician continue.

On February 11, 2016, Mr. López Madrid was called as "investigado" by a Spanish investigative court in connection with the "Púnica" investigation into possible bribery relating to awards of public contracts. This investigation, in which numerous individuals have been called as "investigado" thus far, has been pending since October 2014. In connection with this matter, a further investigation (the "Lezo" investigation) was initiated and, on April 20 and 21, 2017, Mr. López Madrid was questioned in relation to an alleged payment in 2007 of €1.4 million in favor of a public officials by Obrascón Huarte Lain, S.A. ("OHL"), a listed company partially owned by Grupo VM. Mr. López Madrid was a non-executive director of OHL at the time of the alleged payment and has never held any executive responsibility at OHL. He remains as "investigado" in both the "Punica" and the "Lezo" investigations but no formal charges have been filed. Mr. López Madrid vehemently denies the allegations against him and intends to defend himself vigorously in these matters.

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1 For simplicity, this summary uses the term "investigado", although the accurate term for the equivalent status in those proceedings initiated prior to October 2015 is "imputado."

Dividend policy

Our Board intends to declare annual (or final) dividends and interim dividends, payable quarterly, to be reviewed each year, but this will depend upon many factors, including the amount of our distributable profits as defined below. Pursuant to the Articles, and subject to applicable law, the Company may by ordinary resolution declare dividends (which shall not exceed the amounts recommended by the Board), and the Board may decide to pay interim dividends. The Articles provide that the Board may pay any dividend if it appears to them that the profits available for distribution permit the payment. Under English law, dividends may only be paid out of distributable reserves of the Company or distributable profits, defined as accumulated realized profits not previously utilized by distribution or capitalization less accumulated realized

losses to the extent not previously written off in a reduction or reorganization of capital duly made, as reported to Companies House, and not out of share capital, which includes the share premium account. Further, a U.K. public company may only make a distribution if the amount of its net assets is not less than the aggregate of its called-up share capital and undistributable reserves, and if, and to the extent that, the distribution does not reduce the amount of those assets to less than such aggregate. Distributable profits are determined in accordance with generally accepted accounting principles at the time the relevant accounts are prepared. The amount of Ferroglobe's distributable profits is thus a cumulative calculation. Ferroglobe may be profitable in a single year but unable to pay a dividend if the profits of that year do not offset all the previous years' accumulated losses. The shareholders of Ferroglobe may by ordinary resolution on the recommendation of the Board decide that the payment of all or any part of a dividend shall be satisfied by transferring non-cash assets of equivalent value, including shares or securities in any corporation.

The declaration and payment of future dividends to holders of our Shares will be at the discretion of our Board and will depend upon many factors, including, in addition to the amount of our distributable profits, our financial condition, earnings, legal requirements, and restrictions in our debt agreements and other factors deemed relevant by our Board of Directors. In addition, as a holding company, our ability to pay dividends depends on our receipt of cash dividends from our operating subsidiaries, the payment which may be restricted by the laws of their respective jurisdictions of organization, their respective agreements, and/or covenants under future indebtedness that we or they may incur.

B. Significant Changes

In the third quarter of 2019, Grupo FerroAtlántica S.A.U., as sole shareholder of FerroAtlántica. S.A.U., effected a corporate reorganization of FerroAtlántica, S.A.U. in order to spin off certain parts of its business into separate entities and sell the remainder. First, on April 2, 2019, FerroAtlántica, S.A.U. transferred the financial branch of its business, consisting of shares, quotas and/or shareholding interests in other companies, to a newly created limited liability company named FerroAtlántica Participaciones, S.L.U.

Second, on August 13, 2019, Grupo FerroAtlántica. S.A.U. effected spinoffs of certain other branches of FerroAtlántica, S.A.U.'s business, as follows: the ferroalloy and silicon metal businesses historically associated with FerroAtlántica, S.A.U.'s Boo manufacturing plant were transferred to a newly created limited liability company named FerroAtlántica de Boo, S.L.U.; the ferroalloy and silicon metal businesses historically associated with FerroAtlántica, S.A.U.'s Sabón manufacturing plant were transferred to a newly created limited liability company named FerroAtlántica de Sabón, S.L.U.; and FerroAtlántica, S.A.U.'s central corporate services unit located in Madrid was transferred to a newly created limited liability company named Grupo FerroAtlántica de Servicios, S.L.U.

Third, on August 30, 2019, Grupo FerroAtlántica, S.A.U. sold its 100% interest in the remainder of FerroAtlántica, S.A.U. to Kehlen Industries Management, S.L.U., an affiliate of U.S.-based TPG Sixth Street Partners. The FerroAtlántica, S.A.U. assets transferred by means of this transaction included ten hydroelectric power plants and the Cee-Dumbría ferroalloys manufacturing plant, all located in the province of A Coruña, Spain. Simultaneously, Grupo FerroAtlántica, S.A.U. signed a long-term tolling agreement with FerroAtlántica, S.A.U., under which the former is the exclusive off-taker of the Cee-Dumbría plant's finished goods and supplies the plant with key raw materials.

On July 31, 2017, the Company entered into an accounts receivable securitization program, where trade receivables generated by the Company's subsidiaries in the United States, Canada, Spain and France were sold to Ferrous Receivables DAC, a special purpose entity domiciled and incorporated in Ireland (the "SPE"). The program was initially financed by ING Bank N.V., as senior lender, and Finacity Capital Management Inc. ("Finacity"), as intermediate subordinated lender and control party. As sales of the Company's products to customers occurred, eligible trade receivables were sold to the SPE at an agreed upon purchase price. On December 10, 2019, the Company refinanced the program and amended and restated its terms; the SPE repaid the remaining senior loans to ING with the proceeds of new senior loans issued by an affiliate of U.S.-based Sound Point Capital Management LP, Finacity remains as intermediate subordinated lender and the Company's European subsidiaries continue as senior subordinated and junior subordinated lenders. The Company's subsidiaries in the United States and Canada repurchased all outstanding receivables that had they had previously sold to

the SPE so that such receivables could form part of the borrowing base for the North American asset-based revolving credit facility (the "ABL Revolver"). This program has a two-year term expiring December, 10, 2021. The Company does not own shares in the SPE or have the ability to appoint its directors.

On September 6, 2019, Globe Argentina Holdco LLC, an indirect subsidiary of Globe Specialty Metals, Inc., sold its 100% interest in Poland-based cored wire manufacturer UltraCore Polska sp. z.o.o, to Spain-based Cedie 2018, S.A.

On October 11, 2019, Globe Specialty Metals, Inc. and QSIP Canada ULC, as borrowers, entered into a new, five-year $100 million North American asset-based revolving credit facility (the "ABL Revolver"), between and PNC Bank, National Association ("PNC"), as lender and agent. The initial drawing under the ABL Revolver was used, along with Company cash, to discharge in full the Company's obligations under the prior Revolving Credit Facility, to repurchase North American accounts receivable from the Company's accounts receivable securitization program, and to pay associated fees and expenses. The maximum amount available under the ABL Revolver is subject to a borrowing base comprising North American inventory and accounts receivable of Globe and QSIP. The relevant credit agreement contains no leverage-based or financial ratio-based covenants.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details.

On December 24, 2015, our ordinary shares were listed for trading on the NASDAQ in U.S. Dollars under the symbol "GSM." Prior to completion of the Business Combination, which occurred on December 23, 2015, shares of Globe's common stock were registered pursuant to Section 12(b) of the U.S. Exchange Act and listed on NASDAQ under the ticker symbol "GSM." Globe's common stock was suspended from trading on the NASDAQ prior to the open of trading on December 24, 2015.

B. Plan of Distribution.

Not applicable.

C. Markets.

Our ordinary shares are traded on the NASDAQ Global Select Market under the symbol "GSM."

D. Selling Shareholders.

Not applicable.

E. Dilution.

Not applicable.

F. Expenses of the Issue.

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital.

Not applicable.

B. Memorandum and Articles of Association.

Composition and Nomination of the Board

Pursuant to the Articles, the Board will consist of at least two directors and no more than eleven directors. The directors are nominated by the Board, after being recommended to the Board by the Nominations Committee, for appointment at a general meeting or appointed by the Board where permitted to do so by law. When a person has been approved by the Board for nomination for election as a director at a general meeting of the Company, prior to the first date after the date of adoption of the Articles on which Grupo VM and its affiliates in the aggregate beneficially own less than 10% of the issued ordinary shares of the Company (the "Sunset Day"), Grupo VM and its affiliates shall not vote against the election of that director at the general meeting unless a majority of its nominees on the Board have voted against such nomination. At every annual general meeting, all the directors shall retire from office and will be eligible, subject to applicable law, for nomination for re-appointment in accordance with the Articles.

The board shall constitute a committee (the "Nominations Committee") to perform the function of recommending a person for director. The Nominations Committee shall consist of three directors, a majority of whom shall be independent directors, as such term is defined in the NASDAQ rules and applicable law. While Grupo VM and its Affiliates own at least 30% of the shares of the Company, the Grupo VM nominees will be entitled to nominate not more than two-fifths of the members of the Nominations Committee.

On December 23, 2015, Grupo VM designated Javier López Madrid to serve as the Executive Vice-Chairman of the Board in connection with the closing of the Business Combination. Upon the resignation of Alan Kestenbaum as Executive Chairman of the Board, Mr. López Madrid was appointed as Executive Chairman of the Board effective December 31, 2016. Mr. López Madrid is also the Chairman of the Nominations Committee.

Board Powers and Function

The members of the Board, subject to the restrictions contained in the Articles, is responsible for the management of the Company's business, for which purpose they may exercise all our powers whether relating to the management of the business or not. In exercising their powers, the members of the Board must perform their duties to us under English law. These duties include, among others:

- to act within their powers and in accordance with the Articles;
- to act in a way that the directors consider, in good faith, would be most likely to promote our success for the benefit of its members as a whole (having regard to a list of non-exhaustive factors);
- to exercise independent judgment;
- to exercise reasonable care, skill and diligence;
- to avoid conflicts of interest;
- not to accept benefits from third parties; and
- to declare interests in proposed transactions/arrangements.

The Articles provide that the members of the Board may delegate any of the powers which are conferred on them under the Articles to such committee or person, by such means (including by power of attorney), to such an extent and on such terms and conditions, as they think fit.

Share Qualification of Directors

A director is not required to hold any Shares by way of qualification.

Board and Decision Making

The Articles provide that any director may call a meeting of the Board. Subject to the provisions of the U.K. Companies Act 2006, the Executive Chairman may also call general meetings on behalf of the Board. The quorum for such a meeting will be at least a majority of the directors then in office.

Except as otherwise provided in the Articles, a decision may be taken at a duly convened Board meeting with the vote of a majority of the directors present at such meeting who are entitled to vote on such question and each director will have one vote.

A director shall not be counted in the quorum present in relation to a matter or resolution on which he is not entitled to vote (or when his vote cannot be counted) but shall be counted in the quorum present in relation to all other matters or resolutions considered or voted on at the meeting. Except as otherwise provided by the Articles, a director shall not vote at a meeting of the Board or a committee of the Board on any resolution concerning a matter in which he has, directly or indirectly, an interest (other than an interest in shares, debentures or other securities of, or otherwise in or through, us) which could reasonably be regarded as likely to give rise to a conflict with our interests.

Unless otherwise determined by us by ordinary resolution, the remuneration of the non-executive directors for their services in the office of director shall be as the Board may from time to time determine. Any director who holds any executive office or who serves on any committee of the Board or who performs services which the Board considers go beyond the ordinary duties of a director may be paid such special remuneration (by way of bonus, commission, participation in profits or otherwise) as the Board may determine. However, the U.K. Companies Act 2006 requires “quoted” companies, such as the Company, to obtain a binding vote of shareholders on the directors’ remuneration policy at least once every three years and an annual advisory (non-binding) shareholders’ vote on an on the directors’ remuneration in the financial year being reported on and how the directors’ remuneration policy will be implemented in the following financial year.

Directors’ Borrowing Powers

Under our Board’s general power to manage our business, our Board may exercise all the powers to borrow money.

Matters Requiring Majority of Independent Directors Approval

Prior to the Sunset Date, the approval of a majority of the independent directors (who are not conflicted in relation to the relevant matter) shall be required to authorize any transaction agreement or arrangement between Grupo VM or any of its affiliates or connected persons and the Company or any of its Affiliates, or the alteration amendment, repeal or waiver of any such agreement, including any shareholders’ agreement between the Company and Grupo VM.

Director Liability

Under English law, members of the Board may be liable to us for negligence, default, breach of duty or breach of trust in relation to us. Any provision that purports to exempt a director from such liability is void. Subject to certain exceptions, English law does not permit us to indemnify a director against any liability attaching to him in connection with any negligence, default, breach of duty or breach of trust in relation to us. The exceptions allow us to:

- purchase and maintain director and officer insurance against any liability attaching in connection with any negligence, default, breach of duty or breach of trust owed to us;

- provide a qualifying third party indemnity provision which permits us to indemnify its directors (and directors of an “associated company” (i.e., a company that is a parent, subsidiary or sister company of Ferroglobe) in respect of proceedings brought by third parties (covering both legal costs and the amount of any adverse judgment), except for: (i) the legal costs of an unsuccessful defense of criminal proceedings or civil proceedings brought by us an associated company, or the legal costs incurred in connection with certain specified applications by the director for relief where the court refuses to grant the relief; (ii) fines imposed in criminal proceedings; and (iii) penalties imposed by regulatory bodies;

- loan funds to a director to meet expenditure incurred in defending civil and criminal proceedings against him or her (even if the action is brought by us), or expenditure incurred applying for certain specified relief, but subject to the requirement for the director or officer to reimburse us if the defense is unsuccessful; and

- provide a qualifying pension scheme indemnity provision, (which allows us to indemnify a director of a company that is a trustee of an occupational pension scheme against liability incurred in connection with such company's activities as a trustee of the scheme (subject to certain exceptions).

Indemnification Matters

Under the Articles, subject to the provisions of the U.K. Companies Act 2006 and applicable law, we will exercise all of our powers to (i) indemnify any person who is or was a director (including by funding any expenditure incurred or to be incurred by him or her) against any loss or liability, whether in connection with any proven or alleged negligence, default, breach of duty or breach of trust by him or her or otherwise, in relation to us or any associated company; and/or (ii) indemnify to any extent any person who is or was a director of an associated company that is a trustee of an occupational pension scheme (including by funding any expenditure incurred or to be incurred by him or her) against any liability, incurred by him or her in connection with our activities as trustee of an occupational pension scheme; including insurance against any loss or liability or any expenditure he or she may incur, whether in connection with any proven or alleged act or omission in the actual or purported execution or discharge of his or her duties or in the exercise or purported exercise of his or her powers or otherwise in relation to his or her duties, power or offices, whether comprising negligence, default, breach of duty, breach of trust or otherwise, in relation to the relevant body or fund.

Under the Articles and subject to the provisions of the U.K. Companies Act 2006, we may exercise all of our powers to purchase and maintain insurance for or for the benefit of any person who is or was a director, officer or employee of, or a trustee of any pension fund in which our employees are or have been interested, including insurance against any loss or liability or any expenditure he or she may incur, whether in connection with any proven or alleged act or omission in the actual or purported execution or discharge of his or her duties or in the exercise or purported exercise of his or her powers or otherwise in relation to his or her duties, power or offices, whether comprising negligence, default, breach of duty, breach of trust or otherwise, in relation to the relevant body or fund.

No director or former director shall be accountable to us or the members for any benefit provided pursuant to the Articles. The receipt of any such benefit shall not disqualify any person from being or becoming a director.

Director Removal or Termination of Appointment

The general meeting of shareholders will, at all times, have the power to remove a member of the Board by an ordinary resolution, being a resolution passed by a simple majority of votes cast. The Articles also provide that a member of the Board will cease to be a director as soon as:

- the director ceases to be a director by virtue of any provision of the U.K. Companies Act 2006 (including, without limitation, section 168) or he becomes prohibited by applicable law from being a director;

- the director becomes bankrupt or makes any arrangement or composition with the director's creditors generally;

- a registered medical practitioner who is treating that person gives a written opinion to us stating that that person has become physically or mentally incapable of acting as a director and may remain so for more than three months;

- by reason of the director's mental health a court makes an order which wholly or partly prevents the director from personally exercising any powers or rights he would otherwise have;

- the director resigns from office by notice in writing to us;

- in the case of a director who holds any executive office, the director's appointment as such is terminated or expires and the Board resolves that he should cease to be a director;

- the director is absent for more than six consecutive months, without permission of the Board, from meetings of the Board held during that period and the Board resolves that the director should cease to be a director; or

- the director dies.

Committees

Subject to the provisions of the Articles, the directors may delegate any of the powers which are conferred on them under the Articles:

- to a committee consisting of one or more directors and (if thought fit) one or more other persons, to such an extent and on such terms and conditions as the Board thinks fit (and such ability of the directors to delegate applies to all powers and discretions and will not be limited because certain articles refer to powers and discretions being exercised by committees authorized by directors while other articles do not);

- to such person by such means (including by power of attorney), to such an extent, and on such terms and conditions, as they think fit including delegation to any director holding any executive office, any manager or agent such of its powers as the Board considers desirable to be exercised by him; or

- to any specific director or directors (with power to sub-delegate). These powers can be given on terms and conditions decided on by the directors either in parallel with, or in place of, the powers of the directors acting jointly.

Any such delegation shall, in the absence of express provision to the contrary in the terms of delegation, be deemed to include authority to sub-delegate to one or more directors (whether or not acting as a committee) or to any employee or agent all or any of the powers delegated and may be made subject to such conditions as the Board may specify, and may be revoked or altered. The directors can remove any people they have appointed in any of these ways and cancel or change anything that they have delegated, although this will not affect anybody who acts in good faith who has not has any notice of any cancellation or change.

General Meeting

The Board shall convene and the Company shall hold general meetings as annual general meetings in accordance with the U.K. Companies Act 2006. The Board may call general meetings whenever and at such times and places as it shall determine. Subject to the provisions of the U.K. Companies Act 2006, the executive chairman of the Company may also call general meetings on behalf of the Board. On requisition of members pursuant to the provisions of the U.K. Companies Act 2006, the Board shall promptly convene a general meeting in accordance with the requirements of the U.K. Companies Act 2006.

Subject to the provisions of the U.K. Companies Act 2006, an annual general meeting and all other general meetings shall be called by at least such minimum period of notice as is prescribed or permitted under the U.K. Companies Act 2006.

All provisions of the Articles relating to general meetings of the Company shall apply, *mutatis mutandis*, to every separate general meeting of the holders of any class of shares in the capital of the Company.

C. Material Contracts

Asset-Based Loan

On October, 11, 2019, Ferroglobe subsidiaries Globe Specialty Metals, Inc., and QSIP Canada ULC, as borrowers, entered into a Credit and Security Agreement for a new $100 million north American asset-based revolving credit facility (the "ABL Revolver"), with PNC Bank, N.A., as lender.

The maximum advances granted by the lender are up to the lesser of (a) $100 million and (b) the Formula Amount. The Formula Amount at any time will be determined by referent to the most recent Borrowing Base Certificate delivered to PNC Bank, N.A. (the Agent), and is equal to (a) up to 85% of Eligible Receivables plus (b) the lesser of:

- up to 75% of the cost of Eligible Inventory and eligible foreign-in transit inventory;
- up to 85% of the appraised net orderly liquidation value of Eligible inventory, minus (c) Reserves, if any.

The Formula Amount is subject to the following limits:

- inventory to account for up to 65% of the Formula Amount;
- Canadian inventory up to $20 million;
- eligible in-transit inventory of up to $10 million;
- consigned inventory of up to $7.5 million;
- stores and spare parts inventory of up to $2 million;
- packaging materials inventory of up to $500 thousand; and
- receivables aged 90 to 120 days due of up to $5 million.

Subject to certain exceptions, loans under the ABL Revolver may be borrowed, repaid and reborrowed at any time until the facility's expiration date. The legal maturity date of the ABL Revolver is October 11, 2024, which is five years after the initial drawdown under the facility. Notwithstanding this, the terms of the facility provide a spring forward provision which requires the ABL Revolver to be repaid on the date which is three (3) months prior to the maturity date of the senior Notes (March 1, 2022), which would currently imply a facility repayment date of December 1, 2021. This spring forward provision would adjust in respect of a refinancing of the senior Notes to be the date which is three (3) months prior to the date of any permitted refinancing of the Notes. There is a provision in the ABL Revolver credit agreement which requires the approval of PNC Bank, as agent on behalf of the lender, to the terms of any refinancing of the senior unsecured notes and provides, ***inter alia***, that the maturity date of such refinancing shall be no earlier than January 9, 2025.

Interest rates

Under the ABL Revolver, and in respect of LIBOR Rate Loans, the interest to be paid will be LIBOR plus aplicable margin, and in respect of Domestic Rate Loans, the interest will be ABR plus aplicable margin. ABR shall mean the highest of (i) the PNC Bank prime rate, (ii) overnight bank funding rate plus 0.5% and (iii) daily LIBOR plus 1.0%.

The aplicable margin is based on the average undrawn availability of the ABL Revolver. The undrawn availability is an amount equal to:

- the lesser of (i) $100 million and (ii) the Formula Amount; minus
- the maximum undrawn amount of all outstanding letters of credit; minus
- the outstanding amount of revolving advances and swing loans.

Therefore, three levels are established depending on the average undrawn availabity. The Level I means that the average undrawn availability is higher than 66.7%, the applicable LIBOR rate margin will be 2.50% and the aplicable Domestic rate margin will be 1.50%. The Level II means that the average undrawn availability is between 33.3% to 66.7%, the applicable LIBOR rate margin will be 2.75% and the applicable Domestic rate margin will be 1.75%. The Level III means if average undrawn availability is lower or equal to 33.3%, the applicable LIBOR rate margin will be 3.00% and the Domestic rate margin will be 2.00%. As a result, the applicable margin from the Closing date of the ABL Revolver to January 1, 2020, will be Level III rate. Thereafter, effective as of the first day of each calendar quarter, the rate corresponding to the average daily undrawn availability for the most recently completed calendar quarter.

Guarantees and security

Ferroglobe PLC was not required to provide a guarantee of the ABL Revolver, but entered into a Non-Recourse Pledge Agreement with lender in respect of its shares in Globe Specialty Metals, Inc..

Covenants

The ABL Revolver contains certain affirmative covenants relating to, among other things: (i) preservation of existence; (ii) payment of taxes; (iii) continuation of business; (iv) maintenance of insurance on its properties and assets; (v) maintenance and protection of rights of properties; (vi) visitation rights granted to the Administrative Agent and (vii) maintain and keep proper books of record and account. The ABL Revolver also contains certain negative covenants, relating to, among other things: (i) debt; (ii) liens; (iii) liquidations, mergers or consolidation; (iv) amendment of organizational documents; (v) restricted payments (including dividends, distributions, issuances of equity interests, redemptions and repurchases of equity interests); (vi) sale and leaseback transactions and (vii) further negative pledges. The ABL Revolver does not contain any leverage-based or financial ratio-based covenants, but requires minimum undrawn availability of $10,000 thousand and a restricted cash reserve of $22,500 thousand.

Senior Notes due 2022

On February 15, 2017, Ferroglobe and Globe (together, the “Issuers”) issued $350 million aggregate principal amount of 9.375% senior unsecured notes due 2022 (the “Notes”) pursuant to the Indenture. The interest on the Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2017. At any time prior to March 1, 2019, the Issuers may redeem all or a portion of the Notes at a redemption price based on a “make-whole” premium. At any time on or after March 1, 2019, the Issuers may redeem all or a portion of the Notes at redemption prices varying based on the period during which the redemption occurs. In addition, at any time prior to March 1, 2019, the Issuers may redeem up to 35% of the aggregate principal amount of the Notes with the net proceeds from certain equity offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest. The Issuers have agreed to pay certain additional amounts in respect of any withholdings or deductions for certain types of taxes in certain jurisdictions on payments to holders of the Notes. The Notes are senior unsecured obligations of the Issuers and are guaranteed on a senior basis by certain subsidiaries of Ferroglobe. The Notes are listed on the Irish Stock Exchange.

The Indenture contains certain negative covenants restricting, among other things, our ability to: (i) make certain advances, loans or investments; (ii) incur indebtedness or issue guarantees; (iii) create security; sell, lease, transfer or dispose of assets; (iv) merge or consolidate with other companies; (v) transfer all or substantially all of our assets; make a substantial change to the general nature of our business; (vi) pay dividends and make other restricted payments; (vii) create or incur liens; (viii) agree to limitations on the ability of our subsidiaries to pay dividends or make other distributions; (ix) engage in sales of assets and subsidiary stock; (x) enter into transactions with affiliates; (xi) amend organizational documents; (xii) enter into sale-leaseback transactions and (xiii) enter into agreements that contain a negative pledge.

REINDUS Loan

On September 8, 2016, FerroAtlántica, S.A.U., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce (the “Ministry”), as lender, entered into a loan agreements under which the Ministry made available to the borrower a loan in aggregate principal amount of €44.9 million, in connection with the industrial development projects relating to our solar grade silicon project. FAU transferred the loan to OPCO before its sale. See “Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)—Solar grade silicon.” The loan of €44.9 million is to be repaid in seven installments over a 10-year period with the first three years as a grace period. Interest on outstanding amounts under each loan accrues at an annual rate of 2.29%. As of December 31, 2019, the balance of the remaining loan has been presented within current Non current and Current liabilities.

Use of the proceeds of the outstanding loan was limited to the period between January 1, 2016 and May 24, 2019. On May 24, 2019, a report on uses of the loan was presented to the Ministry.

Securitization of trade receivables

On December 10, 2019, the Company refinanced the Program and amended the accounts receivables securitization program (the "Program") where trade receivables held by the Company's subsidiaries in Spain are sold to a special purpose "designated activity company" domiciled and incorporated in Ireland (the "SPE"). Eligible receivables are sold to the SPE on an on-going basis at an agreed upon purchase price of approximately 98% (2018: 99%) of their invoiced amount. Part of the purchase consideration is funded upfront in cash and part is deferred in the form of senior subordinated and junior subordinated loans from the selling entities to the SPE. Up to $150,000 thousand of upfront cash consideration can be provided by the SPE under the Program, financed by Soundpoint Capital Management, LLP, as senior lender and Finacity Capital Management Inc., as intermediate subordinated lender. In respect of trade receivables outstanding at December 31, 2019 the SPE had provided upfront cash consideration of approximately $58,339 thousand (2018: $227,360 thousand). The program has a two-year term until December 10, 2021.

The Company is also engaged as master servicer to the SPE whereby the Company is responsible for the cash collection, reporting and cash application of the sold receivables. As master servicer, the Company earns a fixed rate management fee due to the purchase discount percentage but depends on the volume of assets and an additional servicing fee which entitles the Company to a residual interest upon monthly liquidation of the SPE. The additional servicing fee will only be paid out on monthly liquidation of the SPE and from any excess cash flows remaining after all lenders to the SPE have been repaid.

The agreements under the Program contain certain restrictive covenants limiting the ability of the Company, its subsidiaries participating in the Program or the SPE, as applicable, to, in particular, (1.) create or suffer to exist any adverse claim upon any receivable covered by the Program or any proceeds thereof, (2.) extend, amend, rescind or cancel any receivable covered by the Program, (3.) make any change in the character of the business (for the SPE) or any material change to the credit and collection policy that would be reasonably expected to materially and adversely affect the collectability of the receivables covered by the Program (for the Company and its subsidiaries participating in the Program), (4.) engage in any business other than the transactions contemplated by the Program (for the SPE), (5.) create, incur or permit to exist any debt of any kind other than pursuant to the Program (for the SPE) and (6.) merge into or consolidate with any person, or permit any other person to merge into or consolidate with it, or purchase, lease or otherwise acquire all or substantially all of the assets of any other person other than pursuant to the Program (for the SPE).

Other material contracts

See also "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions."

D. Exchange Controls

See "Item 3.D.—Key Information—Risk Factors—Risks Related to Our Ordinary Shares."

E. Taxation.

U.S. federal income taxation

The following is a discussion of the material U.S. federal income tax consequences to U.S. holders (as defined below) of the ownership and disposition of ordinary shares. The discussion is based on and subject to the Code, the U.S. Treasury Regulations promulgated thereunder, administrative rulings and court decisions in effect on the date hereof, all of which are subject to change, possibly with retroactive effect, and to differing interpretations. The discussion applies only to U.S. holders that acquire ordinary shares in exchange for cash in this offering and hold ordinary shares as "capital assets" within the meaning of Section 1221 of the Code (generally, property held for investment). The discussion also assumes that we will not be treated as a U.S. corporation under Section 7874 of the Code. The discussion does not address all aspects of U.S. federal income taxation that may be relevant to particular U.S. holders in light of their personal circumstances,

including any tax consequences arising under the Medicare contribution tax on net investment income, or to such shareholders subject to special treatment under the Code, such as:

- banks, thrifts, mutual funds, insurance companies, and other financial institutions,
- real estate investment trusts and regulated investment companies,
- traders in securities who elect to apply a mark-to-market method of accounting,
- brokers or dealers in securities or foreign currency,
- tax-exempt organizations or governmental organizations,
- individual retirement and other deferred accounts,
- U.S. holders whose functional currency is not the U.S. Dollar,
- U.S. expatriates and former citizens or long-term residents of the United States,
- "passive foreign investment companies," "controlled foreign corporations," and corporations that accumulate earnings to avoid U.S. federal income tax,
- persons subject to the alternative minimum tax,
- shareholders who hold ordinary shares as part of a straddle, hedging, conversion, constructive sale or other risk reduction transaction,
- "S corporations," partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass-through entities (and investors therein),
- persons that actually or constructively own 10% or more of our voting stock, and
- shareholders who received their ordinary shares through the exercise of employee stock options or otherwise as compensation or through a tax-qualified retirement plan.

The discussion does not address any non-income tax consequences or any foreign, state or local tax consequences. For purposes of this discussion, a U.S. holder means a beneficial owner of ordinary shares who is:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in the United States or under the laws of the United States or any subdivision thereof, or that is otherwise treated as a U.S. tax resident under the Code;
- an estate the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust if (1) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership, including for this purpose any entity that is treated as a partnership for U.S. federal income tax purposes, holds ordinary shares, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. A U.S. holder that is a partnership and the partners in such partnership should consult their tax advisors about the U.S. federal income tax consequences of the ownership and disposition of ordinary shares.

Prospective purchasers are urged to consult their tax advisors with respect to the U.S. federal income tax consequences to them of the purchase, ownership and disposition of ordinary shares, as well as the tax consequences to them arising under U.S. federal tax laws other than those pertaining to income tax (including estate or gift tax laws), state, local and non-U.S. tax laws, as well as any applicable income tax treaty.

Dividends and other distributions on ordinary shares

Dividends will generally be taxed as ordinary income to U.S. holders to the extent that they are paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. As such, subject to the following discussion of special rules applicable to PFICs (as defined below) and, assuming that ordinary shares continue to be listed on NASDAQ and certain holding-period requirements are met, the gross amount of the dividends paid by us to U.S. holders may be eligible to be taxed at lower rates applicable to dividends paid by a "qualified foreign corporation." Dividends paid by us will not qualify for the dividends received deduction under Section 243 of the Code otherwise available to corporate shareholders. In general, and subject to the discussion below, the dividend income will be treated as foreign source passive income for U.S. federal foreign tax credit limitation purposes. The rules relating to the determination of the U.S. foreign tax credit are complex and U.S. holders should consult their tax advisors to determine whether and to what extent a credit would be available.

To the extent that the amount of any dividend exceeds our current and accumulated earnings and profits for a taxable year, the excess will first be treated as a tax-free return of capital, causing a reduction in the U.S. holder's adjusted basis in ordinary shares. The balance of any excess will be taxed as capital gain, which would be long-term capital gain if the U.S. holder has held the ordinary shares for more than one year at the time the dividend is received.

It is possible that we are, or at some future time will be, at least 50% owned by U.S. persons. Dividends paid by a foreign corporation that is at least 50% owned by U.S. persons may be treated as U.S. source income (rather than foreign source passive income) for foreign tax credit purposes to the extent the foreign corporation has more than an insignificant amount of U.S. source income. The effect of this rule may be to treat a portion of any dividends paid by us as U.S. source income, which may limit a U.S. holder's ability to claim a foreign tax credit with respect to foreign taxes payable or deemed payable in respect of the dividends or other foreign source passive income. The Code permits a U.S. holder entitled to benefits under the United Kingdom-United States Income Tax Treaty to elect to treat any dividends paid by us as foreign source income for foreign tax credit purposes if the dividend income is separated from other income items for purposes of calculating the U.S. holder's foreign tax credit with respect to U.K. taxes withheld, if any, on the distribution of such dividend income. U.S. holders should consult their own tax advisors about the desirability and method of making such an election.

We generally intend to pay dividends in U.S. Dollars. If we were to pay dividends in a foreign currency or other property, the amount of any such dividend will be the U.S. Dollar value of the foreign currency or other property distributed by us, calculated, in the case of foreign currency, by reference to the exchange rate on the date the dividend is includible in the U.S. holder's income, regardless of whether the payment is in fact converted into U.S. Dollars on the date of receipt. Generally, a U.S. holder should not recognize any foreign currency gain or loss if the foreign currency is converted into U.S. Dollars on the date the payment is received. However, any gain or loss resulting from currency exchange fluctuations during the period from the date the U.S. holder includes the dividend payment in income to the date such U.S. holder actually converts the payment into U.S. Dollars will be treated as ordinary income or loss. That currency exchange or loss (if any) generally will be income or loss from U.S. sources for foreign tax credit purposes.

Sale, exchange or other taxable disposition of ordinary shares

Subject to the following discussion of special rules applicable to PFICs, a U.S. holder will generally recognize taxable gain or loss on the sale, exchange or other taxable disposition of ordinary shares in an amount equal to the difference between the amount realized on such taxable disposition and the U.S. holder's tax basis in the ordinary shares. A U.S. holder's initial tax basis in ordinary shares generally will equal the cost of such ordinary shares.

The source of any such gain or loss is generally determined by reference to the residence of the holder such that it generally will be treated as U.S. source income for foreign tax credit limitation purposes in the case of a sale, exchange or other taxable disposition by a U.S. holder. However, the Code permits a U.S. holder entitled to benefits under the United Kingdom-United States Income Tax Treaty to elect to treat any gain or loss on the sale, exchange or other taxable disposition of ordinary shares as foreign source income for foreign tax credit purposes if the gain or loss is sourced outside of the United States under the United Kingdom-United States Income Tax Treaty and such gain or loss is separated from other income items for purposes of calculating the U.S. holder's foreign tax credit. U.S. holders should consult their own tax advisors about the desirability and method of making such an election.

Gain or loss realized on the sale, exchange or other taxable disposition of ordinary shares generally will be capital gain or loss and will be long-term capital gain or loss if the ordinary shares have been held for more than one year. Non-corporate U.S. holders (including individuals) generally will be subject to U.S. federal income tax on long-term capital gain at preferential rates. The deduction of capital losses is subject to limitations.

Passive foreign investment company considerations

A foreign corporation is a "passive foreign investment company" (a "PFIC") if, after the application of certain "look-through" rules, (1) at least 75% of its gross income is "passive income" as that term is defined in the relevant provisions of the Code, or (2) at least 50% of the value of its assets (determined on the basis of a quarterly average) produce "passive income" or are held for the production of "passive income." The determination as to PFIC status is made annually. If a U.S. holder is treated as owning PFIC stock, the U.S. holder will be subject to special rules generally intended to reduce or eliminate the benefit of the deferral of U.S. federal income tax that results from investing in a foreign corporation that does not distribute all of its earnings on a current basis. These rules may adversely affect the tax treatment to a U.S. holder of dividends paid by us and of sales, exchanges and other dispositions of ordinary shares, and may result in other adverse U.S. federal income tax consequences.

We do not expect to be treated as a PFIC for the current taxable year, and we do not expect to become a PFIC in the future. However, there can be no assurance that the IRS will not successfully challenge this position or that we will not become a PFIC at some future time as a result of changes in our assets, income or business operations. U.S. holders should consult their own tax advisors about the determination of our PFIC status and the U.S. federal income tax consequences of holding ordinary shares if we are considered a PFIC in any taxable year.

Information reporting and backup withholding

In general, information reporting requirements may apply to dividends received by U.S. holders of ordinary shares and the proceeds received on the disposition of ordinary shares effected within the United States (and, in certain cases, outside the United States), paid to U.S. holders other than certain exempt recipients (such as corporations). Backup withholding may apply to such amounts if the U.S. holder fails to provide an accurate taxpayer identification number (generally on an IRS Form W-9) or is otherwise subject to backup withholding. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a refund or credit against the U.S. holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

Individuals that own "specified foreign financial assets" with an aggregate value of more than $50 thousand (or higher threshold for some married individuals and individuals living abroad) may be required to file an information report (IRS Form 8938) with respect to such assets with their tax returns. Ordinary shares generally will constitute specified foreign financial assets subject to these reporting requirements, unless the ordinary shares are held in an account at a financial

institution (which, in the case of a foreign financial account, may also be subject to reporting). Additionally, under recently finalized regulations, a domestic corporation, domestic partnership, or trust (as described in Section 7701(a)(30)(E) of the Code) which is formed or availed of for purposes of holding, directly or indirectly, specified foreign financial assets may be treated as an individual for purposes of these rules. U.S. holders should consult their own tax advisors regarding information reporting requirements relating to their ownership of ordinary shares, and the significant penalties to which they may be subject for failure to comply.

United Kingdom taxation

The following paragraphs are intended as a general guide to current U.K. tax law and HM Revenue & Customs published practice applying as at the date of this annual report (both of which are subject to change at any time, possibly with retrospective effect) relating to the holding of ordinary shares. They do not constitute legal or tax advice and do not purport to be a complete analysis of all U.K. tax considerations relating to the holding of ordinary shares. They relate only to persons who are absolute beneficial owners of ordinary shares (and where the ordinary shares are not held through an Individual Savings Account or a Self-Invested Personal Pension) and who are resident for tax purposes in (and only in) the U.K. (except to the extent that the position of non-U.K. resident persons is expressly referred to).

These paragraphs may not relate to certain classes of holders of ordinary shares, such as (but not limited to):

- persons who are connected with the Company;
- insurance companies;
- charities;
- collective investment schemes;
- pension schemes;
- brokers or dealers in securities or persons who hold ordinary shares otherwise than as an investment;
- persons who have (or are deemed to have) acquired their ordinary shares by virtue of an office or employment or who are or have been officers or employees of the Company or any of its affiliates; and
- individuals who are subject to U.K. taxation on a remittance basis.

These paragraphs do not describe all of the circumstances in which holders of ordinary shares may benefit from an exemption or relief from U.K. taxation. It is recommended that all holders of ordinary shares obtain their own tax advice. In particular, non-U.K. resident or domiciled persons are advised to consider the potential impact of any relevant double tax agreements.

Dividends

Withholding tax

Dividends paid by the Company will not be subject to any withholding or deduction for or on account of U.K. tax, irrespective of the residence or particular circumstances of the shareholders.

Income tax

An individual holder of ordinary shares who is resident for tax purposes in the U.K. may, depending on his or her particular circumstances, be subject to U.K. tax on dividends received from the Company. An individual holder of ordinary shares who is not resident for tax purposes in the U.K. should not be chargeable to U.K. income tax on dividends received from

the Company unless he or she carries on (whether solely or in partnership) any trade, profession or vocation in the U.K. through a branch or agency to which the ordinary shares are attributable (subject to certain exceptions for trading through independent agents, such as some brokers and investment managers).

A nil rate of income tax will currently apply to the first £2 thousand of dividend income received by an individual shareholder in a tax year (the "Nil Rate Amount"), regardless of what tax rate would otherwise apply to that dividend income. Any dividend income received by an individual shareholder in a tax year in excess of the Nil Rate Amount will be subject to income tax at dividend rates determined by thresholds of income, as follows:

- at the rate of 7.5%, to the extent that the relevant dividend income falls below the threshold for the higher rate of income tax;

- at the rate of 32.5%, to the extent that the relevant dividend income falls above the threshold for the higher rate of income tax but below the threshold for the additional rate of income tax; and

- at the rate of 38.1%, to the extent that the relevant dividend income falls above the threshold for the additional rate of income tax.

Dividend income that is within the dividend Nil Rate Amount counts towards an individual's basic or higher rate limits and will therefore potentially affect the level of savings allowance to which an individual is entitled, and the rate of tax that is due on any dividend income in excess of the Nil Rate Amount. In calculating into which tax band any dividend income over the nil rate falls, savings and dividend income are treated as the highest part of an individual's income. Where an individual has both savings and dividend income, the dividend income is treated as the top slice.

Corporation tax

Corporate holders of ordinary shares which are resident for tax purposes in the U.K. should not be subject to U.K. corporation tax on any dividend received from the Company so long as the dividends qualify for exemption (as is likely) and certain conditions are met (including anti-avoidance conditions).

Chargeable gains

A disposal of ordinary shares by a shareholder resident for tax purposes in the U.K. may, depending on the shareholder's circumstances and subject to any available exemptions or reliefs, give rise to a chargeable gain or an allowable loss for the purposes of U.K. capital gains tax and corporation tax on chargeable gains.

If an individual holder of ordinary shares who is subject to U.K. income tax at either the higher or the additional rate becomes liable to U.K. capital gains tax on the disposal of ordinary shares, the applicable rate will be 20%. For an individual holder of ordinary shares who is subject to U.K. income tax at the basic rate and liable to U.K. capital gains tax on such disposal, the applicable rate would be 10%, save to the extent that any capital gains exceed the unused basic rate tax band. In that case, the rate applicable to the excess would be 20%. No indexation allowance will be available to an individual holder of ordinary shares in respect of any disposal of such shares. However, the capital gains tax annual exempt amount (which is £12,000 (2019/20) for individuals (2018/19: £11,700)) may be available to exempt any chargeable gain, to the extent that the exemption has not already been utilized.

If a corporate holder of ordinary shares becomes liable to U.K. corporation tax on the disposal of ordinary shares, the main rate of U.K. corporation tax (currently 19%) would apply. An indexation allowance may be available to such a holder to give an additional deduction based on the indexation of its base cost in the shares by reference to U.K. retail price inflation over its holding period. An indexation allowance can only reduce a gain on a future disposal, and cannot create a loss.

A holder of ordinary shares which is not resident for tax purposes in the U.K. should not normally be liable to U.K. capital gains tax or corporation tax on chargeable gains on a disposal of ordinary shares. However, an individual holder of ordinary shares who has ceased to be resident for tax purposes in the U.K. for a period of less than five years and who disposes of

ordinary shares during that period may be liable on his or her return to the U.K. to U.K. tax on any capital gain realized (subject to any available exemption or relief).

Stamp duty and Stamp Duty Reserve Tax ("SDRT")

The discussion below relates to holders of ordinary shares wherever resident.

Transfers of ordinary shares within a clearance service or depositary receipt system should not give rise to a liability to U.K. stamp duty or SDRT, provided that no instrument of transfer is entered into and that no election that applies to the ordinary shares is or has been made by the clearance service or depositary receipt system under Section 97A of the U.K. Finance Act 1986.

Transfers of ordinary shares within a clearance service where an election has been made by the clearance service under Section 97A of the U.K. Finance Act 1986 will generally be subject to SDRT (rather than U.K. stamp duty) at the rate of 0.5% of the amount or value of the consideration.

Transfers of ordinary shares that are held in certificated form will generally be subject to U.K. stamp duty at the rate of 0.5% of the consideration given (rounded up to the nearest £5). An exemption from U.K. stamp duty is available for a written instrument transferring an interest in ordinary shares where the amount or value of the consideration is £1,000 or less, and it is certified on the instrument that the transaction effected by the instrument does not form part of a larger transaction or series of transactions for which the aggregate consideration exceeds £1,000. SDRT may be payable on an agreement to transfer such ordinary shares, generally at the rate of 0.5% of the consideration given in money or money's worth under the agreement to transfer the ordinary shares. This charge to SDRT would be discharged if an instrument of transfer is executed pursuant to the agreement which gave rise to SDRT and U.K. stamp duty is duly paid on the instrument transferring the ordinary shares within six years of the date on which the agreement was made or, if the agreement was conditional, the date on which the agreement became unconditional. The stamp duty would be duly accounted for if it is paid, an appropriate relief is claimed or the instrument is otherwise certified as exempt.

If ordinary shares (or interests therein) are subsequently transferred into a clearance service or depositary receipt system, U.K. stamp duty or SDRT will generally be payable at the rate of 1.5% of the amount or value of the consideration given (rounded up in the case of U.K. stamp duty to the nearest £5) or, in certain circumstances, the value of the shares (save to the extent that an election has been made under Section 97A of the U.K. Finance Act 1986). This liability for U.K. stamp duty or SDRT will strictly be accountable by the clearance service or depositary receipt system, as the case may be, but will, in practice, generally be reimbursed by participants in the clearance service or depositary receipt system.

F. Dividends and Paying Agents.

Not applicable.

G. Statements by Experts.

Not applicable.

H. Documents on Display.

We previously filed with the SEC our registration statement on Form F-1 on March 15, 2016 with file number 333-209595.

We have filed this annual report on Form 20-F with the SEC under the U.S. Exchange Act. Statements made in this annual report as to the contents of any document referred to are not necessarily complete. With respect to each such document filed as an exhibit to this annual report, reference is made to the exhibit for a more complete description of the matter involved, and each such statement shall be deemed qualified in its entirety by such reference.

We are subject to the informational requirements of the U.S. Exchange Act and file reports and other information with the SEC.

Electronic copies of this material may be obtained from the SEC's Internet site at http://www.sec.gov. The Commission's telephone number is 1-800-SEC-0330.

As a foreign private issuer, we are exempt from the rules under the U.S. Exchange Act prescribing the furnishing and content of proxy statements and will not be required to file proxy statements with the SEC, and its officers, directors and principal shareholders will be exempt from the reporting and "short swing" profit recovery provisions contained in Section 16 of the U.S. Exchange Act.

I. Subsidiary Information.

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Ferroglobe operates in an international and cyclical industry which exposes it to a variety of financial risks such as currency risk, liquidity risk, interest rate risk, credit risk and risks relating to the price of finished goods, raw materials and power.

The Company's management model aims to minimize the potential adverse impact of such risks upon the Company's financial performance. Risk is managed by the Company's executive management, supported by the Risk Management, Treasury and Finance functions. The risk management process includes identifying and evaluating financial risks in conjunction with the Company's operations and quantifying them by project, region and subsidiary. Management provides written policies for global risk management, as well as for specific areas such as foreign currency risk, credit risk, interest rate risk, liquidity risk, the use of hedging instruments and derivatives, and investment of surplus liquidity. Ferroglobe does not speculatively enter into or trade derivatives.

Market risk

Market risk is the risk that the Company's future cash flows or the fair value of its financial instruments will fluctuate because of changes in market prices. The primary market risks to which the Company is exposed comprise foreign currency risk, interest rate risk and risks related to prices of finished goods, raw materials (principally coal and manganese ore) and power.

Foreign exchange rate risk

Ferroglobe generates sales revenue and incurs operating costs in various currencies. The prices of finished goods are to a large extent determined in international markets, primarily in U.S. Dollars and Euros. Foreign currency risk is partly mitigated by the generation of sales revenue, the purchase of raw materials and other operating costs being denominated in the same currencies. Although it has done so on occasions in the past, and may decide to do so in the future, the Company does not generally enter into foreign currency derivatives in relation to its operating cash flows.

Notes and cross currency swap

In February 2017, the Company completed a restructuring of its finances which included the issuance of $350,000 thousand 9.375% senior notes due 2022 (the "Notes") and the repayment of certain existing indebtedness denominated in a number of currencies across its subsidiaries. The Company is exposed to foreign exchange risk as the interest and principal of the Notes is payable in US dollars, whereas its operations principally generate a combination of U.S. Dollar and Euro cash flows. Following approval by the Board, the Company entered into a cross-currency interest rate swap (the "CCS") to exchange 55% of the principal and interest payments due in U.S. Dollars for principal and interest payments in Euros. Under the CCS, on a semi-annual basis the Company will receive interest of 9.375% on a notional amount of $192,500 thousand and pay interest of 8.062% on a notional amount of €176,638 thousand and it will exchange these Euro and U.S.

Dollar notional amounts at maturity of the Notes in *2022*. The timing of payments of interest and principal under the CCS coincide exactly with those of the Notes. The fair value of the CCS at December 31, 2019 was a liability of $9,600 thousand (2018: $20,384 thousand).

The Parent Company, which has a Euro functional currency, has designated $150,000 thousand of the notional amount of the CCS as a cash flow hedge of the variability of the Euro functional currency equivalents of the future US dollar cash flows of $150,000 thousand of the principal amount of the Notes. The remaining $42,500 thousand of the notional amount of the CCS is not designated as a cash flow hedge and is accounted for at fair value through profit or loss. The Company has performed a sensitivity analysis that indicates that if the Euro was to strengthen (weaken) against the US Dollar by 10% it would record a loss (gain) of $4,724 thousand in respect of the portion of the CCS accounted for at fair value through profit or loss (2018: $4,615 thousand). In March 2020, the Company has cancelled the CCS, see *Note 30* Events after the reporting period.

Interest rate risk

Ferroglobe is exposed to interest rate risk in respect of its financial liabilities that bear interest at floating rates. These primarily comprise credit facilities and lease commitments for lease agreements following IFRS 16 implementation.

At December 31, the Company's interest-bearing financial liabilities were as follows:

	2019		
	Fixed rate	Floating rate	Total
	US$'000	US$'000	US$'000
Bank borrowings	—	158,999	158,999
Lease liabilities	—	25,872	25,872
Debt instruments	354,951	—	354,951
Other financial liabilities (*)	56,939	—	56,939
	411,890	**184,871**	**596,761**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments.

	2018		
	Fixed rate	Floating rate	Total
	US$'000	US$'000	US$'000
Bank borrowings	—	141,012	141,012
Obligations under finance leases	—	66,471	66,471
Debt instruments	352,595	—	352,595
Other financial liabilities (*)	61,849	—	61,849
	414,444	**207,483**	**621,927**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments.

The Company's finance leases related to its Spanish hydroelectrical installations bear interest at a floating rate tied to EURIBOR. In May 2012, the Company entered into interest rate swaps to fix the interest payable in respect of these lease obligations, Spanish hydroelectrical assets have been sold at August 30, 2019, the lease and its interest rate swap was paid totally by Ferroglobe before the sale of the business. During the year ended December 31, 2019, the Company did not enter into any new interest rate derivatives. The market value of the Company's interest rate swap derivatives at December 31, 2019 was nil, compared to a liability of $3,079 thousand at December 31, 2018.

In respect of the above financial liabilities, at December 31, 2019, the Company had floating to fixed interest rate swaps in place covering 0% of its exposure to floating interest rates (2018: 31%).

At December 31, 2019, an increase of 1% in interest rates would have given rise to additional borrowing costs of $2,232 thousand (2018: $1,425 thousand).

Credit risk

Credit risk refers to the risk that a customer or counterparty will default on its contractual obligations resulting in financial loss. The Company's main credit risk exposure relates to the following financial assets:

- trade and other receivables; and
- loans and receivables (other financial assets) arising from the Company's accounts receivable securitization program.

Trade receivables consist of a large number of customers, spread across diverse industries and geographical areas. The Company has established policies, procedures and controls relating to customer credit risk management. Ongoing credit evaluation is performed on the financial condition of accounts receivable and, where appropriate, the Company insures its trade receivables with reputable credit insurance companies.

Since August 2017, the Company has sold substantially all of the trade receivables generated by its subsidiaries in the U.S., Canada, Spain and France to an accounts receivable securitization program. This has enabled it to monetize these assets earlier and significantly reduce working capital. On October 11, 2019, the Company's subsidiaries in the United States and Canada repurchased all outstanding receivables that had they had previously sold to the SPE so that they could form part of the borrowing base for the North American asset-based revolving credit facility (the "ABL Revolver").

Liquidity risk

The purpose of the Company's liquidity and financing policy is to ensure that the Company keeps sufficient funds available to meet its financial obligations as they fall due. The Company's main sources of financing are as follows:

- $350,000 thousand aggregate principal amount of 9.375% senior unsecured notes due March 1, 2022 (the "Notes"). The proceeds from the Notes, issued by Ferroglobe and Globe (together, the "Issuers") on February 15, 2017, were primarily used to repay certain existing indebtedness of the Parent Company and its subsidiaries. Interest is payable semi-annually on March 1 and September 1 of each year. If Ferroglobe experiences a change of control, the Company is required to offer to redeem the Notes at 101% of their principal amount (further information below).

- $150,000 thousand accounts receivables securitization program. Trade receivables held by the Company's subsidiaries in Spain and France are sold to a special purpose "designated activity company" domiciled and incorporated in Ireland (the "SPE"). Eligible receivables are sold to the SPE on an on-going basis at an agreed upon purchase price of approximately 98% (2018: 99%) of their invoiced amount. The program has a two-year term until December 10, 2021. In respect of trade receivables outstanding at December 31, 2019 the SPE had provided upfront cash consideration of approximately $58,339 thousand (2018: $227,360 thousand).

- $100,000 North-American asset-based, revolving credit facility (the "ABL Revolver"). Loans under the ABL Revolver may be borrowed, repaid and reborrowed at any time until the facility's expiration date. The legal final maturity date of the ABL Revolver is October 11, 2024. The terms of the facility provide a spring forward provision which requires the ABL Revolver to be repaid on the date which is three months prior to the maturity date of the Company's senior Notes (March 1, 2022), which would currently imply a facility repayment date of December 1, 2021. At December 31, 2019 $58,049 thousand was utilized.

The Indenture governing the Notes includes change of control provisions that would require the Company to offer to redeem the outstanding senior Notes at a purchase price in cash equal to 101% of the principal amount of the Notes, plus any accrued and unpaid interest in the event of a change of control. A change in control is defined in the Indenture as the occurrence of any of the following:

1. If the Company becomes aware, that any person or group, other than one of the Permitted Holders (which is defined as Grupo Villar Mir (GVM), Alan Kestenbaum or members of senior management) or affiliates of those Permitted Holders, directly or indirectly controls 35% or more of the Company's voting stock and the aggregate voting stock of the Permitted Holders is the same or a lesser percentage;
2. If the Company sells or otherwise disposes of all or substantially all of its assets;
3. If the Company ceases to hold directly or indirectly 100% of the capital stock of Globe; or
4. If the shareholders or the Company or the U.S. subsidiary approve the liquidation or dissolution of either the Company or Globe.

GVM currently owns approximately 54% of the Company's voting stock, and a significant majority of GVM's shares in the Company are pledged as collateral for GVM's obligations to certain of its lenders. A change of control may occur if a person other than a Permitted Holder (as defined in Note 27) were to acquire 35% or more of the Company's outstanding shares at a time when the Permitted Holders held an equal or lesser percentage. While GVM maintains its current shareholding, a change of control cannot occur. Based on the provisions cited above, a change of control as defined in the Indenture is unlikely to occur but the matter it is beyond the Company's control. If a change of control were to occur, the company may not have sufficient financial resources available to satisfy all of its obligations.

Management has evaluated the potential impact from the coronavirus outbreak on the Company results of operations and liquidity finding difficult to develop a reliable estimate of the potential impact on the results of operations and cash flow at this time, but the downside scenario analysis supports an expectation that the Company will have cash headroom to continue to operate throughout the following twelve months (see Note 3).

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES.

A. Debt Securities.

Not applicable.

B. Warrants and Rights.

Not applicable.

C. Other Securities.

Not applicable.

D. American Depositary Shares.

Not applicable.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES.

None of these events occurred in any of the years ended December 31, 2019, 2018 and 2017.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS.

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES.

A. Evaluation of disclosure controls and procedures

We maintain disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the U.S. Exchange Act, that are designed to ensure that information required to be disclosed by the Company in reports that we file or submit under the U.S. Exchange Act is (i) recorded, processed, summarized and reported within the time period specified in the SEC's rules and forms, and (ii) accumulated and communicated to our management, including our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), as appropriate, to allow timely decisions regarding required disclosure. Disclosure controls and procedures, no matter how well designed, can provide only reasonable assurance of achieving the desired control objectives.

Our principal executive officer and principal financial officer have conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this annual report. Based on that evaluation, they have concluded that our disclosure controls and procedures were effective.

B. Management's annual report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the U.S. Exchange Act. Our internal control over financial reporting is designed by management to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of our published consolidated financial statements.

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, management conducted an assessment of the effectiveness of our internal control over financial reporting as of the end of the period covered by this annual report based on criteria established in the *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on those criteria, management concluded that, as of the end of the period covered by this annual report, our internal control over financial reporting is effective.

C. Attestation report of the registered public accounting firm

The report of Deloitte, S.L., our Independent Registered Public Accounting Firm, on our internal control over financial reporting is included herein.

D. Changes in internal control over financial reporting

There has been no change in our internal control over financial reporting that occurred during 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. [RESERVED]

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT.

See "Item 6.C.—Directors, Senior Management and Employees—Board Practices—Committees of board of directors—Audit Committee." Our Board of Directors has determined that Mr. Greger Hamilton qualifies as an "audit committee financial expert" under applicable SEC rules.

ITEM 16B. CODE OF ETHICS.

Our Board of Directors has adopted a Code of Conduct for our employees, officers and directors to govern their relations with current and potential customers, fellow employees, competitors, government and regulatory agencies, the media, and anyone else with whom Ferroglobe PLC has contact. Our Code of Conduct is publicly available on our website at www.ferroglobe.com.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The following table provides information on the aggregate fees billed by our principal accountant Deloitte or by other firms, to Ferroglobe PLC and subsidiaries, classified by type of service rendered for the periods indicated, in thousands of U.S. Dollars:

($ thousands)	2019	2018
Audit Fees	5,206	6,007
Audit-Related Fees	11	20
Tax Fees	29	84
Total	**5,246**	**6,111**

Audit Fees are the aggregate fees billed for professional services in connection with the audit of our consolidated annual financial statements and statutory audits of our subsidiaries' financial statements under the rules in which our subsidiaries are organized. Also included are quarterly limited reviews, audits of non-recurring transactions, consents and any audit services required for SEC or other regulatory filings.

Audit-Related Fees are fees charged for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements, and are not restricted to those that can only be provided by the auditor signing the audit report. This category comprises fees billed for comfort letters and agreed upon procedures for grants and other financial compliance.

Tax Fees are fees billed for tax compliance, tax review and tax advice on actual or contemplated transactions.

All Other Fees comprises fees billed in relation to financial advisory services and other services not accounted for under other categories.

Audit Committee's policy on pre-approval of audit and permissible non-audit services of the independent auditor

Subject to shareholder approval of the independent auditor, the Audit Committee has the sole authority to appoint, retain or replace the independent auditor. The Audit Committee is also directly responsible for the compensation and oversight of the work of the independent auditor. These policies generally provide that we will not engage our independent auditors to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee. The Audit Committee's pre-approval policy, which covers audit and non-audit services provided to us or to any of our subsidiaries, is as follows:

- The Audit Committee shall review and approve in advance the annual plan and scope of work of the independent external auditor, including staffing of the audit, and shall (i) review with the independent external auditor any

audit-related concerns and management's response and (ii) confirm that any examination is performed in accordance with the relevant accounting standards.

- The Audit Committee shall pre-approve all audit services and all permitted non-audit services (including the fees and terms thereof) to be performed for us by the independent auditors, to the extent required by law. The Audit Committee may delegate to one or more Committee members the authority to grant pre-approvals for audit and permitted non-audit services to be performed for us by the independent auditor, provided that decisions of such members to grant pre-approvals shall be presented to the full Audit Committee at its next regularly scheduled meeting.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES.

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS.

Not applicable.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT.

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE.

As a "foreign private issuer," as defined by the SEC, although we are permitted to follow certain corporate governance practices of England and Wales, instead of those otherwise required under NASDAQ rules for domestic issuers, we intend to follow the NASDAQ corporate governance rules applicable to foreign private issuers. While we voluntarily follow most NASDAQ corporate governance rules, we intend to take advantage of the following limited exemptions:

- Exemption from filing quarterly reports on Form 10-Q or providing current reports on Form 8-K disclosing significant events within four days of their occurrence;

- Exemption from Section 16 rules regarding sales of ordinary shares by insiders, which will provide less data in this regard than shareholders of U.S. companies that are subject to the U.S. Exchange Act;

- Exemption from the NASDAQ rules applicable to domestic issuers requiring disclosure within four business days of any determination to grant a waiver of the code of business conduct and ethics to directors and officers. Although we will require board approval of any such waiver, we may choose not to disclose the waiver in the manner set forth in the NASDAQ rules, as permitted by the foreign private issuer exemption;

- Exemption from the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities. Currently, our Compensation Committee is composed entirely of independent directors, but we are not certain at this time that we would not take advantage of this exception in the future; and

- Exemption from the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board's independent directors in a vote in which only independent directors participate, or (2) a nominations committee composed solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as us, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided

that we nevertheless comply with NASDAQ's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to England and Wales requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of NASDAQ. We may utilize these exemptions for as long as we continue to qualify as a "controlled company" and foreign private issuer.

For additional information see "Item 6.C.—Directors, Senior Management and Employees—Board Practices."

ITEM 16H. MINE SAFETY DISCLOSURE

The information concerning mine safety violations and other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act is included in Exhibit 16.1 to this annual report.

PART III

ITEM 17. FINANCIAL STATEMENTS.

We have elected to provide financial statements pursuant to Item 18.

ITEM 18. FINANCIAL STATEMENTS.

Our Consolidated Financial Statements are included at the end of this annual report.

ITEM 19. EXHIBITS.

Exhibit No.	Exhibit Description
1.1	Articles of Association of Ferroglobe PLC, dated as of October 26, 2017 (incorporated by reference to Exhibit 1.1 to the annual report on Form 20-F filed by the Company on April 30, 2018)
2.1	Description of securities (filed herewith to exhibit 2.1 to the annual report on Form 20-F filed by the Company on May 29, 2020)
3.1	Amended and Restated Shareholder Agreement, dated as of November 21, 2017, between Grupo VM and Ferroglobe (incorporated by reference to Exhibit 3.1 to the annual report on Form 20-F filed by the Company on April 30, 2018)
3.2	Amendment No. 1, dated January 23, 2018, to the Grupo VM Shareholder Agreement, between Grupo VM and Ferroglobe (incorporated by reference to Exhibit 3.2 to the annual report on Form 20-F filed by the Company on April 30, 2018)
3.3	Shareholder Agreement, dated as of December 23, 2015, between Alan Kestenbaum, certain of his affiliates and Ferroglobe (incorporated by reference to Exhibit 4.3 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
4.1	Amended and Restated Business Combination Agreement, dated as of May 5, 2015, by and between Globe, Grupo VM, FerroAtlántica, Ferroglobe and Merger Sub (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on May 6, 2015)
4.2	Letter Agreement, dated November 11, 2015, by and among Globe, Grupo VM, FerroAtlántica, Ferroglobe and Merger Sub (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on November 12, 2015)
4.3	First Amendment to Amended and Restated Business Combination Agreement, dated September 10, 2015 (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on September 11, 2015)
4.4	Credit and Security Agreement dated October 11, 2019 among, *inter alia*, PNC Bank, NA, Globe Specialty Metals, Inc. and QSIP Canada ULC (filed herewith to exhibit 4.4 to the annual report on Form 20-F filed by the Company on May 29, 2020)

Exhibit No.	Exhibit Description
4.5	Indenture governing the $350,000,000 aggregate principal amount of 9.375% senior unsecured due 2022, dated as of February 15, 2017, among Ferroglobe PLC and Globe Specialty Metals, Inc., as Issuers, the Guarantors party thereto and Wilmington Trust, National Association, as Trustee, Registrar, Transfer Agent and Paying Agent (incorporated by reference to Exhibit 4.35 to the annual report on Form 20-F filed by the Company on May 1, 2017)
4.6†	Employment Agreement, dated January 27, 2011, between Globe and Alan Kestenbaum (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on May 12, 2011)
4.7†	Amendment, dated February 22, 2015, to the Employment Agreement, dated January 27, 2011, between Globe and Alan Kestenbaum (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Globe with the SEC on February 23, 2015)
4.8†	Service Agreement, dated June 21, 2016, between Ferroglobe and Javier López Madrid (incorporated by reference to Exhibit 4.10 to the annual report on Form 20-F filed by the Company on May 1, 2017)
4.9†	Amendment, dated February 7, 2017, to the Service Agreement, dated June 21, 2016, between Ferroglobe and Javier López Madrid (incorporated by reference to Exhibit 4.11 to the annual report on Form 20-F filed by the Company on May 1, 2017)
4.10†	Amended and Restated Service Agreement, dated June 28, 2017, between Ferroglobe and Pedro Larrea Paguaga (incorporated by reference to Exhibit 4.13 to the annual report on Form 20-F filed by the Company on April 30, 2018)
4.11†	2016 Equity Incentive Plan (incorporated by reference to Exhibit 4.14 to the annual report on Form 20-F filed by the Company on April 30, 2018)
4.12†	2006 Employee, Director and Consultant Stock Plan (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-1 filed by Globe with the SEC on July 25, 2008)
4.13†	Amendments to 2006 Employee, Director and Consultant Stock Plan (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on February 11, 2011)
4.14†	2010 Annual Executive Bonus Plan (incorporated by reference to Exhibit 10.15 to the Annual Report on Form 10-K filed by Globe with the SEC on September 28, 2010)
4.15†	2011 Annual Executive Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on May 12, 2011)
4.16†	2012 Long-Term Incentive Plan (incorporated by reference to Exhibit B to Globe's Proxy Statement filed on October 28, 2011)
4.17†	Form Stock Option Agreement (incorporated by reference to Exhibit 10.13 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.18†	Form Stock Appreciation Right Agreement (incorporated by reference to Exhibit 10.14 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)

Exhibit No.	Exhibit Description
4.19†	Form Restricted Stock Unit Grant Agreement (cash settled) (incorporated by reference to Exhibit 10.15 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.20	IT Services Agreement, dated as of January 1, 2004, between FerroAtlántica and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.17 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.21	IT Outsourcing Agreement, dated as of June 26, 2014, between FerroAtlántica de Mexico and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.18 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.22	IT Services Agreement, in force since January 1, 2006, between FerroPem SAS and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.19 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.23	Outsourcing Agreement, in force since January 1, 2009, between Silicon Smelters (Pty.) Ltd. and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.20 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.24	Framework agreement for the supply of electricity to the Boo de Guarnizo facility (Cantabria) executed on June 22, 2010, between FerroAtlántica, S.A.U. and Villar Mir Energía S.L., as amended by the amendments provided to Globe (incorporated by reference to Exhibit 10.23 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.25	Lease Agreement, dated as of August 9, 2007, between Torre Espacio Castellana S.A and FerroAtlántica S.L.U. (incorporated by reference to Exhibit 10.26 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.26	Lease Agreement, dated as of April 2, 2012, between Torre Espacio Castellana S.A and FerroAtlántica S.L.U. (incorporated by reference to Exhibit 10.27 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.27	Lease Agreement, dated as of October 1, 2019, between Torre Espacio Gestión, S.L., and Grupo Ferroatlántica de Servicios, S.L.U. (filed herewith to exhibit 4.27 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.28	Registration Rights Agreement, dated as of December 23, 2015, among Ferroglobe, Grupo VM and Alan Kestenbaum (incorporated by reference to Exhibit 10.27 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
4.29	Master framework agreement, dated July 11, 2019, among Grupo Ferroatlántica, S.A.U., Silicio Ferrosolar, S.L.U., Ferroatlántica, S.A.U., Ferroatlántica Participaciones, S.L.U., Aurinka Photovoltaic Group, S.L., Blue Power Corporation, S.L., Ferrosolar Opco Group, S.L., and Ferrosolar R&D, S.L. (filed herewith to exhibit 4.29 to the annual report on Form 20-F filed by the Company on May 29, 2020)

Exhibit No.	Exhibit Description
4.30	Deed for the sale by Blue Power Corp. of 25% of the shares in Ferrosolar Opco Group, SL for €1, dated as of July 11, 2019 (filed herewith to exhibit 4.30 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.31	Deed for the sale by Silicio Ferrosolar SL of 1% of the shares of Ferrosolar R&D, SL to Aurinka Photovoltaic Group SL for €1, dated as of July 11, 2019 (filed herewith to exhibit 4.31 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.32	Contract for the termination of the FAT-Aurinka Consultancy Services Agreement, dated as of July 11, 2019 (filed herewith to exhibit 4.32 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.33	Commitment letter among Grupo Ferroatlántica, S.A.U., Ferroatlántica, S.A.U., Ferrosolar Opco Group, S.L., and Aurinka Photovoltaic Group, S.L. related to the consultancy services termination agreement (filed herewith to exhibit 4.33 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.34	Contract for the termination of the Joint Venture Agreement and agreements derived from it, dated as of July 11, 2019, among Grupo Ferroatlántica, S.A.U., Silicio Ferrosolar, S.L.U., Ferroatlántica, S.A.U., Ferroatlántica Participaciones, S.L.U., Aurinka Photovoltaic Group, S.L., Blue Power Corporation, S.L., Ferrosolar Opco Group, S.L., and Ferrosolar R&D, S.L. (filed herewith to exhibit 4.34 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.35	Consultancy Services Agreement between Aurinka Photovoltaic Group, S.L., and Ferrosolar Opco Group, S.L., dated as of July 11, 2019 (filed herewith to exhibit 4.35 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.36	Contract granting Aurinka Photovoltaic Group, S.L. an option to purchase a maximum book value of the assets of Ferrosolar Opco Group, S.L., dated as of July 11, 2019 (filed herewith to exhibit 4.36 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.37	Contract for the sale of intellectual property, for the granting of patent licenses and the promise of licensing to a third party buyer, dated as of July 11, 2019, celebrated among Silicio Ferrosolar, S.L.U., and Ferrosolar R&D, S.L., Grupo Ferroatlántica, S.A.U., Aurinka Photovoltaic Group, S.L., and Blue Power Corporation, S.L. (filed herewith to exhibit 4.37 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.38	Mandate for the sale of OpCo's assets and agreement to collaborate in the search for potential investors, dated as of July 11, 2019, among Grupo Ferroatlántica, S.A.U., Silicio Ferrosolar, S.L.U., Aurinka Photovoltaic Group, S.L., Blue Power Corporation, S.L., and Ferrosolar Opco Group, S.L. (filed herewith to exhibit 4.38 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.39	Right of first refusal granted to Aurinka as to OpCo assets, dated as of July 11, 2019, among Ferrosolar Opco Group, S.L.U., and Aurinka Photovoltaic Group, S.L. (filed herewith to exhibit 4.39 to the annual report on Form 20-F filed by the Company on May 29, 2020)
4.40	Right of first refusal granted to Aurinka Photovoltaic Group, S.L., as to Ferrosolar R&D, S.L. shares, dated as of July 11, 2019, among Silicio Ferrosolar , S.L.U., and Aurinka Photovoltaic Group, S.L. (filed herewith to exhibit 4.40 to the annual report on Form 20-F filed by the Company on May 29, 2020)
8.1	List of Significant Subsidiaries

Exhibit No.	Exhibit Description
12.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2	Certification of the Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1	Certification of the Principal Executive Officers and Principal Financial Officer Pursuant to 18 U.S.C. 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1	Consent of Deloitte, S.L., Independent Registered Public Accounting Firm for Ferroglobe PLC
16.1	Mine Safety and Health Administration Safety Data
101	Interactive Data Files formatted in XBRL (Extensible Business Reporting Language)

† Management contract or compensatory plan or arrangement

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Date: May 29, 2020

Ferroglobe PLC
(Registrant)

By: /s/ Marco Levi
Marco Levi
Principal Executive Officer

By: /s/ Beatriz García-Cos
Beatriz García-Cos
Principal Accounting Officer

FERROGLOBE PLC

AUDITED CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements as of December 31, 2019 and 2018 and for each of the three years ended December 31, 2019, 2018 and 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferroglobe PLC

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Ferroglobe PLC and subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated income statements, the consolidated statements of comprehensive income (loss), the consolidated statements of changes in equity, and the consolidated statements of cash flows for each of the three years in the period ended December 31, 2019 and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board (“IFRS-IASB”).

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated May 29, 2020, expressed an unqualified opinion on the Company's internal control over financial reporting.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 3 to the financial statements, the uncertainties related to a potential change of control and the difficulties in forecasting net cash flows in the current economic conditions, raise substantial doubt about the ability of the Company to continue as a going concern. Management’s plans in regard to these matters are also described in Note 3. The financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Impairment of property, plant and equipment and goodwill — Refer to Notes 4.4, 7, 9 and 25 to the financial statements

Critical Audit Matter Description

As described in Notes 4.4, 7 and 9 to the financial statements, the Company's evaluation of property, plant and equipment and goodwill for impairment involves the comparison of their carrying amounts with their recoverable amount at the end of the reporting period, or more frequently if there are indicators that the assets might have become impaired. The recoverable amount is the higher of the fair value and the value in use. If the asset itself does not generate cash flows that are independent from other assets, the Company estimates the recoverable amount for the asset's cash-generating unit ("CGU"). The value in use are developed by estimating the net present value of the future cash flows that are expected to be derived, discounted at a rate which reflects the time value of money and the risks specific to the CGU. The assets involved in this analysis are the US, Canada, most of the European business and certain assets in South Africa. The estimation of the recoverable value of individual CGUs requires significant judgment in developing and applying key underlying assumptions concerning future market conditions, trading performance (sale prices, volumes, cost structure and capital expenditure or "capex"), as well as application of an appropriate discount rates (weighted average cost of capital or "WACC") and other factors (long-term growth rate). These inputs are estimated based on management's business plans, which are subject to change as business conditions change, and therefore, could affect the fair values in the future. As of December 31, 2019, the book value of the above-mentioned CGUs was $821,875 thousand, including goodwill and property, plant and equipment. The US CGU is the only CGU with a carrying value attributable to goodwill of $29,702 thousand. As described in Note 25 to the financial statements, an impairment charge of $175,899 thousand has been recognized in the year ended December 31, 2019.

We identified impairment of property, plant and equipment and goodwill as a critical audit matter because of the significant judgments involved in the assessment. A high degree of auditor judgment and an increased extent of audit effort, including the involvement of appropriate specialist support, was required to consider management's estimates and assumptions related to forecast of future cash flows, discount rates (WACC) and other factors (long-term growth rate).

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to management's estimates and assumptions in developing future cash flows (mainly sale prices, volumes, cost structure and capex), discount rates (WACC) and other factors (long-term growth) included the following, among others:

- We assessed the design and tested the operating effectiveness of relevant controls over the development of the impairment assessment of long-lived assets;
- We considered the accuracy of past forecasts developed by management to aid assessment of the reliability of the forecasting process;
- We considered key assumptions applied in the development of the discounted future cash flows, including their consistency with the forecasts used in the assessment of the carrying value of the individual CGU, as discussed above. We confirmed the cash flow forecasts were consistent with the most recent forecasts approved by the Board of Directors;
- We discussed and challenged management on key assumptions underlying the forecasts including evaluation of management's forecasts by reference to prior year and 2020 year to date results, current order book, comparison with the approved budget and changes in the regulatory environment;
- We evaluated the volumes and prices projected for the period 2021-2024 using independent sources of information (such as analyst and industry reports or prices reports, when available) and considered information that could be potentially contradictory to management's forecasts;
- With the assistance of our fair value specialists, we evaluated the discount rates (WACC), the long-term growth rate and the underlying source information. Our fair value specialists also assisted in testing the mathematical accuracy of the calculations and developing a range of independent estimates and comparing those to management's discount rates (WACC) and the long-term growth rate;

- We have evaluated the sensitivity analysis disclosed by the Company over the US CGU by comparing the results of the impairment test with significant changes and modifications (10% variances) to the underlying inputs such as the net cash flows, the discount rates (WACC) and the long-term growth rate.

Consolidation of the SPE undertaking the securitization program — Refer to Notes 10 and 16 to the financial statements.

Critical Audit Matter Description

As described in Notes 10 and 16 to the financial statements, on July 31, 2017, the Company entered into an accounts receivable securitization program (the "Program") where trade receivables held by the Company's subsidiaries in the US, Canada, Spain and France were sold to Ferrous Receivables DAC, a special purpose entity domiciled and incorporated in Ireland (the "SPE"). On December 10, 2019, the Company refinanced the Program and amended and restated its terms, maintaining the Company's European subsidiaries as senior subordinated and junior subordinated lenders and creating a new interest in the senior and intermediate subordinated loan tranches. On September 5, 2019 as a consequence of certain amendments to the contract, management determined, after considering the risk exposure for each lender, that Ferroglobe PLC became exposed to variable returns and has the ability to affect those returns through its power over the investee. As such from this date it was concluded that Ferroglobe PLC has control over the SPE and therefore that the SPE should be consolidated. This conclusion was maintained under the Program amended and restated on December 10, 2019. The new senior lender's commitments under the amended and restated securitization program are $150,000 thousand, of which $104,130 thousand was drawn at December 31, 2019.

We identified the appropriateness of the consolidation of the SPE undertaking the securitization program as a critical audit matter because of the significant judgment involved in evaluating the analysis of control over the SPE. This required a high degree of auditor judgment and an increased extent of audit effort, including the need to involve our IFRS technical specialists, when performing audit procedures to evaluate the reasonableness of management's estimates and assumptions related to the consolidation of the SPE.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the consolidation of the SPE undertaking the securitization program and the consolidation of the SPE included the following, among others:

- We assessed the design and tested the operating effectiveness of relevant controls governing the assessment;
- We performed procedures, including inquiry to management and review of relevant documentation, to obtain an understanding of the business purpose and economic substance of the transaction;
- We evaluated the control of the Company over the SPE, considered whether the consolidation of the entity is required by the applicable accounting standards and assessed the appropriateness of the accounting treatment;
- We used internal specialists to evaluate the assumptions used to assess the variable returns and the ability of Ferroglobe PLC to affect those returns through its power over the investee, which determine the control over the SPE, its risk exposure and therefore if its consolidation is required;
- We performed audit procedures over the accounts receivable sold to the SPE, including the reconciliation of balances, verification with third-party reports and external confirmations;
- We have performed audit procedures over the consolidation process, including the review of the journal entries and the subsequent consolidation eliminations and adjustments.

/s/ Deloitte, S.L.
Madrid, Spain
May 29, 2020

We have served as the Company's auditor since 1992.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferroglobe PLC

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Ferroglobe PLC and subsidiaries (the "Company") as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements of the Company as of December 31, 2019 and our report dated May 29, 2020, expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the substantial doubt about the ability of the Company to continue as a going concern.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying management's annual report on internal control over financial reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte, S.L.
Madrid, Spain
May 29, 2020

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2019 AND 2018

Thousands of U.S. Dollars

	Notes	2019 US$'000	2018 US$'000
ASSETS			
Non-current assets			
Goodwill	Note 7	29,702	202,848
Other intangible assets	Note 8	51,267	51,822
Property, plant and equipment	Note 9	740,906	888,862
Other non-current financial assets	Note 10	2,618	70,343
Deferred tax assets	Note 22	59,551	14,589
Non-current receivables from related parties	Note 23	2,247	2,288
Other non-current assets	Note 12	1,597	10,486
Non-current restricted cash and cash equivalents	Note 10	28,323	—
Total non-current assets		**916,211**	**1,241,238**
Current assets			
Inventories	Note 11	354,121	456,970
Trade and other receivables	Note 10	309,064	155,996
Current receivables from related parties	Note 23	2,955	14,226
Current income tax assets	Note 22	27,930	27,404
Other current financial assets	Note 10	5,544	2,523
Other current assets	Note 12	23,676	8,813
Cash and cash equivalents	Note 10	94,852	216,647
Total current assets		**818,142**	**882,579**
Total assets		**1,734,353**	**2,123,817**
EQUITY AND LIABILITIES			
Equity			
Share capital		1,784	1,784
Reserves		975,358	941,707
Translation differences		(210,152)	(207,366)
Valuation adjustments		(2,169)	(11,559)
Result attributable to the Parent		(280,601)	43,661
Non-controlling interests		118,077	116,145
Total equity	Note 13	**602,297**	**884,372**
Non-current liabilities			
Deferred income		1,253	1,434
Provisions	Note 15	84,852	75,787
Bank borrowings	Note 16	144,388	132,821
Lease liabilities	Note 17	16,972	53,472
Debt instruments	Note 18	344,014	341,657
Other financial liabilities	Note 19	43,157	32,788
Other non-current liabilities	Note 21	25,906	25,030
Deferred tax liabilities	Note 22	74,057	77,379
Total non-current liabilities		**734,599**	**740,368**
Current liabilities			
Provisions	Note 15	46,091	40,570
Bank borrowings	Note 16	14,611	8,191
Lease liabilities	Note 17	8,900	12,999
Debt instruments	Note 18	10,937	10,937
Other financial liabilities	Note 19	23,382	52,524
Payables to related parties	Note 23	4,830	11,128
Trade and other payables	Note 20	189,229	256,823
Current income tax liabilities	Note 22	3,048	2,335
Other current liabilities	Note 21	96,429	103,570
Total current liabilities		**397,457**	**499,077**
Total equity and liabilities		**1,734,353**	**2,123,817**

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED INCOME STATEMENT FOR 2019, 2018 AND 2017
Thousands of U.S. Dollars

	Notes	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Sales	Note 25.1	1,615,222	2,242,002	1,732,276
Cost of sales		(1,214,397)	(1,446,677)	(1,043,275)
Other operating income		54,213	45,844	18,100
Staff costs	Note 25.2	(285,029)	(338,862)	(300,035)
Other operating expense		(225,705)	(277,560)	(234,399)
Depreciation and amortization charges, operating allowances and write-downs	Note 25.3	(120,194)	(113,837)	(100,402)
Impairment losses	Note 25.5	(175,899)	(58,919)	(31,641)
Net (loss) gain due to changes in the value of assets	Note 25.5	(1,574)	(7,623)	7,504
(Loss) gain on disposal of non-current assets	Note 25.6	(2,223)	14,564	(4,316)
Bargain purchase gain	Note 5	—	40,142	—
Other losses	Note 29	—	—	(2,613)
Operating (loss) profit		**(355,586)**	**99,074**	**41,199**
Finance income	Note 25.4	1,380	4,858	2,409
Finance costs	Note 25.4	(63,225)	(57,066)	(59,969)
Financial derivative gain (loss)	Note 19	2,729	2,838	(6,850)
Exchange differences		2,884	(14,136)	8,214
(Loss) profit before tax		**(411,818)**	**35,568**	**(14,997)**
Income tax benefit (expense)	Note 22	41,541	(20,459)	14,225
(Loss) profit for the year from continuing operations		**(370,277)**	**15,109**	**(772)**
(Loss) profit for the year from discontinued operations	Note 29	84,637	9,464	(5,050)
(Loss) profit for the year		**(285,640)**	**24,573**	**(5,822)**
Loss attributable to non-controlling interests	Note 13	5,039	19,088	5,144
(Loss) profit attributable to the Parent		**(280,601)**	**43,661**	**(678)**

Earnings per share				
		2019	**2018 (*)**	**2017 (*)**
(Loss) profit attributable to the Parent (US$'000)		(280,601)	43,661	(678)
Weighted average basic shares outstanding		169,152,905	171,406,272	171,949,128
Basic (loss) earnings per ordinary share (US$)	Note 14	**(1.66)**	**0.25**	**(0.00)**
Weighted average basic shares outstanding		169,152,905	171,406,272	171,949,128
Effect of dilutive securities		—	123,340.00	—
Weighted average dilutive shares outstanding		169,152,905	171,529,612	171,949,128
Diluted (loss) earnings per ordinary share (US$)	Note 14	**(1.66)**	**0.25**	**(0.00)**

(*) The amounts for prior periods have been restated to reclassify the results of the Company´s Spanish hydroelectric assets within profit (loss) from discontinued operations.

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (LOSS) FOR 2019, 2018 AND 2017
Thousands of U.S. Dollars

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Net (loss) profit	**(285,640)**	**24,573**	**(5,822)**
Items that will not be reclassified subsequently to income or loss:			
Defined benefit obligation	(1,859)	3,568	4,511
Tax effect	—	(296)	—
Total income and expense that will not be reclassified subsequently to income or los	**(1,859)**	**3,272**	**4,511**
Items that may be reclassified subsequently to income or loss:			
Arising from cash flow hedges	9,663	10,006	(24,171)
Translation differences	(8,698)	(45,435)	54,670
Tax effect	—	—	—
Total income and expense that may be reclassified subsequently to income or loss	**965**	**(35,429)**	**30,499**
Items that have been reclassified to income or loss in the period:			
Arising from cash flow hedges	2,390	(7,228)	15,138
Tax effect	(805)	(190)	(390)
Total transfers to income or loss	**1,585**	**(7,418)**	**14,748**
Other comprehensive income (loss) for the year, net of income tax	**691**	**(39,575)**	**49,758**
Total comprehensive (loss) income for the year	**(284,949)**	**(15,002)**	**43,936**
Attributable to the Parent	(281,097)	4,976	47,158
Attributable to non-controlling interests	(3,852)	(19,978)	(3,222)

(*) The amounts for prior periods have been restated to reclassify the results of the Company´s Spanish hydroelectric assets within profit (loss) from discontinued operations.

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR 2019, 2018 AND 2017
Thousands of U.S. Dollars

	Total Amounts Attributable to Owners							
	Issued Shares (Thousands)	Share Capital US$'000	Reserves US$'000	Translation Differences US$'000	Valuation Adjustments US$'000	Result for the Year US$'000	Non-controlling Interests US$'000	Total US$'000
Balance at January 1, 2017	**171,838**	**1,795**	**1,332,428**	**(217,423)**	**(11,887)**	**(338,427)**	**125,556**	**892,042**
Comprehensive income (loss) for 2017	—	—	—	52,748	(4,912)	(678)	(3,222)	43,936
Issue of share capital	139	1	179	—	—	—	—	180
Share-based compensation	—	—	2,405	—	—	—	—	2,405
Distribution of 2016 loss	—	—	(338,427)	—	—	338,427	—	—
Dividends paid to joint venture partner	—	—	—	—	—	—	(7,350)	(7,350)
Non-controlling interest arising on the acquisition of FerroSolar Opco Group S.L.	—	—	—	—	—	—	6,750	6,750
Other changes	—	—	(205)	—	—	—	—	(205)
Balance at December 31, 2017	**171,977**	**1,796**	**996,380**	**(164,675)**	**(16,799)**	**(678)**	**121,734**	**937,758**
Comprehensive (loss) income for 2018	—	—	—	(44,276)	5,591	43,661	(19,978)	(15,002)
Issue of share capital	40	—	240	—	—	—	—	240
Cash settlement of equity awards	—	—	(680)	—	—	—	—	(680)
Share-based compensation	—	—	2,798	—	—	—	—	2,798
Distribution of 2017 loss	—	—	(678)	—	—	678	—	—
Dividends paid	—	—	(20,642)	—	—	—	—	(20,642)
Own shares acquired	(1,153)	(12)	(20,088)	—	—	—	—	(20,100)
Increase of Parent's ownership interest in FerroAtlántica de Venezuela S.A.	—	—	(15,623)	1,585	(351)	—	14,389	—
Balance at December 31, 2018	**170,864**	**1,784**	**941,707**	**(207,366)**	**(11,559)**	**43,661**	**116,145**	**884,372**
Comprehensive (loss) income for 2019	—	—	—	(9,886)	9,390	(280,601)	(3,852)	(284,949)
Share-based compensation	—	—	4,879	—	—	—	—	4,879
Distribution of 2018 income	—	—	43,661	—	—	(43,661)	—	—
Dividends paid non-controlling interests	—	—	—	—	—	—	(97)	(97)
Acquisition of non-controlling interests in Ferrosolar OPCO Group SL. and Rocas Arcillas and Minerales, S.A.	—	—	(14,889)	7,100	—	—	5,881	(1,908)
Balance at December 31, 2019	**170,864**	**1,784**	**975,358**	**(210,152)**	**(2,169)**	**(280,601)**	**118,077**	**602,297**

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS FOR 2019, 2018 AND 2017
Thousands of U.S. Dollars

	2019 US$'000	2018 US$'000	2017 US$'000
Cash flows from operating activities:			
(Loss) profit for the year	**(285,640)**	**24,573**	**(5,822)**
Adjustments to reconcile net profit (loss) to net cash provided by operating activities:			
Income tax expense (benefit)	(40,528)	24,235	(14,821)
Depreciation and amortization charges, operating allowances and write-downs	123,024	119,137	104,529
Finance income	2,140	(5,374)	(3,708)
Finance costs	66,139	62,022	65,412
Financial derivative (gain) loss	(2,729)	(2,838)	6,850
Exchange differences	(2,884)	14,136	(8,214)
Impairment losses	175,899	58,919	30,957
Bargain purchase gain	—	(40,142)	—
Gain on disposal of discontinued operations	(85,101)	—	—
Loss (gain) due to changes in the value of assets	1,574	7,623	(7,504)
(Gain) loss on disposal of non-current assets	2,223	(14,564)	4,316
Share-based compensation	4,879	2,798	2,405
Other loss	—	—	2,613
Changes in operating assets and liabilities:			
(Increase) decrease in inventories	91,531	(101,024)	(16,274)
(Increase) decrease in trade and other receivables	30,933	(25,807)	50,168
Increase (decrease) in trade and other payables	(63,187)	55,410	17,613
Other changes in operating assets and liabilities	(45,878)	(25,901)	(12,251)
Income tax paid	(3,589)	(36,408)	(26,764)
Interest paid	(43,033)	(43,018)	(39,130)
Net cash (used) provided by operating activities	**(74,227)**	**73,777**	**150,375**
Cash flows from investing activities:			
Interest and finance income received	1,673	3,833	952
Payments due to investments:			
Acquisition of subsidiaries	9,088	(20,379)	—
Other intangible assets	(184)	(3,313)	(811)
Property, plant and equipment	(32,445)	(106,136)	(74,616)
Other financial assets	(1,248)	—	(343)
Disposals:			
Disposal of subsidiaries	176,590	20,533	—
Other non-current assets	8,668	12,734	—
Other	3,768	6,853	—
Net cash provided (used) by investing activities	**165,910**	**(85,875)**	**(74,818)**
Cash flows from financing activities:			
Dividends paid	—	(20,642)	—
Payment for debt issuance costs	(15,117)	(4,905)	(16,765)
Repayment of hydro leases	(55,352)	—	—
Repayment of other financial liabilities	—	(33,096)	—
Proceeds from debt issuance	—	—	350,000
Increase (decrease) in bank borrowings:			
Borrowings	245,629	252,200	31,455
Payments	(329,501)	(106,514)	(453,948)
Proceeds from stock option exercises	—	240	180
Other amounts (paid) due to financing activities	(26,631)	(13,880)	(24,319)
Payments to acquire or redeem own shares	—	(20,100)	—
Net cash (used) provided by financing activities	**(180,972)**	**53,303**	**(113,397)**
Total net cash flows for the year	**(89,289)**	**41,205**	**(37,840)**
Beginning balance of cash and cash equivalents	216,647	184,472	196,982
Exchange differences on cash and cash equivalents in foreign currencies	(4,183)	(9,030)	25,330
Ending balance of cash and cash equivalents	**123,175**	**216,647**	**184,472**

Notes 1 to 30 are an integral part of the consolidated financial statements

Ferroglobe PLC and Subsidiaries

Notes to the Consolidated Financial Statements
December 31, 2019, 2018 and 2017
(U.S. Dollars in thousands, except share and per share data)

1. General information

Ferroglobe PLC and subsidiaries (the “Company” or “Ferroglobe”) is among the world’s largest producers of silicon metal and silicon-based alloys, important ingredients in a variety of industrial and consumer products. The Company’s customers include major silicone chemical, aluminum and steel manufacturers, auto companies and their suppliers, ductile iron foundries, manufacturers of photovoltaic solar cells and computer chips, and concrete producers. Additionally, the Company has been operating hydroelectric plants (hereinafter “energy business”) in Spain until August 30, 2019 and France.

Ferroglobe PLC (the “Parent Company” or “the Parent”) is a public limited company that was incorporated in the United Kingdom on February 5, 2015 (formerly named ‘Velonewco Limited’). The Parent’s registered office is 2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London (United Kingdom).

On December 23, 2015, Ferroglobe PLC consummated the acquisition (“Business Combination”) of Globe Specialty Metals, Inc. and subsidiaries (“GSM” or “Globe”) and Grupo FerroAtlántica, S.A.U. (“FerroAtlántica”).

Presentation of results of Spanish energy business

As described in Note 29 of these financial statements, on June 2, 2019 the Company entered into an agreement with Kehlen Industries Management, S.L., a wholly-owned subsidiary of TSSP Adjacent Opportunities Partners, L.P., for the sale of the entire share capital of FerroAtlántica, S.A.U ("FAU"), the owner and operator of the Group's hydro-electric assets in Galicia, Spain (the “Spanish Hydro-electric Business”) and its smelting facility at Cee-Dumbria and effectively sold at August 30, 2019. The Spanish Hydroelectric Business was classified as disposal group held for sale and accounted for as a discontinued operation in the second quarter of 2019. Accordingly, the results of Spanish energy business are presented as discontinuing operations for the year ended December 31, 2019 and the consolidated income statement for the prior years ended 2018 and 2017 have been restated to reclassify the results of the Company’s Spanish hydro-electric plants or assets within profit (loss) for the year from discontinued operations.

2. Organization and Subsidiaries

Ferroglobe has a diversified production base consisting of production facilities across the North America, Europe, South America, South Africa and Asia.

The subsidiaries of Ferroglobe as of December 31, 2019, classified by business activity, were as follows:

	Percentage of Ownership			
	Direct	Total	Line of Business	Registered
Alabama Sand and Gravel, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
Alden Resources, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Alden Sales Corporation, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
ARL Resources, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
ARL Services, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Core Metals Group Holdings, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Core Metals Group, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Gatliff Services, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Globe Metallurgical Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
Globe Metals Enterprises, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Alloys I, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Alloys II, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Enterprises Holdings, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Enterprises, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Sales, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
LF Resources, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
Metallurgical Process Materials, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Norchem, Inc.	—	100.0	Electrometallurgy - North America	Florida - USA
QSIP Canada ULC	—	100.0	Electrometallurgy - North America	Canada
Quebec Silicon General Partner	—	51.0	Electrometallurgy - North America	Canada
Quebec Silicon Limited Partnership	—	51.0	Electrometallurgy - North America	Canada
Tennessee Alloys Company, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
West Virginia Alloys, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
WVA Manufacturing, LLC	—	51.0	Electrometallurgy - North America	Delaware - USA
Cuarzos Industriales, S.A.U.	—	100.0	Electrometallurgy - Europe	A Coruña - Spain
Ferroatlántica del Cinca, S.L.	—	99.9	Electrometallurgy - Europe	Madrid - Spain
Ferroatlántica de Sabón, S.L.U. (1)	—	100.0	Electrometallurgy - Europe	Madrid - Spain
Ferroatlántica de Boo, S.L.U. (1)	—	100.0	Electrometallurgy - Europe	Madrid - Spain
Ferroglobe Mangan Norge AS	—	100.0	Electrometallurgy - Europe	Norway
Ferroglobe Manganese France SAS	—	100.0	Electrometallurgy - Europe	France
FerroPem, S.A.S.	—	100.0	Electrometallurgy - Europe	France
Ferrous Receivables DAC. (1)	—	100.0	Electrometallurgy - Europe	Ireland
Grupo FerroAtlántica, S.A.U	100	100.0	Electrometallurgy - Europe	Madrid - Spain
Islenska Kisilfelagio EHF (Icelandic Silicon Corp.)	—	20.1	Electrometallurgy - Europe	Ireland
Kintuck (France) SAS	—	100.0	Electrometallurgy - Europe	France
Kintuck AS	—	100.0	Electrometallurgy - Europe	Norway
Rocas, Arcillas y Minerales, S.A.	—	100.0	Electrometallurgy - Europe	A Coruña - Spain
Rebone Mining (Pty.), Ltd.	—	74.0	Electrometallurgy - South Africa	Polokwane - South Africa
Silicon Smelters (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	Polokwane - South Africa
Silicon Technology (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	South Africa
Thaba Chueu Mining (Pty.), Ltd.	—	74.0	Electrometallurgy - South Africa	Polokwane - South Africa
16 Front Street, LLC	—	100.0	Other segments	Delaware - USA
Actifs Solaires Bécancour, Inc	—	100.0	Other segments	Canada
Cuarzos Indus. de Venezuela (Cuarzoven), S.A.	—	100.0	Other segments	Venezuela
Emix, S.A.S.	—	100.0	Other segments	France
ECPI, Inc.	—	100.0	Other segments	Delaware - USA
Ferroatlántica de México, S.A. de C.V.	—	100.0	Other segments	Nueva León - Mexico
Ferroatlántica de Venezuela (FerroVen), S.A.	—	99.9	Other segments	Venezuela
Ferroatlántica Deutschland, GmbH	—	100.0	Other segments	Germany
Ferroatlántica do Brasil Mineraçao Ltda.	—	70.0	Other segments	Brazil
Ferroatlántica I+D, S.L.U.	—	100.0	Other segments	Madrid - Spain
Ferroatlántica Participaciones, S.L.U. (1)	—	100.0	Other segments	Madrid - Spain
FerroAtlántica International Ltd	—	100.0	Other segments	United Kingdom
Ferroglobe Services (UK) PLC	100	100.0	Other segments	United Kingdom
FerroManganese Mauritania SARL	—	90.0	Other segments	Mauritania
Ferroquartz Holdings, Ltd (Hong Kong)	—	100.0	Other segments	Hong Kong
FerroQuartz Mauritania SARL	—	90.0	Other segments	Mauritania
Ferrosolar OPCO Group SL.	—	100.0	Other segments	Spain
Ferrosolar R&D SL.	—	50.0	Other segments	Spain
FerroTambao, SARL	—	90.0	Other segments	Burkina Faso
GBG Financial LLC	—	100.0	Other segments	Delaware - USA
GBG Holdings, LLC	—	100.0	Other segments	Delaware - USA
Globe Argentina Holdco, LLC	—	100.0	Other segments	Delaware - USA
Globe BG, LLC	—	100.0	Other segments	Delaware - USA
Globe LSE, Inc.	—	100.0	Other segments	Delaware - USA
Globe Metales S.R.L.	—	100.0	Other segments	Argentina
Globe Metallurgical Carbon, LLC	—	100.0	Other segments	Delaware - USA
Globe Specialty Metals, Inc.	100	100.0	Other segments	Delaware - USA
Grupo FerroAtlántica de Servicios, S.L.U. (1)	—	100.0	Other segments	Madrid - Spain
GSM Financial, Inc.	—	100.0	Other segments	Delaware - USA
GSM Netherlands, BV	—	100.0	Other segments	Netherlands
Hidroelectricité de Saint Beron, S.A.S (1)	—	100.0	Other segments	France
Laurel Ford Resources, Inc.	—	100.0	Other segments	Delaware - USA
Mangshi FerroAtlántica Mining Indus. Serv. Ltd	—	100.0	Other segments	Mangshi, Dehong -Yunnan -China
Mangshi Sinice Silicon Industry Company Limited	—	100.0	Other segments	Mangshi, Dehong -Yunnan -China
MST Financial Holdings, LLC	—	100.0	Other segments	Delaware - USA
MST Financial, LLC	—	100.0	Other segments	Delaware - USA
MST Resources, LLC	—	100.0	Other segments	Delaware - USA
Ningxia Yonvey Coal Industrial Co., Ltd.	—	98.0	Other segments	China
Photosil Industries, SAS	—	100.0	Other segments	France
Silicio Ferrosolar, SLU	—	100.0	Other segments	Spain
Solsil, Inc.	—	92.4	Other segments	Delaware - USA
Ultracore Energy SA	—	100.0	Other segments	Argentina

(1) Entered into the scope of consolidation during 2019.

Subsidiaries are all companies over which Ferroglobe has control.

Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power over the investee to affect the amount of the investor's returns.

The Company has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the total voting rights held by the Company relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time these decisions need to be made, including voting patterns at previous shareholders' meetings.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary.

The Company uses the acquisition method to account for the acquisition of subsidiaries. According to this method, the consideration transferred for the acquisition of a subsidiary corresponds to the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Company. The consideration transferred also includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Any contingent consideration transferred by the Company is recognized at fair value at the date of acquisition. Subsequent changes in the fair value of the contingent consideration classified as an asset or a liability are recognized in accordance with IAS 39 either in the income statement or in the statement of comprehensive (loss) income. The costs related to the acquisition are recognized as expenses in the years incurred. The identifiable assets acquired and the liabilities and contingent liabilities assumed in a business combination are initially recognized at their fair value at the date of acquisition. The Company recognizes any non-controlling interest in the acquiree at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

Profit or loss for the period and each component of other comprehensive (loss) income are attributed to the owners of the Company and to the non-controlling interests. The Company attributes total comprehensive (loss) income to the owners of the Company and to the non-controlling interests even if the profit or loss of the non-controlling interests gives rise to a balance receivable.

All assets and liabilities, equity, income, expenses and cash flows relating to transactions between subsidiaries are eliminated in full in consolidation.

3. Basis of presentation and basis of consolidation

3.1 Basis of presentation

These consolidated financial statements have been issued in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and interpretations issued by the International Financial Reporting Interpretations Committee (collectively "IFRS").

The consolidated financial statements have been authorized for issuance on May 29, 2020.

All accounting policies and measurement bases with effect on the consolidated financial statements were applied in their preparation.

The consolidated financial statements were prepared on a historical cost basis, with the exceptions disclosed in the notes to the consolidated financial statements, where applicable, and in those situations where IFRS requires that financial assets and financial liabilities are valued at fair value.

The accompanying consolidated financial statements for the year ended December 31, 2019 have been prepared on a going concern basis, which contemplates the realization of assets and settlement of liabilities in the normal course of business. In connection with the preparation of our consolidated financial statements, we conducted an evaluation as to whether there were conditions and events, considered in the aggregate, which raised substantial doubt as to the entity's ability to continue as a going concern within one year after the date of the issuance of our consolidated financial statements. As of December 31, 2019, as reflected in our consolidated financial statements, the Company had cash and cash equivalents of $123.2 million, of which $28.3 is restricted. The Company had an operating loss of $355.6 million and a net loss of $285.6 million for the year ended December 31, 2019.

Our business has historically been subject to fluctuations in the prices of our products and the market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. During the second half of 2018 and throughout 2019, we experienced the most dramatic decline in prevailing prices of our products, which adversely affected our results. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. Prior to the uncertainties described in this note management assessed that the Company had adequate financial resources, albeit with limited cash headroom, to operate as a going concern in the forthcoming twelve months. Management continue to closely monitor operating cash flows, and are pursuing additional sources of financing to increase liquidity to fund operations. At this time, however, additional financing has not been secured.

In early 2020, the outbreak of coronavirus disease ("COVID-19") in China spread to other jurisdictions, including locations where the Company conducts business. As of the date of the issuance of the consolidated financial statements, the COVID-19 outbreak has not yet had a material effect on the Company's liquidity or financial position. Management continue to monitor the impact that the COVID-19 pandemic is having on the Company, the specialty chemical industry and the economies in which the Company operates. Given the speed and frequency of continuously evolving developments with respect to this pandemic and the uncertainties this may bring for the Company and the demand for its products it is difficult to forecast the level of trading activities and hence cash flow in the next twelve months. Management have developed an impact assessment to stress test and assess potential responses to a downside scenario. The assessment involves application of key assumptions around market demand and prices, including the extent of the decrease that might be experienced in summer 2020 and the subsequent timing and level of recovery. Additionally, judgment is required around the level and extent of mitigating actions such as reductions in operating costs and capital expenditure. Developing a reliable estimate of the potential impact on the results of operations and cash flow at this time is difficult as markets and industries react to the pandemic and the measures implemented in response to it, but the downside scenario analysis supports an expectation that the Company will have cash headroom to continue to operate throughout the following twelve months. The key assumption underlying this assessment is a recovery in forecast trading activity in the latter part of 2020.

Additionally, as discussed in Note 27, the Indenture governing the Notes includes provisions which, in the event of a change of control, would require the Company to offer to redeem the outstanding senior Notes at a cash purchase price equal to 101% of the principal amount of the Notes, plus any accrued and unpaid interest. GVM currently owns approximately 54% of the Company's voting stock, and a significant majority of GVM's shares in the Company are pledged as collateral for GVM's obligations to certain of its lenders. A change of control may occur if a person other than a Permitted Holder (as defined in Note 27) were to acquire 35% or more of the Company's outstanding shares at a time when the Permitted Holders held an equal or lesser percentage. While GVM maintains its current shareholding, a change of control cannot occur. Based on the provisions cited above, a change of control as defined in the Indenture is unlikely to occur but the matter it is beyond the Company's control. If a change of control were to occur, the company may not have sufficient financial resources available to satisfy all of its obligations.

Management acknowledges that the material uncertainties, previously described, the most significant in value terms being the potential repayment of the outstanding balance of the Senior Notes should there be a change of control, raise substantial doubt as to the ability of the Company to continue as a going concern for a period of twelve months following the date our consolidated financial statements are issued. Nevertheless, as described above, management believes that the Group has adequate resources to continue in operational existence for the foreseeable future. The consolidated financial statements do not include any adjustments that might be necessary if the Company is unable to continue as going concern.

3.2 International financial reporting standards

Application of new accounting standards

New and amended standards and interpretations adopted by the Company

Standards, interpretations and amendments effective from January 1, 2019, applied by the Company in the preparation of these consolidated financial statements:

- IFRS 9 (Amendment) 'Financial Instruments'
- IFRS 16 'Leases'
- IAS 19 (Amendment) ' Employee Benefits'
- IAS 28 (Amendment) 'Interests in Associates and Joint Ventures'
- IFRIC Interpretation 23 'Uncertainty over Income Tax Treatments'
- Annual improvements cycle to IFRS 2015-2017

The impacts of applying IFRS 16 for the first time is discussed further below. The applications of the other amendments and interpretations above did not have an impact on the consolidated financial statements of the Company. The Company has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

Adoption of IFRS 16 – Leases

IFRS 16 Leases replaces the existing standard on accounting for leases, IAS 17, and the related interpretations. The Company applied the standard from its mandatory adoption date of January 1, 2019 and transitioned to the standard in accordance with the modified retrospective approach; the prior year figures have not been adjusted. The Company elected the practical expedient in paragraph IFRS 16:C3 that permits an entity not to reassess

whether a contract is, or contains, a lease at the date of initial application. IFRS 16 has had the following effect on components of the consolidated financial statements:

	January 1, 2019 US$'000
Operating lease obligations at December 31, 2018	31,263
Minimum lease payments on finance lease liabilities at December 31, 2018	74,918
Gross lease liabilities at January 1, 2019	**106,181**
Discounting	9,238
Lease liabilities at January 1, 2019	**96,943**
Present value of finance lease liabilities at December 31, 2018	66,471
Additional lease liabilities as a result of the initial application of IFRS 16 as at January 1, 2019	**30,472**

	2019 US$'000
Balance at December 31, 2018	(66,471)
Adoption of IFRS 16	(30,472)
Additions	(4,858)
Disposals and other	163
Interest	(1,972)
Lease payments	75,807
Exchange differences	1,931
Balance at December 31, 2019	**(25,872)**

On January 1, 2019, on adoption of IFRS 16, lease liabilities were discounted at the weighted average borrowing rate. The weighted average discount rate was 5.5% for the year ended December 31, 2019.

Leases are presented as follows in the Statement of financial position:

	2019 US$'000
Non-current assets	
Leased land and buildings	13,298
Leased plant and machinery	24,025
Accumulated depreciation	(12,386)
Non-current liabilities	
Lease liabilities	(16,972)
Current liabilities	
Lease liabilities	(8,900)

Leases are presented as follows in the Consolidated income statement:

	2019 US$'000
Depreciation and amortization charges, operating allowances and write-downs	
Depreciation of right of use assets	15,098
Finance costs	
Interest expense on lease liabilities	1,972
Exchange differences	
Currency translation gains on lease liabilities	1,931
Currency translation losses on right of use assets	(2,686)

Leases are presented as follows in the Statement of cash flows:

	2019 US$'000
Payments for:	
Principal	73,835
Interest	1,972

New and amended standards and interpretations not yet adopted

Certain new accounting standards and interpretations have been published that are not mandatory for the reporting period ended December 31, 2019 and have not been early adopted by the Company. Standards, interpretations and amendments published by the IASB that will be effective for periods beginning on or after January 1, 2020:

- IFRS 17 ‘Insurance Contracts’
- IFRS 3 (Amendment) ‘Definition of Business’
- IAS 1 and IAS 8 (Amendment) ‘Definition of Material’
- IAS 1 (Amendment) ‘Classification of liabilities’
- IFRS 7 and IFRS 9. Amendments regarding pre-replacement issues in the context of the IBOR reform
- Amendments to References to the Conceptual Frameworks in IFRS Standards

None of these standards or interpretations that are not yet effective are expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

3.3 Currency

The Parent’s functional currency is the Euro. The functional currencies of subsidiaries are determined by the primary economic environment in which each subsidiary operates.

The reporting currency of the Company is U.S. Dollars and as such the accompanying results and financial position have been translated pursuant to the provisions indicated in IAS 21.

All differences arising from the aforementioned translation are recognized in equity under “Translation differences.”

Upon the disposal of a foreign operation, the translation differences relating to that operation deferred as a separate component of consolidated equity are recognized in the consolidated income statement when the gain or loss on disposal is recognized.

3.4 Responsibility for the information and use of estimates

The information in these consolidated financial statements is the responsibility of Ferroglobe’s management.

Certain assumptions and estimates were made by management in the preparation of these consolidated financial statements, including:

- The impairment losses on certain assets, including property, plant and equipment and goodwill.
- The useful life of property, plant and equipment and intangible assets.
- The fair value of certain unquoted financial assets.
- The assumptions used in the actuarial calculation of pension liabilities.
- The discount rate used to calculate the present value of certain collection rights and payment obligations.
- Provisions for contingencies and environmental liabilities.
- The calculation of income tax and of deferred tax assets and liabilities.

The Company based its estimates and judgments on historical experience, known or expected trends and other factors that are believed to be reasonable under the circumstances. Actual results may differ materially from these estimates. Changes in accounting estimates are applied in accordance with IAS 8.

At the date of preparation of these consolidated financial statements no events had taken place that might constitute a significant source of uncertainty regarding the accounting effect that such events might have in future reporting periods.

3.5 Basis of consolidation

The financial statements of the subsidiaries are fully consolidated with those of the Parent. Accordingly, all balances and effects of the transactions between consolidated companies are eliminated in consolidation.

Non-controlling interests are presented in “Equity – Non-controlling interests” in the consolidated statement of financial position, separately from the consolidated equity attributable to the Parent. The share of non-controlling interests in the profit or loss for the year is presented under “Loss attributable to non-controlling interests” in the consolidated income statement.

When necessary, adjustments are made to the financial statements of subsidiaries to align the accounting policies used to the accounting policies of the Company.

4. Accounting policies

The principal IFRS accounting policies applied in preparing these consolidated financial statements were in effect at the date of preparation are described below.

4.1 Goodwill

Goodwill arising on consolidation represents the excess of the cost of acquisition over the Company's interest in the fair value of the identifiable assets and liabilities of a subsidiary at the date of acquisition.

Any excess of the cost of the investments in the consolidated companies over the corresponding underlying carrying amounts acquired, adjusted at the date of first-time consolidation, is allocated as follows:

1. If it is attributable to specific assets and liabilities of the companies acquired, increasing the value of the assets (or reducing the value of the liabilities) whose market values were higher (lower) than the carrying amounts at which they had been recognized in their balance sheets and whose accounting treatment was similar to that of the same assets (liabilities) of the Company amortization, accrual, etc.

2. If it is attributable to specific intangible assets, recognizing it explicitly in the consolidated statement of financial position provided that the fair value at the date of acquisition can be measured reliably.

3. The remaining amount is recognized as goodwill, which is allocated to one or more specific cash-generating units.

Goodwill is only recognized when it has been acquired for consideration and represents, therefore, a payment made by the acquirer for future economic benefits from assets of the acquired company that are not capable of being individually identified and separately recognized.

On disposal of a subsidiary, the attributable amount of goodwill is included in the determination of the gain or loss on disposal.

4.2 Other intangible assets

Other intangible assets are assets without physical substance which can be individually identified either because they are separable or because they arise as a result of a legal or contractual right or of a legal transaction or were developed by the consolidated companies. Only intangible assets whose value can be measured reliably and from which the Company expects to obtain future economic benefits are recognized in the consolidated statement of financial position.

Intangible assets are recognized initially at acquisition or production cost. The aforementioned cost is amortized systematically over each asset's useful life. At each reporting date, these assets are measured at acquisition cost less accumulated amortization and any accumulated impairment losses, if any. The Company reviews amortization periods and amortization methods for finite-lived intangible assets at the end of each fiscal year.

The Company's main intangible assets are as follows:

Development expenditures

Development expenditures are capitalized if they meet the requirements of identifiability, reliability in cost measurement and high probability that the assets created will generate economic benefits. Developmental expenditures are amortized on a straight-line basis over the useful lives of the assets, which are between four and ten years.

Expenditures on research activities are recognized as expenses in the years in which they are incurred.

Power supply agreements

Power supply agreements are amortized on a straight-line basis over the term in which the agreement is effective.

Rights of use

Rights of use granted are amortized on a straight-line basis over the term in which the right of use was granted from the date it is considered that use commenced. Rights of use are generally amortized over a period ranging from 10 to 20 years.

Computer software

Computer software includes the costs incurred in acquiring or developing computer software, including the related installation. Computer software is amortized on a straight-line basis over two to five years.

Computer system maintenance costs are recognized as expenses in the years in which they are incurred.

Other intangible assets

Other intangible assets include:

- Supply agreements which are amortized in accordance with their estimated useful lives (see Note 8).
- CO_2 emissions allowances ("rights held emit greenhouse gasses") which are not amortized, but rather are expensed when used (see Note 4.21).

4.3 Property, plant and equipment

Cost

Property, plant and equipment for our own use are initially recognized at acquisition or production cost and are subsequently measured at acquisition or production cost less accumulated depreciation and any accumulated impairment losses.

When the construction and start-up of non-current assets require a substantial period of time, the borrowing costs incurred over that period are capitalized. In 2019, 2018 and 2017 no material borrowing cost were capitalized.

The costs of expansion, modernization or improvements leading to increased productivity, capacity or efficiency or to a lengthening of the useful lives of the assets are capitalized. Repair, upkeep and maintenance expenses are recognized in the consolidated income statement for the year in which they are incurred.

Mineral reserves are recorded at fair value at the date of acquisition. Depletion of mineral reserves is computed using the units-of-production method utilizing only proven and probable reserves (as adjusted for recoverability factors) in the depletion base.

Property, plant and equipment in the course of construction are transferred to property, plant and equipment in use at the end of the related development period.

Depreciation

The Company depreciates property, plant and equipment using the straight-line method at annual rates based on the following years of estimated useful life:

	Years of Estimated Useful Life
Properties for own use	25-50
Plant and machinery	8-20
Tools	12.5-15
Furniture and fixtures	10-15
Computer hardware	4-8
Transport equipment	10-15

Land included within property, plant and equipment is considered to be an asset with an indefinite useful life and, as such, is not depreciated, but rather it is tested for impairment annually. The Company reviews residual value, useful lives, and the depreciation method for property, plant and equipment annually.

Environment

The costs arising from the activities aimed at protecting and improving the environment are accounted for as an expense for the year in which they are incurred. When they represent additions to property, plant and equipment aimed at minimizing the environmental impact and protecting and enhancing the environment, they are capitalized to non-current assets.

4.4 Impairment of property, plant and equipment, intangible assets and goodwill

In order to ascertain whether its assets have become impaired, the Company compares their carrying amount with their recoverable amount at the end of the reporting period, or more frequently if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of:

- Fair value: the price that would be agreed upon by two independent parties, less estimated costs to sell, and
- Value in use: the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset (or cash-generating unit) is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under “Impairment losses” in the consolidated income statement.

Where an impairment loss subsequently reverses (not permitted in the case of goodwill), the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recognized as “Other income” in the consolidated income statement.

The basis for depreciation is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

4.5 Financial instruments

Financial assets and financial liabilities are recognized in the Company's statement of financial position when the Company becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

The Company has elected to apply the limited exemption in IFRS 9 relating to classification, measurement and impairment requirements for financial instruments, and accordingly comparative periods have not been restated and remain in line with the previous standard IAS 39 "Financial Instruments: Recognition and Measurement."

Financial assets

From January 1, 2018, the Company classifies its financial assets into the following categories: those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss) and those to be measured at amortized cost. The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

Financial assets measured at amortized cost

Financial assets are classified as measured at amortized cost when they are held in a business model whose objective is to collect contractual cash flows and the contractual terms of the financial asset give rise on specific dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Such assets are carried at amortized cost using the effective interest method if the time value of money is significant. Gains and losses are recognized in profit or loss when the assets are derecognized or impaired and when interest is recognized using the effective interest method. This category of financial assets includes trade receivables, receivables from related parties and cash and cash equivalents.

Financial assets measured at fair value through other comprehensive income

Debt instruments are classified as measured at fair value through other comprehensive income when they are held in a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets, and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. All movements in the fair value of these financial assets are taken through other comprehensive income, except for the recognition of impairment gains or losses, interest income calculated using the effective interest method and foreign exchange gains and losses. When the financial asset is derecognized, the cumulative fair value gain or loss previously recognized in other comprehensive income is reclassified to the income statement.

Equity instruments are classified as measured at fair value through other comprehensive income if, on initial recognition, the Company makes an irrevocable election to designate the instrument as at fair value through other comprehensive income. The election is made on an instrument-by-instrument basis and is not permitted if the equity investment is held for trading. Fair value gains or losses on revaluation of such equity investments are recognized in other comprehensive income and accumulated in the valuation adjustments reserve. When the equity investment is derecognized, there is no reclassification of fair value gains or losses previously recognized

in other comprehensive income to the income statement. Dividends are recognized in the income statement when the right to receive payment is established.

Financial assets measured at fair value through profit or loss

Financial assets are classified as measured at fair value through profit or loss when the asset does not meet the criteria to be measured at amortized cost or at fair value through other comprehensive income. Such assets are carried on the balance sheet at fair value with gains or losses recognized in the income statement. This category includes loans associated with the Company's accounts receivable securitization program and certain equity investments in listed companies.

Derecognition of financial assets

The Company derecognizes a financial asset when:

- the rights to receive cash flows from the asset have expired; or
- the Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss.

If the Company retains substantially all of the risks and rewards of ownership of a transferred financial asset, the Company continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

Impairment of financial assets

The expected credit loss model is applied for recognition and measurement of impairments in financial assets measured at amortized cost and debt instruments held at fair value through other comprehensive income. The loss allowance for the financial asset is measured at an amount equal to the 12-month expected credit losses. If the credit risk on the financial asset has increased significantly since initial recognition, the loss allowance for the financial asset is measured at an amount equal to the lifetime expected credit losses. Changes in loss allowances are recognized in profit and loss. For trade receivables, a simplified impairment approach is applied recognizing expected lifetime losses from initial recognition. For this purpose, the Company has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

The Company writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are over two years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Company's recovery procedures, considering legal advice where appropriate. Any recoveries made are recognized in profit or loss.

Financial liabilities

The subsequent measurement of financial liabilities depends on their classification, as described below:

Financial liabilities measured at fair value through profit or loss

Financial liabilities that meet the definition of held for trading are classified as measured at fair value through profit or loss. Such liabilities are carried on the balance sheet at fair value with gains or losses recognized in the income statement. This category includes contingent consideration and derivatives, other than those designated as hedging instruments in an effective hedge.

Derivatives designated as hedging instruments in an effective hedge

These derivatives are carried on the balance sheet at fair value. The treatment of gains and losses arising from revaluation is described below in the accounting policy for derivative financial instruments and hedging activities.

Financial liabilities measured at amortized cost

This is the category most relevant to the Company and comprises all other financial liabilities, including bank borrowings, debt instruments, financial loans from government agencies, payables to related parties and trade and other payables.

After initial recognition, other financial liabilities are subsequently measured at amortized cost using the effective interest method. Amortized cost is calculated by considering any issue costs and any discount or premium on settlement.

Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss. When the Company exchanges with the existing lender one debt instrument into another one with substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Company accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective rate is at least 10 per cent different from the discounted present value of the remaining cash flows of the original financial liability. If the modification is not substantial, the difference between the carrying amount of the liability before the modification and the present value of the cash flows after modification are recognized in profit or loss as a modification gain or loss.

4.6 Derivative financial instruments and hedging activities

In order to mitigate the economic effects of exchange rate and interest rate fluctuations to which it is exposed as a result of its business activities, the Company uses derivative financial instruments, such as cross currency swaps and interest rate swaps.

The Company's derivative financial instruments are set out in Note 19 to these consolidated financial statements and the Company's financial risk management policies are set out in Note 27.

Derivatives are initially recognized at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each balance sheet date. The resulting gain or loss is recognized in

profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition of profit or loss depends on the nature of the hedge relationship. The gain or loss recognized in respect of derivatives that are not designated and effective as a hedging instrument is recognized in the consolidated income statement in the line item financial derivative gain (loss).

A derivative with a positive fair value is recognized as a financial asset within the line item other financial assets whereas a derivative with a negative fair value is recognized as a financial liability within the line item other financial liabilities. A derivative is presented as a non-current asset or non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months.

Hedge accounting

The Company designates certain derivatives as cash flow hedges. For further details, see Note 19 of the consolidated financial statements.

At the inception of the hedge relationship, the Company documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking the hedge transaction. Furthermore, at the inception of the hedge and on an ongoing basis, the Company documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to any ineffective portion is recognized immediately in profit or loss and is included in the financial derivative gain (loss) line item.

Amounts previously recognized in other comprehensive income and accumulated in equity in the valuation adjustments reserve are reclassified to profit or loss in the periods when the hedged item is recognized in profit or loss, in the same line of the income statement as the recognized hedged item.

Hedge accounting is discontinued when the Company revokes the hedging relationship, the hedging instrument expires or is sold, terminated, or exercised, or no longer qualifies for hedge accounting. Any gain or loss recognized in other comprehensive income at that time is accumulated in equity and is recognized when the forecast transaction is ultimately recognized in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

4.7 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either: in the principal market for the asset or liability; or in the absence of a principal market, in the most advantageous market for the asset or liability.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

The Company uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities.
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable.
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For those assets and liabilities measured at fair value at the balance sheet date, further information on fair value measurement is provided in Note 28.

4.8 Inventories

Inventories comprise assets (goods) which:

- Are held for sale in the ordinary course of business (finished goods); or
- Are in the process of production for such sale (work in progress); or
- Will be consumed in the production process or in the rendering of services (raw materials and spare parts).

Inventories are stated at the lower of acquisition or production cost and net realizable value. The cost of each inventory item is generally calculated as follows:

- Raw materials, spare parts and other consumables and replacement parts: the lower of weighted average acquisition cost and net realizable value.
- Work in progress, finished goods and semi-finished goods: the lower of production cost (which includes the cost of materials, labor costs, direct and indirect manufacturing expenses) or net realizable value in the market.

Obsolete, defective or slow-moving inventories have been reduced to net realizable value.

Net realizable value is the estimated selling price less all the estimated costs of selling and distribution.

The amount of any write-down of inventories (as a result of damage, obsolescence or decrease in the selling price) to their net realizable value and all losses of inventories are recognized as expenses in the year in which the write-down or loss occurs. Any subsequent reversals are recognized as income in the year in which they arise.

The consumption of inventories is recognized as an expense in “Cost of sales” in the consolidated income statement in the period in which the revenue from their sale is recognized.

4.9 Biological assets

The Company recognizes biological assets when:

- It controls the asset as a result of past events;
- It is probable that future economic benefits associated with the asset will flow to the entity; and
- The fair value or cost of the asset can be measured reliably.

Biological assets are measured at fair value less estimated costs to sell.

The gains or losses arising on the initial recognition of a biological asset at fair value less costs to sell are included in the consolidated income statement for the period in which they arise.

4.10 Cash and cash equivalents

The Company classifies under “Cash and cash equivalents” any liquid financial assets, such as for example cash on hand and at banks, deposits and liquid investments, that can be converted into cash within three months and are subject to an insignificant risk of changes in value.

4.11 Restricted cash and cash equivalents

The Company classifies under “restricted cash and cash equivalents” any liquid financial assets, which meet the definition of cash and cash equivalents but the use is resticted by financial agreements.

4.12 Provisions and contingencies

When preparing the consolidated financial statements, the Parent’s directors made a distinction between:

- Provisions: present obligations, either legal, contractual, constructive or assumed by the Company, arising from past events, the settlement of which is expected to give rise to an outflow of economic benefits the amount or timing of which are uncertain; and

- Contingent liabilities: possible obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company, or present obligations arising from past events the amount of which cannot be estimated reliably or whose settlement is not likely to give rise to an outflow of economic benefits.

- Contingent assets: possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

The consolidated financial statements include all the material provisions with respect to which it is considered that it is probable that the obligation will have to be settled. Contingent liabilities are not recognized in the consolidated financial statements, but rather are disclosed, as required by IAS 37 (see Note 24).

Provisions are classified as current or non-current based on the estimated period of time in which the obligations covered by them will have to be met. They are recognized when the liability or obligation giving rise to the indemnity or payment arises, to the extent that its amount can be estimated reliably.

“Provisions” includes the provisions for pension and similar obligations assumed; provisions for contingencies and charges, such as for example those of an environmental nature and those arising from litigation in progress or from outstanding indemnity payments or obligations, and collateral and other similar guarantees provided by the Company; and provisions for medium- and long- term employee incentives.

Contingent assets are not recognized, but are disclosed where an inflow of economic benefits is probable. If it has become virtually certain that an inflow of economic benefits will arise, the asset and the related income are recognized in the financial statements in the period in which the change occurs.

Defined contribution plans

Certain employees have defined contribution plans which conform to the Spanish Pension Plans and Funds Law. The main features of these plans are as follows:

- They are mixed plans covering the benefits for retirement, disability and death of the participants.
- The sponsor undertakes to make monthly contributions of certain percentages of current employees' salaries to external pension funds.

The annual cost of these plans is recognized under Staff costs in the consolidated income statement.

Defined benefit plans

IAS 19, Employee Benefits requires defined benefit plans to be accounted for:

- Using actuarial techniques to make a reliable estimate of the amount of benefits that employees have earned in return for their service in the current and prior periods.
- Discounting those benefits in order to determine the present value of the obligation.
- Determining the fair value of any plan assets.
- Determining the total amount of actuarial gains and losses and the amount of those actuarial gains and losses that must be recognized.

The amount recognized as a benefit liability arising from a defined benefit plan is the total net sum of:

- The present value of the obligations.
- Minus the fair value of plan assets (if any) out of which the obligations are to be settled directly.

The Company recognizes provisions for these benefits as the related rights vest and on the basis of actuarial studies. These amounts are recognized under "Provisions" in the consolidated statement of financial position, on the basis of their expected due payment dates. All plan assets are separately from the rest of the Company's assets.

Environmental provisions

Provisions for environmental obligations are estimated by analyzing each case separately and observing the relevant legal provisions. The best possible estimate is made on the basis of the information available and a provision is recognized provided that the aforementioned information suggests that it is probable that the loss or expense will arise and it can be estimated in a sufficiently reliable manner.

The balance of provisions and disclosures disclosed in Notes 15 and 24 reflects management's best estimation of the potential exposure as of the date of preparation of these financial statements.

4.13 Leases

As a lessee, the Company assesses if a contract is or contains a lease at inception of the contract. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company recognizes a right-of-use asset and a lease liability at the commencement date.

The lease liability is initially measured at the present value of the minimum future lease payments, discounted using the interest rate implicit in the lease, or, if not readily determinable, the incremental borrowing rate. Lease payments include fixed payments, variable payments, as well as any extension or purchase options, if the Company is reasonably certain to exercise these options. The lease liability is subsequently measured at amortized cost using the effective interest method and remeasured with a corresponding adjustment to the related right-of-use asset when there is a change in future lease payments.

The right-of-use asset comprises, at inception, the initial lease liability, any initial direct costs and, when applicable, the obligations to refurbish the asset, less any incentives granted by the lessors. The right-of-use asset is subsequently depreciated, on a straight-line basis, over the lease term or, if the lease transfers the ownership of the underlying asset to the Company at the end of the lease term or, if the cost of the right-of-use asset reflects that the lessee will exercise a purchase option, over the estimated useful life of the underlying asset. Right-of-use assets are also subject to testing for impairment if there is an indicator for impairment.

Variable lease payments not included in the measurement of the lease liabilities are expensed to the consolidated statement of operations in the period in which the events or conditions which trigger those payments occur.

In the statement of financial position, right-of-use assets and lease liabilities are classified, respectively, as part of property, plant and equipment and current and non-current lease liabilities.

4.14 Current assets and liabilities

In general, assets and liabilities are classified as current or non-current based on the Company's operating cycle. However, in view of the diverse nature of the activities carried on by the Company, in which the duration of the operating cycle differs from one activity to the next, in general assets and liabilities expected to be settled or fall due within twelve months from the end of the reporting period are classified as current items and those which fall due or will be settled within more than twelve months are classified as non-current items.

4.15 Income taxes

Income tax expense represents the sum of current tax and deferred tax. Income tax is recognized in the income statement except to the extent that it relates to items recognized in other comprehensive income or directly in equity, in which case the related tax is recognized in other comprehensive income or directly in equity.

The current income tax expense is based on domestic and international statutory income tax rates in the tax jurisdictions where the Company operates related to taxable profit for the period. The taxable profit differs from net profit as reported in the income statement because it is determined in accordance with the rules established by the applicable taxation authorities which includes temporary differences, permanent differences, and available credits and incentives.

The Company's deferred tax assets and liabilities are provided on temporary differences at the balance sheet date between financial reporting and the tax basis of assets and liabilities, then applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. Deferred tax assets are recognized for deductible temporary differences, carry-forward of unused tax credits and losses, to the extent that it is probably that taxable profit will be available against which the deductible temporary difference and carryforwards of unused tax credits and losses can be utilized. The deferred tax assets and liabilities that have been recognized are reassessed at the end of each reporting period in order to ascertain whether they still exist, and adjustments are made on the basis of the findings of the analyses performed.

Income tax payable is the result of applying the applicable tax rate in force to each tax-paying entity, in accordance with the tax laws in force in the country in which the entity is registered. Additionally, tax deductions and credits

are available to certain entities, primarily relating to inter-company trades and tax treaties between various countries to prevent double taxation.

Income tax expense is recognized in the consolidated income statement, except to the extent that it arises from a transaction which is recognized directly to “consolidated equity”, in which case the tax is recognized directly to “consolidated equity.”

Deferred tax assets and liabilities are offset only when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority or either the same taxable entity or different taxable entities where there is an intention to settle the current tax assets and liabilities on a net basis or to realize the assets and settle the liabilities simultaneously.

4.16 Foreign currency transactions

Foreign currency transactions are initially recognized in the functional currency of the subsidiary by applying the exchange rates prevailing at the date of the transaction.

Subsequently, at each reporting date, monetary assets and liabilities denominated in foreign currencies are translated to euros at the rates prevailing on that date.

Any exchange differences arising on settlement or translation at the closing rates of monetary items are recognized in the consolidated income statement for the year.

Note 4.6 details the Company’s accounting policies for these derivative financial instruments. Also, Note 27 to these consolidated financial statements details the financial risk policies of Ferroglobe.

4.17 Revenue recognition

The Company recognizes sales revenue related to the transfer of promised goods or services when control of the goods or services passes to the customer. The amount of revenue recognized reflects the consideration to which the Company is or expects to be entitled in exchange for those goods or services.

In the Company’s electrometallurgy business, revenue is principally generated from the sale of goods, including silicon metal and silicon- and manganese-based specialty alloys. The Company mainly satisfies its performance obligations at a point in time; the amounts of revenue recognized relating to performance obligations satisfied over time are not significant. The point in time at which control is transferred to the buyer is determined based on the agreed delivery terms, which follow Incoterms 2010 issued by International Chamber of Commerce.

In most instances, control passes and sales revenue is recognized when the product is delivered to the vessel or vehicle on which it will be transported, the destination port or the customer’s premises. There may be circumstances when judgment is required based on the five indicators of control below.

- The customer has the significant risks and rewards of ownership and has the ability to direct the use of, and obtain substantially all of the remaining benefits from, the goods or service.
- The customer has a present obligation to pay in accordance with the terms of the sales contract.
- The customer has accepted the asset. Sales revenue may be subject to adjustment if the product specification does not conform to the terms specified in the sales contract, but this does not impact the passing of control. Specification adjustments have been immaterial historically.

- The customer has legal title to the asset. The Company may retain legal title until payment is received but this is for credit risk purposes only.

- The customer has physical possession of the asset. This indicator may be less important as the customer may obtain control of an asset prior to obtaining physical possession, which may be the case for goods in transit.

Where the Company sells on ‘C’ terms (e.g., CIF, CIP, CFR and CPT), the Company is responsible (acts as principal) for providing shipping services and, in some instances, insurance after the date at which control of goods passes to the customer at the loading point. The Company therefore has separate performance obligations for freight and insurance services that are provided solely to facilitate sale of the commodities it produces. Revenue attributable to freight and insurance services is not usually material.

Where the Company sells on ‘D’ terms (e.g., DDP, DAP and DAT), the Company arranges and pays for the carriage and retains the risk of the goods until delivery at an agreed destination, where ownership and control is transferred.

Where the Company sells on ‘F’ terms (e.g., FCA and FOB), the customer arranges and pays for the main transportation. Risk and control are transferred to the customer when the goods are handed to the carrier engaged by the customer.

The Company’s products are sold to customers under contracts which vary in tenure and pricing mechanisms. The majority of pricing terms are either fixed or index-based for monthly, quarterly or annual periods, with a smaller proportion of volumes being sold on the spot market.

Within each sales contract, each unit of product shipped is a separate performance obligation. Revenue is generally recognized at the contracted price as this reflects the stand-alone selling price. Sales revenue excludes any applicable sales taxes.

Physical exchanges with counterparties in the same line of business in order to facilitate sales to customers are reported net, as are sales and purchases made with a common counterparty, as part of an arrangement similar to a physical exchange.

Revenue from the energy business is based on the power generated and put on the market at regulated prices and is recognized when the energy produced is transferred to the power network.

Interest income is recognized as the interest accrues using the effective interest rate, the rate that exactly discounts estimated future cash receipts through the expected life of the financial instrument to the net carrying amount of the financial asset.

Dividend income from investments is recognized when the shareholders’ right to receive the payment is established.

4.18 Expense recognition

Expenses are recognized on an accrual basis, i.e. when the actual flow of the related goods and services occurs, regardless of when the resulting monetary or financial flow arises.

An expense is recognized in the consolidated income statement when there is a decrease in the future economic benefits related to a reduction of an asset, or an increase in a liability, which can be measured reliably. This means that an expense is recognized simultaneously with the recognition of the increase in a liability or the reduction of an asset. Additionally, an expense is recognized immediately in the consolidated income statement when a disbursement does not give rise to future economic benefits or when the requirements for recognition as an asset

are not met. Also, an expense is recognized when a liability is incurred and no asset is recognized, as in the case of a liability relating to a guarantee.

4.19 Grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. When the grant relates to an asset, it is recognized as income in equal amounts over the expected useful life of the related asset.

4.20 Termination benefits

Under current labour legislation, the Company is required to pay termination benefits to employees whose employment relationship is terminated under certain conditions. The payments for termination benefits, when they arise, are charged as an expense when the decision to terminate the employment relationship is taken.

4.21 CO2 emission allowances

CO_2 emission allowances are measured at cost of acquisition. Allowances acquired free of charge under governmental schemes are initially measured at market value at the date received. At the same time, a grant is recognized for the same amount under “deferred income.”

Emissions allowances are not amortized, but rather are expensed when used.

At year end, the Company assesses whether the carrying amount of the allowances exceeds their market value in order to determine whether there are indicators of impairment. If there are such indicators, the Company determines whether these allowances will be used in the production process or earmarked for sale, in which case the necessary impairment losses would be recognized. Provisions are released when the factors leading to the valuation adjustment have ceased to exist.

A provision for liabilities and charges is recognized for expenses related to the emission of greenhouse gases. This provision is maintained until the company is required to settle the liability by surrendering the corresponding emission allowances. These expenses are accrued as greenhouse gases are emitted.

When an expense is recognized for allowances acquired free of charge, the corresponding “deferred income” is taken to operating income. The Company derecognizes allowances surrendered at their carrying amount and recognizes those received at their fair value when received. The difference between both values is recognized as “deferred income.”

4.22 Share-based compensation

The Company recognizes share-based compensation expense based on the estimated grant date fair value of share-based awards using a Black-Scholes option pricing model. Prior to vesting, cumulative compensation cost equals the proportionate amount of the award earned to date. The Company has elected to treat each award as a single award and recognize compensation cost on a straight-line basis over the requisite service period of the entire award. If the terms of an award are modified in a manner that affects both the fair value and vesting of the award, the total amount of remaining unrecognized compensation cost (based on the grant-date fair value) and the incremental fair value of the modified award are recognized over the amended vesting period.

4.23 Assets and disposal groups classified as held for sale, liabilities associated with assets held for sale and discontinued operations

Assets and disposal groups classified as held for sale include the carrying amount of individual items, disposal groups or items forming part of a business unit earmarked for disposal (discontinued operations), whose sale in their present condition is highly likely to be completed within one year from the reporting date. Therefore, the carrying amount of these items, which may or may not be of a financial nature, will likely be recovered through the proceeds from their disposal.

Liabilities associated with non-current assets held for sale include the balances payable arising from the assets held for sale or disposal groups and from discontinued operations.

Assets and disposal groups classified as held for sale are measured at the lower of fair value less costs to sell and their carrying amount at the date of classification in this category. Non-current assets held for sale are not depreciated as long as they remain in this category.

4.24 Consolidated statement of cash flows

The following terms are used in the consolidated statement of cash flows, prepared using the indirect method, with the meanings specified as follows:

1. Cash flows: inflows and outflows of cash and cash equivalents, which are short-term, highly liquid investments that are subject to an insignificant risk of changes in value.
2. Operating activities: activities constituting the object of the subsidiaries forming part of the consolidated Company and other activities that are not investing or financing activities.
3. Investing activities: the acquisition and disposal of long-term assets and other investments not included in cash and cash equivalents.
4. Financing activities: activities that result in changes in the size and composition of the equity and borrowings of the Company that are not operating or investing activities.

5. Business Combinations

Business combinations are accounted for using the acquisition method. The identifiable assets acquired and liabilities assumed are recognized at their fair values at the acquisition date. Acquisition costs are recognized in profit or loss as incurred.

Goodwill is initially measured as the excess of the aggregate of the consideration transferred, the amount recognized for any non-controlling interest and the acquisition-date fair values of any previously held interest in the acquiree over the fair value of the identifiable assets acquired and liabilities assumed at the acquisition date. If, after reassessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the excess is recognized immediately in profit or loss as a bargain purchase gain.

When the consideration transferred by the Company in a business combination includes an asset or liability resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination.

Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is remeasured at subsequent reporting dates at fair value with the corresponding gain or loss being recognized in profit or loss. Changes in fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the ‘measurement period’ (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

On February 1, 2018 the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG (“Glencore”) and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France SAS. The Company completed the acquisition through its wholly-owned subsidiary Ferroatlántica.

Simultaneously with the acquisition, Glencore and Ferroglobe have entered into exclusive agency arrangements for the marketing of Ferroglobe’s manganese alloys worldwide and the procurement of manganese ores to supply Ferroglobe’s plants, in both cases for a period of ten years.

The business combination was recorded during the year ended December, 31, 2018 following IFRS 3 Business Combinations, with identifiable assets acquired and liabilities assumed provisionally recorded at their estimated fair values on the acquisition date while costs associated with the acquisition are expensed as incurred. The Company utilized the services of third-party valuation consultants, along with internal estimates and assumptions, to estimate the initial fair value of the assets acquired. The third-party valuation consultants utilized several appraisal methodologies including market and cost approaches to estimate the fair value of the identifiable net assets acquired.

The following is an estimate of the fair value of assets acquired and the liabilities assumed by Ferroglobe reconciled to the value of the acquisition consideration.

	Balances US$'000
ASSETS	
Non-current assets	
Other intangible assets	45
Property, plant and equipment	62,487
Other non-current financial assets	50
Total non-current assets acquired	**62,582**
Current assets	
Inventories	21,314
Trade and other receivables	24,785
Other current assets	1,397
Cash and cash equivalents	29,530
Total current assets acquired	**77,026**
Total assets acquired	**139,608**
LIABILITIES	
Non-current liabilities	
Deferred tax liabilities	90
Total non-current liabilities assumed	**90**
Current liabilities	
Trade and other payables	18,048
Provisions	735
Current income tax liabilities	396
Other current liabilities	4,066
Total current liabilities assumed	**23,245**
Total liabilities assumed	**23,335**
Net assets acquired	**116,273**
Satisfied by:	
Cash	49,909
Contingent consideration	26,222
Total consideration transferred	**76,131**
Gain on bargain purchase	**40,142**
Net cash outflow arising on acquisition	
Cash consideration	49,909
Less: cash and cash equivalent balances acquired	(29,530)
	20,379

The gain on bargain purchase was primarily attributable to the fact that the production of manganese alloys was considered an ancillary business to the seller, coupled with previous weaker manganese alloy pricing in the marketplace. The gain is recorded in the caption ‘Bargain purchase gain’ in the consolidated income statement.

The fair value of Trade and other receivables includes trade receivables with a fair value of $11,900 thousand. There is no difference between the gross contractual value and fair value.

The fair value of the contingent consideration arrangement of $26,222 thousand was estimated by applying the income approach based on a Monte Carlo simulation considering various scenarios of fluctuation of future manganese alloy

spreads as well at the cyclicality of manganese alloy pricing. Contingent consideration is presented in Other liabilities and is assessed in each subsequent reporting period (see Note 21).

Ferroglobe Mangan Norge and Ferroglobe Manganèse France contributed $112,445 thousand and $117,852 thousand respectively to the Company's revenue, and incurred losses of $10,148 thousand and $10,436 thousand respectively for the period between the date of acquisition and December 31, 2018.

If the acquisition of Ferroglobe Mangan Norge and Ferroglobe Manganèse France had been completed on the first day of the financial year, Company revenues for the period would have been $2,289,931 thousand and Company profit would have been $45,007 thousand.

6. Segment reporting

Operating segments are based upon the Company's management reporting structure. The Company's operating segments are primarily at a country level as this is how the Chief Operating Decision Maker (CODM) assesses performance and makes decisions about resource allocation. This is due to the integrated operations within each country and the ability to reallocate production based on the individual capacity of each plant. Additionally, economic factors that may impact our results of operations, such as currency fluctuations and energy costs, are also assessed at a country level.

The Company's North America reportable segment is the result of the aggregation of the operating segments of the United States and Canada. These operating segments have been aggregated as they have similar long-term economic characteristics and there is similarity of competitive and operating risks and the political environment in the United States and Canada. The Company's Europe reportable segment is the result of the aggregation of the operating segments of Spain, France and Norway. Similar to our United States and Canada operating segments, our Spain, France and Norway operating segments are grouped together based on the relative similarity of the EBITDA margins, competitive risks, currency risks (i.e. risks relating to the Euro), operating risks and, given they are each part of the European Union and the European Economic Community, the political and economic environment.

The consolidated income statements at December 31, 2019, 2018 and 2017, by reportable segment, are as follows:

	2019					
	Electrometallurgy - North America US$'000	**Electrometallurgy - Europe US$'000**	**Electrometallurgy - South Africa US$'000**	**Other segments US$'000**	**Adjustments/ Eliminations (**) US$'000**	**Total US$'000**
Sales	551,500	1,049,576	136,292	43,147	(165,293)	**1,615,222**
Cost of sales	(366,711)	(868,654)	(108,823)	(35,923)	165,714	**(1,214,397)**
Other operating income	10,418	47,672	1,323	19,413	(24,613)	**54,213**
Staff costs	(87,954)	(145,712)	(20,333)	(31,030)	—	**(285,029)**
Other operating expense	(60,105)	(142,929)	(19,457)	(27,406)	24,192	**(225,705)**
Depreciation and amortization charges, operating allowances and write-downs	(72,251)	(39,844)	(6,459)	(1,640)	—	**(120,194)**
Impairment losses	(174,013)	(465)	—	(1,421)	—	**(175,899)**
Net loss due to changes in the value of assets	—	—	(530)	(1,044)	—	**(1,574)**
(Loss) gain on disposal of non-current assets	(1,601)	180	—	(802)	—	**(2,223)**
Bargain purchase gain	—	—	—	—	—	**—**
Operating (loss) profit	**(200,717)**	**(100,176)**	**(17,987)**	**(36,706)**	**—**	**(355,586)**
Finance income	529	9,220	156	14,483	(23,008)	**1,380**
Finance costs	(3,914)	(22,547)	(4,507)	(55,265)	23,008	**(63,225)**
Financial derivative gain	—	—	—	2,729	—	**2,729**
Exchange differences	(407)	3,139	(1,179)	1,331	—	**2,884**
(Loss) Profit before tax	**(204,509)**	**(110,364)**	**(23,517)**	**(73,428)**	**—**	**(411,818)**
Income tax (expense) benefit	8,520	22,470	7,761	2,790	—	**41,541**
(Loss) profit for the year from continuing operations	**(195,989)**	**(87,894)**	**(15,756)**	**(70,638)**	**—**	**(370,277)**
Profit for the year from discontinued operations	—	3,280	—	81,357	—	84,637
(Loss) profit for the year	**(195,989)**	**(84,614)**	**(15,756)**	**10,719**	**—**	**(285,640)**
Loss (profit) attributable to non-controlling interests	5,123	—	(368)	284	—	**5,039**
(Loss) profit attributable to the Parent	**(190,866)**	**(84,614)**	**(16,124)**	**11,003**	**—**	**(280,601)**

	2018(*)					
	Electrometallurgy - North America US$'000	**Electrometallurgy - Europe US$'000**	**Electrometallurgy - South Africa US$'000**	**Other segments US$'000**	**Adjustments/ Eliminations (**) US$'000**	**Total US$'000**
Sales	710,716	1,447,973	208,543	62,075	(187,305)	**2,242,002**
Cost of sales	(394,044)	(1,059,474)	(137,177)	(43,194)	187,212	**(1,446,677)**
Other operating income	4,943	39,817	3,420	16,666	(19,002)	**45,844**
Staff costs	(115,555)	(177,047)	(23,735)	(22,525)	—	**(338,862)**
Other operating expense	(77,670)	(146,143)	(26,353)	(46,489)	19,095	**(277,560)**
Depreciation and amortization charges, operating allowances and write-downs	(69,009)	(34,974)	(5,526)	(4,328)	—	**(113,837)**
Impairment losses	—	—	—	(58,919)	—	**(58,919)**
Net loss due to changes in the value of assets	—	(7)	(7,616)	—	—	**(7,623)**
(Loss) gain on disposal of non-current assets	(208)	(8,369)	(261)	23,402	—	**14,564**
Bargain purchase gain	—	40,142	—	—	—	**40,142**
Operating profit (loss)	**59,173**	**101,918**	**11,295**	**(73,312)**	**—**	**99,074**
Finance income	804	11,035	199	32,040	(39,220)	**4,858**
Finance costs	(4,109)	(40,831)	(5,298)	(46,048)	39,220	**(57,066)**
Financial derivative gain	—	—	—	2,838	—	**2,838**
Exchange differences	(1,194)	(10,561)	2,284	(4,665)	—	**(14,136)**
Profit (loss) before tax	**54,674**	**61,561**	**8,480**	**(89,147)**	**—**	**35,568**
Income tax (expense) benefit	4,949	(15,048)	(3,582)	(6,778)	—	**(20,459)**
Profit (loss) for the year from continuing operations	**59,623**	**46,513**	**4,898**	**(95,925)**	**—**	**15,109**
Profit for the year from discontinued operations	**—**	**—**	**—**	**9,464**	**—**	**9,464**
Profit (loss) for the year	**59,623**	**46,513**	**4,898**	**(86,461)**	**—**	**24,573**
Loss (profit) attributable to non-controlling interests	4,785	(332)	358	14,277	—	**19,088**
Profit (loss) attributable to the Parent	**64,408**	**46,181**	**5,256**	**(72,184)**	**—**	**43,661**

	2017(*)					
	Electrometallurgy - North America US$'000	**Electrometallurgy - Europe US$'000**	**Electrometallurgy - South Africa US$'000**	**Other segments US$'000**	**Adjustments/ Eliminations (**) US$'000**	**Total US$'000**
Sales	541,143	1,083,200	122,504	50,782	(65,353)	**1,732,276**
Cost of sales	(303,096)	(690,589)	(81,744)	(33,496)	65,650	**(1,043,275)**
Other operating income	2,701	12,681	2,868	15,520	(15,670)	**18,100**
Staff costs	(90,802)	(147,595)	(23,495)	(37,923)	(220)	**(300,035)**
Other operating expense	(68,537)	(107,130)	(24,462)	(50,428)	16,158	**(234,399)**
Depreciation and amortization charges, operating allowances and write-downs	(66,789)	(27,404)	(5,788)	(430)	9	**(100,402)**
Impairment losses	(30,618)	—	—	(1,007)	(16)	**(31,641)**
Net gain due to changes in the value of assets	—	—	7,222	—	282	**7,504**
Gain (loss) on disposal of non-current assets	(3,718)	301	(138)	(818)	57	**(4,316)**
Bargain purchase gain						
Other (loss) gain	—	(13,604)	—	(2,625)	13,616	**(2,613)**
Operating (loss) profit	**(19,716)**	**109,860**	**(3,033)**	**(60,425)**	**14,513**	**41,199**
Finance income	448	6,733	404	189,962	(195,138)	**2,409**
Finance costs	(4,567)	(40,106)	(7,361)	(43,043)	35,108	**(59,969)**
Financial derivative loss	—	—	—	(6,850)	—	**(6,850)**
Exchange differences	(191)	5,938	(1,197)	3,730	(66)	**8,214**
(Loss) profit before tax	**(24,026)**	**82,425**	**(11,187)**	**83,374**	**(145,583)**	**(14,997)**
Income tax benefit (expense)	29,386	(26,031)	2,068	9,096	(294)	**14,225**
Profit (loss) for the year from continuing operations	**5,360**	**56,394**	**(9,119)**	**92,470**	**(145,877)**	**(772)**
(Loss) profit for the year from discontinued operations	**—**	**—**	**—**	(5,050)	**—**	**(5,050)**
Profit (loss) for the year	**5,360**	**56,394**	**(9,119)**	**87,420**	**(145,877)**	**(5,822)**
Loss (profit) attributable to non-controlling interests	4,734	(370)	(147)	951	(24)	5,144
(Loss) profit attributable to the Parent	**10,094**	**56,024**	**(9,266)**	**88,371**	**(145,901)**	**(678)**

(*) The consolidated Income Statements for the periods ended December 31, 2018 and 2017 have been restated to reclassify the results of the Spanish energy assets within profit (loss) for the year from discontinued operations.as part of the Other segments, as described in Note 1 to the consolidated financial statements.

(**) The amounts correspond to transactions between segments that are eliminated in the consolidation process.

The consolidated statements of financial position at December 31, 2019 and 2018, by reportable segment are as follows:

	2019					
	Electrometallurgy - North America US$'000	Electrometallurgy - Europe US$'000	Electrometallurgy - South Africa US$'000	Other segments US$'000	Consolidation Adjustments/ Eliminations (*) US$'000	Total US$'000
Goodwill	29,702	—	—	—	—	**29,702**
Other intangible assets	18,504	30,248	1,322	1,193	—	**51,267**
Property, plant and equipment	419,695	216,809	53,650	50,752	—	**740,906**
Inventories	91,619	215,509	32,886	14,107	—	**354,121**
Trade and other receivables (**)	427,871	504,294	47,755	764,532	(1,430,186)	**314,266**
Cash, restricted cash and cash equivalents	25,194	65,216	3,321	29,444	—	**123,175**
Other	11,932	60,619	14,921	33,444	—	**120,916**
Total assets	**1,024,517**	**1,092,695**	**153,855**	**893,472**	**(1,430,186)**	**1,734,353**
Equity	459,637	307,131	43,466	(207,937)	—	**602,297**
Provisions	31,220	85,167	7,108	7,448	—	**130,943**
Bank borrowings	—	100,070	—	58,929	—	**158,999**
Obligations under finance leases	6,473	18,128	14	1,257	—	**25,872**
Debt instruments	—	—	—	354,951	—	**354,951**
Other financial liabilities	—	454	—	66,085	—	**66,539**
Trade and other payables (***)	464,592	520,937	86,837	587,552	(1,465,859)	**194,059**
Other	62,595	60,808	16,430	25,187	35,673	**200,693**
Total equity and liabilities	**1,024,517**	**1,092,695**	**153,855**	**893,472**	**(1,430,186)**	**1,734,353**

	2018					
	Electrometallurgy - North America US$'000	Electrometallurgy - Europe US$'000	Electrometallurgy - South Africa US$'000	Other segments US$'000	Consolidation Adjustments/ Eliminations (*) US$'000	Total US$'000
Goodwill	202,848	—	—	—	—	**202,848**
Other intangible assets	22,798	26,476	1,292	1,256	—	**51,822**
Property, plant and equipment	467,616	219,520	56,679	145,047	—	**888,862**
Inventories	113,673	288,669	35,944	18,684	—	**456,970**
Trade and other receivables (**)	267,974	274,291	50,665	834,515	(1,254,935)	**172,510**
Cash, restricted cash and cash equivalents	76,791	110,523	19,483	9,850	—	**216,647**
Other	15,341	85,905	8,692	24,220	—	**134,158**
Total assets	**1,167,041**	**1,005,384**	**172,755**	**1,033,572**	**(1,254,935)**	**2,123,817**
Equity	646,851	206,781	58,294	(27,554)	—	**884,372**
Provisions	29,644	71,163	7,889	7,661	—	**116,357**
Bank borrowings	—	6,914	—	134,098	—	**141,012**
Obligations under finance leases	1,466	—	—	65,005	—	**66,471**
Debt instruments	—	—	—	352,594	—	**352,594**
Other financial liabilities	—	3,841	—	81,471	—	**85,312**
Trade and other payables (***)	414,022	662,667	93,970	379,468	(1,282,176)	**267,951**
Other	75,058	54,018	12,602	40,829	27,241	**209,748**
Total equity and liabilities	**1,167,041**	**1,005,384**	**172,755**	**1,033,572**	**(1,254,935)**	**2,123,817**

(*) These amounts correspond to balances between segments that are eliminated at consolidation.
(**) Trade and other receivables includes non-current and current receivables from group that eliminated in the consolidated process.
(***) Trade and other payables includes non-current and current payables from group that are eliminated in the consolidated process.

Other disclosures

Sales by product line

Sales by product line are as follows:

	2019 US$'000	2018 US$'000	2017 US$'000
Silicon metal	539,872	933,366	739,618
Manganese-based alloys	447,311	527,757	363,644
Ferrosilicon	275,368	359,374	266,862
Other silicon-based alloys	181,736	215,697	188,183
Silica fume	33,540	37,061	36,338
Energy	—	12,149	7,244
Other	137,395	156,598	130,387
Total	**1,615,222**	**2,242,002**	**1,732,276**

Information about major customers

Total sales of $643,689 thousand, $758,894 thousand, and $820,987 thousand were attributable to the Company's top ten customers in 2019, 2018, and 2017 respectively. During 2019 and 2018, there was no single customer representing greater than 10% of the Company's sales. During 2017, sales corresponding to Dow Corning Corporation represented 12.2% of the Company's sales, respectively. Sales to Dow Corning Corporation are included partially in the Electrometallurgy - North America segment and partially in the Electrometallurgy - Europe segment.

7. Goodwill

Changes in the carrying amount of goodwill during the years ended December 31, are as follows:

	January 1, 2018 US$'000	Impairment (Note 25.5) US$'000	Exchange differences US$'000	December 31, 2018 US$'000	Impairment (Note 25.5) US$'000	Exchange differences US$'000	December 31, 2019 US$'000
Globe Specialty Metals, Inc.	205,287	—	(2,439)	202,848	(174,008)	862	29,702
Total	**205,287**	**—**	**(2,439)**	**202,848**	**(174,008)**	**862**	**29,702**

In accordance with the requirements of IAS 36, goodwill is tested for impairment annually and is tested for impairment between annual tests if a triggering event occurs that would indicate the carrying amount of a cash-generating unit may be impaired. Impairment testing for goodwill is done at a cash-generating unit level, and the Company performs its annual impairment test at the end of the annual reporting period (December 31). The estimate of the recoverable value of the cash-generating units requires significant judgment in evaluation of overall market conditions, estimated future cash flows, discount rates and other factors, and are calculated based on management's business plans.

On December 23, 2015, Ferroglobe PLC consummated the acquisition of 100% of the equity interests of Globe Specialty Metals, Inc. (GSM) and subsidiaries and FerroAtlántica. This Business Combination was accounted for using the acquisition method of accounting for business combinations under IFRS 3 Business Combinations, with FerroAtlántica treated as the accounting acquirer and GSM as the acquiree. The aggregate of the fair values as of the closing date of the Business Combination of the assets acquired and liabilities assumed was recorded as goodwill.

During the year ended December 31, 2019, the Company recognized an impairment charge of $174,008 thousand related to the complete impairment of goodwill in Canada and partial impairment of goodwill in the United States, resulting from a decline in future estimated projections and increase of the discount rate which caused the Company

to revise its expected future cash flows from its Canadian and United States business operations. The impairment charge is recorded within the Electrometallurgy – North America reportable segment.

During the year ended December 31, 2018, in connection with our annual goodwill impairment test, the Company did not recognize an impairment charge.

Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis. Recoverable value was estimated based on discounted cash flows. Estimates under the Company's discounted income based approach involve numerous variables including anticipated sales price and volumes, cost structure, discount rates and long term growth that are subject to change as business conditions change, and therefore could impact fair values in the future. As of December 31, 2019, the remaining goodwill for the U.S and Canadian cash-generating units is $29,702 thousand and nil, respectively.

Key assumptions used in the determination of recoverable value

In determining the asset recoverability through value in use, management makes estimates, judgments and assumptions on uncertain matters. For each cash-generating unit, the value in use is determined based on economic assumptions and forecasted operating conditions as follows:

	2019		2018	
	U.S.	Canada	U.S.	Canada
Weighted average cost of capital	11.1 %	11.5 %	11.0 %	10.5 %
Long-term growth rate	2.0 %	2.0 %	2.0 %	2.0 %
Normalized tax rate	21.0 %	26.6 %	22.0 %	26.5 %

The Company has defined a financial model which considers the revenues, expenditures, cash flows, net tax payments and capital expenditures on a five year period (2020-2024), and perpetuity beyond this tranche. The financial projections to determine the net present value of future cash flows are modeled considering the principal variables that determine the historic flows of each group of cash-generating unit.

Sensitivity to changes in assumptions

Changing management's assumptions, could significantly affect the evaluation of the value in use of our cash generating units and, therefore, the impairment result. As of December 31, 2019, there is $5,266 thousand headroom between the carrying value of goodwill and the recoverable value of the U.S cash-generating unit. The following changes to the assumptions used in the impairment test lead to the following changes in recoverable value:

			Sensitivity on discount rate		Sensitivity on long-term growth rate		Sensitivity on cash flows	
	Goodwill	Excess of recoverable value over carrying value	Decrease by 10%	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%	Increase by 10%
			(in millions of US$)					
Electrometallurgy - U.S.	29.7	5.3	44.1	(35.0)	(4.5)	4.5	(62.0)	62.0
Total	**29.7**							

8. Other intangible assets

Changes in the carrying amount of other intangible assets during the years ended December 31 are as follows:

	Development Expenditure US$'000	Power Supply Agreements US$'000	Rights of Use US$'000	Computer Software US$'000	Other Intangible Assets US$'000	Accumulated Depreciation (Note 25.3) US$'000	Impairment (Note 25.5) US$'000	Total US$'000
Balance at January 1, 2018	**50,482**	**37,836**	**23,039**	**6,047**	**24,263**	**(72,751)**	**(10,258)**	**58,658**
Additions	992	—	—	—	26,385	(9,312)	(16,073)	1,992
Disposals	—	—	—	(64)	(7,260)	—	—	(7,324)
Business combinations (Note 5)	—	—	—	45	—	—	—	45
Transfers from/(to) other accounts	1,919	—	—	—	(1,919)	—	—	—
Exchange differences	(2,408)	—	(648)	(101)	(1,656)	2,546	718	(1,549)
Balance at December 31, 2018	**50,985**	**37,836**	**22,391**	**5,927**	**39,813**	**(79,517)**	**(25,613)**	**51,822**
Additions	870	—	—	—	22,842	(7,305)	(211)	16,196
Disposals	(553)	—	(5,595)	(780)	(8,295)	3,845	5,281	(6,097)
Exchange differences	(976)	—	(263)	2	(142)	694	468	(217)
Business disposal	—	—	—	—	(11,548)	—	1,111	(10,437)
Balance at December 31, 2019	**50,326**	**37,836**	**16,533**	**5,149**	**42,670**	**(82,283)**	**(18,964)**	**51,267**

Additions and disposals in other intangible asset in 2019 and 2018 primarily relate to the acquisition, use and expiration of rights held to emit greenhouse gasses by certain Spanish, French and Canadian subsidiaries (see Note 4.21).

As a result of the Business Combination, the Company acquired a power supply agreement which provides favorable below-market power rates to the Alloy, West Virginia facility, which terminates in December 2021.

During 2019 the Company disposed of FerroAtlántica, S.A.U., which resulted in a net reduction of other intangible assets of $10,437 thousand, the net gain on the disposal of FerroAtlántica, S.A.U. is disclosed in Note 29. During 2018 the Company recognised an impairment of $13,947 thousand of development expenditures in relation to our solar-grade silicon metal project based in Puertollano, Spain. Refer to Note 9 for further details.

At December 31, 2019, the Company has no intangible assets pledged as security for outstanding bank loans and other payables. At December 31, 2018 the company has other intangible assets of $26,948 thousands pledged as security for outstanding bank loans and other payables.

9. Property, plant and equipment

The detail of property, plant and equipment, net of the related accumulated depreciation and impairment in 2019 and 2018 is as follows:

	Land and Buildings US$'000	Plant and Machinery US$'000	Other Fixtures, Tools and Furniture US$'000	Advances and Property, Plant and Equipment in the Course of Construction US$'000	Mineral Reserves US$'000	Other Items of Property, Plant and Equipment US$'000	Other Items of Leased Land and Buildings US$'000	Other Items of Leased Plant and machinery US$'000	Accumulated Depreciation (Note 25.3) US$'000	Impairment (Note 25.5) US$'000	Total US$'000
Balance at January 1, 2018	**251,298**	**1,490,804**	**8,533**	**128,584**	**60,359**	**32,364**	**—**	**—**	**(936,325)**	**(117,643)**	**917,974**
Additions	2,983	9,104	12	99,016	—	4,293	—	—	(104,532)	(42,846)	(31,970)
Disposals and other	(4,687)	(34,612)	(1,084)	(2,657)	—	(587)	—	—	35,921	—	(7,706)
Transfers from/(to) other accounts	24,823	69,439	4,850	(97,086)	—	222	—	—	(2,248)	—	—
Exchange differences	(10,743)	(74,554)	(405)	(5,941)	(951)	(383)	—	—	48,455	3,292	(41,230)
Business combinations (Note 5)	6,846	53,337	82	1,790	—	432	—	—	—	—	62,487
Business disposals	(35,211)	(26,471)	(43)	(342)	—	—	—	—	56,674	—	(5,393)
Discounted operations	—	—	—	—	—	—	—	—	(5,300)	—	(5,300)
Balance at December 31, 2018	**235,309**	**1,487,047**	**11,945**	**123,364**	**59,408**	**36,341**	**—**	**—**	**(907,355)**	**(157,197)**	**888,862**
IFRS 16 Adjustments at 1 January 2019	**—**	**—**	**—**	**—**	**—**	**—**	12,417	18,055	(9,703)	**—**	20,769
Additions	74	1,409	32	34,039	—	—	777	3,089	(103,121)	(1,224)	(64,925)
Disposals and other	(13,160)	(78,774)	(3,399)	(7,426)	—	(2,195)	—	—	48,560	48,775	(7,619)
Transfers from/(to) other accounts	408	38,445	220	(39,073)	—	—	—	—	—	—	—
Exchange differences	(2,822)	(8,908)	36	(1,881)	94	317	104	189	9,091	2,000	(1,780)
Business disposals	(23,223)	(165,382)	(15)	(2,372)	—	—	—	—	96,591	—	(94,401)
Balance at December 31, 2019	**196,586**	**1,273,837**	**8,819**	**106,651**	**59,502**	**34,463**	**13,298**	**21,333**	**(865,937)**	**(107,646)**	**740,906**

Additions in the captions leased Land and Building and Leased Plant and Machinery represents the adoption of IFRS 16 from January 1, 2019, see Note 3.

During 2019 the Company disposed of FerroAtlántica, S.A.U. and Ultracore Polska Zoo, which resulted in a net reduction of property, plant and equipment of $94,401 thousand. The net gain on the disposal of FerroAtlántica, S.A.U. is disclosed in Note 29 and the net loss on disposal of Ultracore Polska ZOO is included in Note 25.6.

During 2019 the Company liquidated Ganzi Ferroatlántica Silicon Industry Company, Ltd. and started the process of liquidation of Mangshi Sinice Silicon Industry Company Limited, which resulted in the reduction of impairment of $48,775 thousand.

Business combinations in 2018 relates to the assets acquired as part of the acquisition of the Glencore plants in France and Norway, see Note 5.

During 2018 the Company disposed of Hidro Nitro Española S.A. which resulted in a net reduction of property, plant and equipment of $5,393 thousand. The net gain on the disposal of the business is disclosed in Note 25.6.

During 2018 the Company recognised an impairment of $40,537 thousand in Impairment losses (Electrometallurgy – Other segment) in relation to our solar-grade silicon metal project based in Puertollano, Spain. At the end of 2018 the Company has decided to temporarily suspend investment in the project due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. The Company is preserving the technology and know-how in order to be able to finalize the construction of the factory as soon as market circumstances change. As of December 31, 2019, the Company continues to recognize these project assets as $40,590 thousand based on the higher of fair value less costs of disposal and value in use. Fair value less costs of disposal related to land and buildings was determined based on recent sales of comparable industrial properties located near the project. Fair value less costs of disposal related to machinery and equipment was determined by assessing the recoverability of the assets to a market participant. In 2019 the valuation of these assets has been reassessed and no changes in the impairment recorded were needed.

As at December 31, 2019 the Company tested property, plant and equipment for impairment, estimating the recoverable value of the cash-generating units requires significant judgment in evaluation of overall market conditions, estimated future cash flows, discount rates and other factors, based on management's business plans. Recoverable values were estimated by determining the value in use for all assets, with the exception of our solar-grade silicon metal project based in Puertollano, Spain, and our silicon metal plant in Polokwane, South Africa for which the recoverable value was determined by independent valuation experts. No impairment for property, plant and equipment was recognized during the year ended December 31, 2019.

At December 31, 2019, the Company has no property, plant and equipment pledged as security for outstanding bank loans and other payables. At December 31, 2018, the Company has property, plant and equipment of $514,625 thousands pledged as security for outstanding bank loans.

Finance leases

Finance leases held by the Company included in Plant and Machinery at December 31 are as follows:

	Life (Years)	Time Elapsed (Years)	Historical Cost EUR €'000	Cost US $'000	Accumulated Depreciation US $'000	Carrying Amount US $'000	Interest Payable US $'000	Lease Payments Outstanding US $'000
December 31, 2018 Hydro-electrical installations	10	6.6	109,047	124,859	(82,940)	41,918	—	65,005

The leases of the Hydroelectrical installation have been canceled before the sale of FAU.

Commitments

At December 31, 2019 and 2018, the Company has capital expenditure commitments totaling $15,635 thousand and $26,935 thousand, respectively, primarily related to maintenance and improvement works at plants.

10. Financial assets and other receivables

The company's financial assets and their classification under IFRS 9 are as follows:

	Note	2019 classification			
		Amortised cost	Fair value through profit or loss - mandatorily measured	Fair value through other comprehensive income - designated	Total
		US$'000	US$'000	US$'000	US$'000
Other financial assets	10.1	2,618	5,544	—	8,162
Receivables from related parties	23	5,202	—	—	5,202
Trade receivables	10.2	232,479	—	—	232,479
Other receivables	10.2	10,889	—	—	10,889
Cash and cash equivalents		94,852	—	—	94,852
Restricted cash		28,323	—	—	28,323
Total financial assets		**374,363**	**5,544**	**—**	**379,907**

	Note	2018 classification			
		Amortised cost	Fair value through profit or loss - mandatorily measured	Fair value through other comprehensive income - designated	Total
		US$'000	US$'000	US$'000	US$'000
Other financial assets	10.1	3,264	69,602	—	72,866
Receivables from related parties	23	16,514	—	—	16,514
Trade receivables	10.2	70,755	—	—	70,755
Other receivables	10.2	7,784	—	—	7,784
Cash and cash equivalents		216,647	—	—	216,647
Total financial assets		**314,964**	**69,602**	**—**	**384,566**

a. As of year ended December 31, 2019, Cash and cash equivalents and restricted cash comprise the following:

	2019 US$'000	2018 US$'000
Cash and cash equivalents	**94,852**	**216,647**
Current restricted cash presented as Cash	**28,323**	—
Escrow: Hydro-electric assets sale	5,617	—
ABL	22,500	—
Others	206	—
Total	**123,175**	**216,647**

The escrow was constituted in August 30, 2019, in consideration of FAU sale; under agreement terms, the Purchaser and the Seller deposited in a restricted bank account a part of the share purchase price, guaranteeing any compensation

to the purchaser for any claim under the contract. In relation to the ABL Restricted cash, the amount constituted is fixed by agreement as liquidity covenants, see “Note 16”.

10.1 Other financial assets

At December 31, 2019, other financial assets comprise the following:

	2019		
	Non-Current US$'000	Current US$'000	Total US$'000
Other financial assets held with third parties:			
Other financial assets at amortised cost	2,618	—	2,618
Listed equity securities	—	5,544	5,544
Total	**2,618**	**5,544**	**8,162**

Listed equity securities comprises investments held by Globe Argentina Metales in Pampa Energía.

At December 31, 2018, other financial assets comprise the following:

	2018		
	Non-Current US$'000	Current US$'000	Total US$'000
Other financial assets held with third parties:			
Other financial assets at amortised cost	3,264	—	3,264
Listed equity securities	—	2,523	2,523
Debt investments at fair value through profit or loss	67,079	—	67,079
Total	**70,343**	**2,523**	**72,866**

Debt instruments at fair value through profit or loss comprise an investment in subordinated loan notes issued by a special purpose entity that has purchased accounts receivable from the Company pursuant to a securitization program (see ‘Securitization of trade receivables’ below). There is no equivalent amount at December 31, 2019 as the Irish SPE (see‘Securitization of trade receivables’) is now consolidated and the investment in subordinated loan notes were eliminated on consolidation.

Securitization of trade receivables

On July 31, 2017, the Company entered into an accounts receivable securitization program (the “Program”) where trade receivables generated by the Company’s subsidiaries in the United States, Canada, Spain and France were sold to Ferrous Receivables DAC, a special purpose entity domiciled and incorporated in Ireland (the “SPE”). As sales of the Company’s products to customers occurred, eligible trade receivables were sold to the SPE at an agreed upon purchase price. Part of the consideration was received upfront in cash and part was deferred in the form of senior subordinated and junior subordinated loans notes issued by the SPE to the selling entities.

The SPE purchased the receivables at a slight discount to invoice value in order to pay certain expenses and fees related to the receivables including the costs of servicing the portfolio, the costs servicing the debt incurred to fund the purchase and any administrative costs. This discount was sized to adequately to cover any and all expenses required of the SPE.

At December 31, 2018, up to $303,000 thousand of upfront cash consideration could be provided by the SPE under the Program, financed by ING Bank N.V. (“ING”), as senior lender and Finacity Capital Management Inc. (“Finacity”), as intermediate subordinated lender and control party. In respect of trade receivables outstanding at December 31, 2018, the SPE provided upfront cash consideration of approximately $227,360 thousand.

On October 11, 2019, the Company's subsidiaries in the United States and Canada repurchased all outstanding receivables that had they had previously sold to the SPE so that they could form part of the borrowing base for the North American asset-based revolving credit facility (the "ABL Revolver").

During 2019, following certain termination events under the Program, ING's senior loan commitments were reduced to $75,000 thousand and the Company and ING agreed the Program would terminate during the fourth quarter of 2019, unless otherwise refinanced.

On December 10, 2019, the Company refinanced the Program and amended and restated its terms. The SPE repaid the remaining senior loans to ING with the proceeds of new senior loans issued by an affiliate of Sound Point Capital Management LP. The new senior lender's commitments under the amended and restated securitization program are $150,000 thousand, of which $104,130 was drawn at December 31, 2019. Finacity remains an intermediate subordinated lender and the Company's European subsidiaries continue as senior subordinated and junior subordinated lenders as well as having a new interest in the senior and intermediate subordinated loan tranches. The Program has a two-year term until December 10, 2021.

Judgements relating to the consolidation of the SPE

The Company does not own shares in the SPE or have the ability to appoint its directors. In determining whether to consolidate the SPE, the Company has evaluated whether it has control over the SPE, in particular, whether it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

Receivables are sold to the SPE under a true sale opinion with legal interest transferred from the Company to the SPE. While the sale of receivables to the SPE is without credit recourse, the Company continues to be exposed to the variable returns from its involvement in the SPE as it is exposed to credit risk as a subordinated lender to the SPE and it earns a variable amount of remuneration as master servicer of the receivables, as well as any excess return from additional service fee, including the loss or gain due to the effect of foreign exchange rates.

As master servicer, Ferroglobe is responsible for the cash collection and management of any impaired receivables. Finacity, in addition to being intermediate subordinated lender, is the backup servicer and has the unilateral right to remove Ferroglobe as master servicer and manage impaired receivables. Until September 5, 2019, this right was considered to be substantive and therefore that Finacity had power and control over the SPE and that the SPE was not consolidated by Ferroglobe. Considering the risk exposure for each lender at September 5, 2019 and subsequently, including under the amended and restated program effective December 10, 2019, it is not considered that Finacity has a risk exposure such as to be considered substantive. Therefore, Ferroglobe is now considered to have control over the SPE as it is exposed to variable returns and has the ability to affect those returns through its power over the investee. Accordingly, Ferroglobe has consolidated the SPE with effect from September 5, 2019.

As a result of consolidating the SPE, the trade receivables purchased by the SPE are included in the Company's consolidated statement of financial position, along with loans (see Note 16) and cash held by the SPE.

Transactions with the SPE prior to consolidation

Prior to the consolidation of the SPE on September 5, 2019, Company sold approximately $1,127 million of trade receivables to the SPE during the year ended December 31, 2019 (2018: approximately $2,059 million). The loss on transfer of the receivables, or purchase discount, which equates to difference between the carrying amount of the receivable and the purchase consideration, was $12,210 thousand and has been recognized within finance costs in the consolidated income statement (2018: $22,647 thousand).

As a lender to the SPE, the Company earned interest on its senior subordinated and junior subordinated loan receivables. During the year ended December 31, 2019, the Company earned interest of $1,130 thousand in respect

of these loan receivables, recognized within finance income in the consolidated income statement (2018: $3,403 thousand).

The Company is engaged as master servicer to the SPE whereby the Company is responsible for the cash collection, reporting and cash application of the sold receivables. As master servicer, the Company earns a fixed rate management fee due to the percentage but depends on the volume of assets and an additional servicing fee which entitles the Company to a residual interest upon monthly liquidation of the SPE. The additional servicing fee will only be paid out on monthly liquidation of the SPE and from any excess cash flows remaining after all lenders to the SPE have been repaid. This results in the Company being exposed to variable returns. During the year ended December 31, 2019, the Company earned fixed-rate servicing fees of $1,531 thousand (2018: $2,961 thousand) and additional servicing fees of $4,790 thousand (2018: $11,174 thousand).

Restrictions on the use of group assets

At December 31, 2019, the SPE held cash of $38,778 thousand and this is consolidated by the Company and included in the cash and cash equivalents balance (2018: the SPE was not consolidated). Cash held by the SPE can be used to repay the SPE's borrowings (see Note 16), pay interest and expenses incurred by the SPE, purchase new trade receivables from the Ferroglobe entities participating in the Program and repay loan notes issued to Ferroglobe entities, subject to continuing to meet the Program's collateral and minimum liquidity requirements. At December 31, 2019, $3,448 thousand of cash held by the SPE was available to repay subordinated loan notes to Ferroglobe entities and therefore available for use by the wider group.

At December 31, 2019, the SPE held trade receivables of $90,108 thousand and these were consolidated by the Company (2018: the SPE was not consolidated). The proceeds from the collection of the SPE's receivables can be used to repay the SPE's borrowings.

	Amount US$'000	Interest Rate	Currency
Senior Subordinated Loan	—	0%	U.S. Dollars
Junior Subordinated Loan	—	0%	U.S. Dollars

10.2 Trade and other receivables

Trade and other receivables comprise the following at December 31:

	2019 US$'000	2018 US$'000
Trade receivables	237,022	75,719
Less – allowance for doubtful debts	(4,543)	(4,964)
	232,479	70,755
Tax receivables[(1)]	45,948	60,851
Government grant receivables	19,748	16,606
Other receivables	10,889	7,784
Total	**309,064**	**155,996**

(1) "Tax receivables" is primarily related to VAT receivables, which are recovered either by offsetting against VAT payables or are expected to be refunded by the tax authorities in the relevant jurisdictions.

The trade and other receivables disclosed above are short-term in nature and therefore their carrying amount is considered to approximate their fair value.

The changes in the allowance for doubtful debts during 2019 and 2018 were as follows:

	Allowance US$'000
Balance at January 1, 2018	**17,346**
Impairment losses recognized	3,190
Amounts written off as uncollectible	(15,118)
Exchange differences	(454)
Balance at December 31, 2018	**4,964**
Impairment losses recognized	2,517
Amounts written off as uncollectible	(100)
Changes in the scope of consolidation	(2,750)
Exchange differences	(88)
Balance at December 31, 2019	**4,543**

Government grants

The Company has been awarded government grants in relation to its operations in France, Spain and Norway, including grants in relation to the compensation of costs associated with the emission of CO_2.

During the year ended December 31, 2019, the Company recognized $33,327 thousand of income related to government grants, of which $33,327 thousand was deducted against the related expense in cost of sales (2018: $26,369 thousand of income, of which $18,923 thousand was deducted against the related expense in cost of sales and $7,446 thousand was recognized as other operating income). The Company has no unfulfilled conditions in relation to government grants, but certain grants would be repayable if the Company were to substantially curtail production or employment at certain plants.

At December 31, 2019, no factoring arrengements were in place. At December 31, 2018, the carrying amounts of the government grant receivables include receivables which were subject to a factoring arrangement. Under this arrangement, the Company transferred receivables to the factor in exchange for cash and is prevented from selling or pledging the receivables. However, the Company has retained late payment and credit risk. The Company therefore continues to recognise the transferred assets in their entirety in its balance sheet. The amount repayable under the factoring agreement is presented as secured borrowing. At December 31, 2018, the carrying amount of both the factored receivables and the secured borrowings was $6,913 thousand.

Factoring of other receivables

The Company has no factoring without recourse arrangements for receivables as of December 31, 2019. There were $6,102 thousand of factored receivables outstanding as of December 31, 2018. These factoring arrangements transfer substantially all the economic risks and rewards associated with the ownership of accounts receivable to a third party and therefore are accounted for by derecognizing the accounts receivable upon receiving the cash proceeds of the factoring arrangement.

11. Inventories

Inventories comprise the following at December 31:

	2019 US$'000	2018 US$'000
Finished goods	158,056	197,982
Raw materials in progress and industrial supplies	140,689	222,912
Other inventories	54,564	34,887
Advances to suppliers	812	1,189
Total	**354,121**	**456,970**

During 2019 the Company recognised an expense of $4,295 thousand (2018: $11,376 thousand) in respect of write-downs of inventory to net realisable value. The Company records expense for the write-down of inventories to Cost of sales in the consolidated income statement.

At December 31, 2019, approximately $33 million of inventories in the Company's subsidiaries in the United States and Canada were pledged forming part of the borrowing base for the North American asset-based revolving credit facility (the "ABL Revolver"). At December 31, 2018, approximately $314 million of inventories were secured as collateral for then outstanding loan agreements.

12. Other assets

Other assets comprise the following at December 31:

	2019			2018		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Guarantees and deposits given	1,100	9	1,109	2,208	11	2,219
Prepayments and accrued income	10	13,415	13,425	16	3,672	3,688
Biological assets	—	—	—	7,790	—	7,790
Other assets	487	10,252	10,739	472	5,130	5,602
Total	**1,597**	**23,676**	**25,273**	**10,486**	**8,813**	**19,299**

Biological assets comprise timber farms in South Africa, which are a source of raw materials used for the production of silicon metal. The biological assets were sold during 2019 for net proceeds of ZAR 130 million.

13. Equity

Share capital

Ferroglobe PLC was incorporated on February 5, 2015 and issued one ordinary share with a face value of $1.00. The share was issued but uncalled. On October 13, 2015, the Company increased its share capital by £50,000 by issuing 50,000 sterling non-voting redeemable preference shares (the "Non-voting Shares") as well as 14 ordinary shares with a par value of $1.00. Subsequently on October 13, 2015, the Company consolidated the 15 ordinary shares at a par value of $1.00 to two ordinary shares with a par value of $7.50, for a total amount of $15.00.

On December 23, 2015, the Company acquired all of the issued and outstanding ordinary shares from Grupo Villar Mir, S.A.U., par value €1,000 per share, of Grupo FerroAtlántica, S.A.U. in exchange for 98,078,161 newly-issued

Ferroglobe Class A ordinary shares, nominal value $7.50 per share, making Grupo FerroAtlántica, S.A.U. a wholly-owned subsidiary of the Company. The company subsequently redeemed all Non-voting Shares.

Subsequently on December 23, 2015, Gordon Merger Sub, Inc., a wholly owned subsidiary of the Company, merged with Globe Specialty Metals, Inc., and all outstanding shares of GSM common stock, par value $0.0001 per share were converted to the right to receive one newly-issued Ferroglobe ordinary share, nominal value $7.50 per share. The ordinary shares were registered by the Company pursuant to a registration statement on Form F-4, which was declared effective by the SEC on August 11, 2015, and trade on the NASDAQ Global Select Market under the ticker symbol "GSM."

On June 22, 2016 the Company completed a reduction of the share capital and as such the nominal value of each share has been reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to a distributable reserve.

On November 18, 2016, Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe shareholders.

During the year ended December 31, 2018, the Company issued 40,000 new ordinary share upon exercise of stock options and cancelled 1,152,958 ordinary shares pursuant to a share repurchase program (see below).

During the year ended December 31, 2019, the Company did not issue new ordinary shares of any class.

At December 31, 2019, there were 170,863,773 ordinary shares in issue with a par value of $0.01, for a total issued share capital of $1,784 thousand, (2018: 170,863,773 ordinary shares in issue with a par value of $0.01, for a total issued share capital of $1,784 thousand).

At December 31, 2019, the Company's largest shareholder is as follows:

Name	Number of Shares Beneficially Owned	Percentage of Outstanding Shares (*)
Grupo Villar Mir, S.A.U.	91,125,521	53.8 %

(*) 169,224,766 ordinary shares were outstanding at 31 December 2019, comprising 170,863,773 shares in issue less 1,733,051 shares held in treasury

Valuation adjustments

Valuation adjustments comprise the following at December 31:

	2019 US$'000	2018 US$'000
Actuarial gains and losses	1,248	(390)
Hedging instruments and other	(3,417)	(11,169)
Total	**(2,169)**	**(11,559)**

Capital management

The Company's primary objective is to maintain a balanced and sustainable capital structure through the industry's economic cycles, while keeping the cost of capital at competitive levels so as to fund the Company's growth. The main sources of financing are as follows:

1. cash flow from operations;
2. bank borrowings, including asset-based loans;
3. debt instruments, including the senior Notes due 2022.

Although the securitization program has been part of the Company's consolidated Balance since September 5, 2019, the Company continues in its efforts to focus on optimizing its working capital.

The Company manages its capital structure and makes adjustments in light of changes in economic conditions and the requirements of financial covenants. To maintain or adjust the capital structure, the Company may restructure or issue new borrowings or debt, make dividend payments, return capital to shareholders or issue new shares. Management's review of the Company's capital structure includes monitoring of the leverage ratio, which was as follows at December 31:

	2019 US$'000	2018 US$'000	2017 US$'000
Gross financial debt (*)	606,361	645,389	571,337
Cash, restricted cash and cash equivalents	(123,175)	(216,647)	(184,472)
Total net financial debt	**483,186**	**428,742**	**386,865**
Total equity (**)	**602,297**	**884,372**	**937,758**
Total net financial debt / total equity	**80.22 %**	**48.48 %**	**41.25 %**

(*) Gross financial debt comprises bank borrowings, obligations under leases, debt instruments and other financial liabilities.
(**) Total equity comprises all capital and reserves of Company as stated in the consolidated statement of financial position.

The classification of the Company's gross financial debt between non-current and current at December 31 is as follows:

	2019		2018		2017	
	Balance US$'000	%	Balance US$'000	%	Balance US$'000	%
Non-current gross financial debt	548,531	90.46 %	560,738	86.88 %	458,056	80.17 %
Current gross financial debt	57,830	9.54 %	84,651	13.12 %	113,281	19.83 %
Total gross financial debt	**606,361**	**100.00 %**	**645,389**	**100.00 %**	**571,337**	**100.00 %**

Share Repurchase Program

At a general meeting of its shareholders held on August 3, 2018, shareholders granted authority to the Company to effect share repurchases. The Company is accordingly authorised for a period of five years to enter into contracts with appointed brokers under which the Company may undertake purchases of its ordinary shares – acquired by the brokers on the NASDAQ and through other permitted channels of up to approximately 10% of its issued ordinary share capital, at a minimum price of $0.01 per share, at a maximum price for such shares of 5% above the average volume-weighted average price of the Company's shares over the five business days prior to purchase and subject to additional restrictions (including as to pricing, volume, timing and the use of brokers or dealers) under applicable U.S. securities laws.

Subsequently, the Company's Board of Directors authorised the repurchase of up to $20,000 thousand of the Company's ordinary shares in the period ending December 31, 2018. On November 7, 2018, the Company completed this repurchase program, resulting in the acquisition of a total of 2,894,049 ordinary shares for total consideration of $20,100 thousand, including applicable stamp duty of $100 thousand. The average price paid per share was $6.89.

The share repurchase program resulted in 1,152,958 ordinary shares purchased and cancelled and 1,741,091 ordinary shares purchased into treasury, all of which remained held in treasury at December 31, 2018.

During the year ended December 31, 2019, there are not new shares repurchased by the Company.

Dividends

There have not been dividends paid or proposed by the Company during the year ended December 31, 2019.

On May 21, 2018, our Board of Directors approved an interim dividend per ordinary share of $0.06. The dividend totaling $10,321 thousand, was paid on June 29, 2018 to shareholders of record at the close of business on June 8, 2018.

On August 20, 2018, our Board of Directors approved an interim dividend per ordinary share of $0.06. The dividend totaling $10,321 thousand, was paid on September 20, 2018 to shareholders of record at the close of business on September 5, 2018.

There were no dividends paid or proposed by the Company during the year ended December 31, 2017.

Non-controlling interests

The changes in non-controlling interests in the consolidated statements of financial position in 2019 and 2018 were as follows:

	Balance US$'000
Balance at January 1, 2018	**121,734**
Loss for the year	(19,088)
Increase of Parent's indirect ownership interest in FerroAtlántica de Venezuela S.A.	14,389
Translation differences and other	(890)
Balance at December 31, 2018	**116,145**
Loss for the year	(5,039)
Increase of Parent's indirect ownership interest in Ferrosolar OPCO Group SL. and Rocas, Arcillas y Minerales, S.A.	5,881
Translation differences and other	1,090
Balance at December 31, 2019	**118,077**

The stand-alone statutory information regarding the largest non-controlling interests, in accordance with IFRS 12 Disclosure of Interests in Other Entities, is as follows:

WVA Manufacturing, LLC (WVA) was formed on October 28, 2009 as a wholly-owned subsidiary of Globe. On November 5, 2009, Globe sold a 49% membership interest in WVA to Dow Corning Corporation (currently named "Dow"), an unrelated third party. As part of the sale of the 49% membership interest to Dow, an operating agreement and an output and supply agreement were established. The output and supply agreement states that of the silicon metal produced by WVA, 49% will be sold to Dow and 51% to Globe, which represents each member's ownership interest, at a price equal to WVA's actual production cost plus $100 per metric ton. The agreement will automatically terminate upon the dissolution or liquidation of WVA in accordance with the joint venture agreement between Globe and Dow. As of December 31, 2019 and 2018, the balance of Non-controlling interest related to WVA was $73,945 thousand and $77,343 thousand, respectively.

Quebec Silicon Limited Partnership (QSLP), formed under the laws of the Province of Québec on August 20, 2010 is managed by its general partner, Quebec Silicon General Partner Inc., which is a wholly-owned subsidiary of Globe. QSLP owns and operates the silicon metal operations in Bécancour, Québec. QSLP's production output is subject to

a supply agreement, which sells 51% of the production output to Globe and 49% to Dow, which represents each member's ownership interest, at a price equal to QSLP's actual production cost plus 31 Canadian dollars per metric ton. As of December 31, 2019 and 2018, the balance of non-controlling interest related to QSLP was $44,224 thousand and $44,796 thousand, respectively.

	2019		2018	
	WVA US$'000	QSLP US$'000	WVA US$'000	QSLP US$'000
Statement of Financial Position				
Non-current assets	80,923	63,639	84,864	62,725
Current assets	56,839	30,931	59,957	42,125
Non-current liabilities	14,677	19,944	14,677	15,406
Current liabilities	27,579	7,277	38,060	24,356
Income Statement				
Sales	167,503	78,414	168,041	108,764
Operating profit	6,688	252	6,319	2,284
Profit before taxes	6,423	(36)	6,319	979
Net (loss) income	3,276	(70)	(6,458)	478
Cash Flow Statement				
Cash flows from operating activities	2,287	3,720	10,025	4,317
Cash flows from investing activities	(2,256)	(3,544)	(3,830)	(4,980)
Cash flows from financing activities	—	227	—	—
Exchange differences on cash and cash equivalents in foreign currencies	—	149	—	(32)
Beginning balance of cash and cash equivalents	6,535	1,767	340	2,462
Ending balance of cash and cash equivalents	**6,566**	**2,319**	**6,535**	**1,767**

14. Earnings (loss) per ordinary share

Basic earnings (loss) per ordinary share are calculated by dividing the consolidated profit (loss) for the year attributable to the Parent by the weighted average number of ordinary shares outstanding during the year, excluding the average number of treasury shares held in the year, if any. Dilutive earnings (loss) per share assumes the exercise of stock options, provided that the effect is dilutive.

	2019	2018	2017
Basic earnings (loss) per ordinary share computation			
Numerator:			
Profit (loss) attributable to the Parent (US$'000)	(280,601)	43,661	(678)
Denominator:			
Weighted average basic shares outstanding	169,152,905	171,406,272	171,949,128
Basic earnings (loss) per ordinary share (US$)	**(1.66)**	**0.25**	**—**
Diluted earnings (loss) per ordinary share computation			
Numerator:			
Profit (loss) attributable to the Parent (US$'000)	(280,601)	43,661	(678)
Denominator:			
Weighted average basic shares outstanding	169,152,905	171,406,272	171,949,128
Effect of dilutive securities	—	123,340	—
Weighted average dilutive shares outstanding	169,152,905	171,529,612	171,949,128
Diluted earnings (loss) per ordinary share (US$)	**(1.66)**	**0.25**	**—**

Potential ordinary shares of 445,008, of 269,116, and of 70,673 were excluded from the calculation of diluted earnings (loss) per ordinary share in 2019, 2018, and 2017 respectively because their effect would be anti-dilutive.

15. Provisions

Provisions comprise the following at December 31:

	2019			2018		
	Non- Current US$'000	Current US$'000	Total US$'000	Non- Current US$'000	Current US$'000	Total US$'000
Provision for pensions	56,679	1,050	57,729	52,529	197	52,726
Environmental provision	2,923	1,185	4,108	2,880	331	3,211
Provisions for litigation	—	3,905	3,905	—	2,399	2,399
Provisions for third-party liability	9,263	—	9,263	7,270	—	7,270
Provisions for C02 emissions allowances	5,776	29,162	34,938	2,859	25,111	27,970
Other provisions	10,211	10,789	21,000	10,249	12,532	22,781
Total	**84,852**	**46,091**	**130,943**	**75,787**	**40,570**	**116,357**

The changes in the various line items of provisions in 2019 and 2018 were as follows:

	Provision for Pensions US$'000	Environmental Provision US$'000	Provisions for Litigation in Progress US$'000	Provisions for Third Party Liability US$'000	Provisions for CO2 Emissions Allowances US$'000	Other Provisions US$'000	Total US$'000
Balance at January 1, 2018	**59,195**	**3,467**	**11,732**	**7,639**	**7,281**	**26,178**	**115,492**
Charges for the year	4,611	103	392	229	26,348	2,483	34,166
Provisions reversed with a credit to income	(36)	—	—	(9)	—	(1,524)	(1,569)
Amounts used	(2,076)	—	(9,595)	(239)	(5,470)	(3,039)	(20,419)
Provision against equity	(3,568)	—	—	—	—	—	(3,568)
Transfers from/(to) other accounts	277	—	—	—	—	—	277
Exchange differences and others	(5,677)	(359)	(130)	(350)	(189)	(2,035)	(8,740)
Additions from business combinations (see Note 5)	—	—	—	—	—	735	735
Disposals from business divestitures	—	—	—	—	—	(17)	(17)
Balance at December 31, 2018	**52,726**	**3,211**	**2,399**	**7,270**	**27,970**	**22,781**	**116,357**
Charges for the year	7,444	820	2,166	2,361	18,794	2,958	34,543
Provisions reversed with a credit to income	(1,798)	—	—	(74)	—	(1,101)	(2,973)
Amounts used	(2,019)	—	(650)	(179)	(9,452)	(723)	(13,023)
Provision against equity	2,244	—	—	—	—	—	2,244
Exchange differences and others	(868)	77	(10)	(115)	(249)	(441)	(1,606)
Disposals from business divestitures	—	—	—	—	(2,125)	(2,474)	(4,599)
Balance at December 31, 2019	**57,729**	**4,108**	**3,905**	**9,263**	**34,938**	**21,000**	**130,943**

The main provisions relating to employee obligations are as follows:

France

These relate to various obligations assumed by FerroPem, SAS with various groups of employees relate to long-service benefits, medical insurance supplements and retirement obligations, all of which are defined benefit obligations, whose changes in 2019 and 2018 were as follows:

	2019 US$'000	2018 US$'000
Obligations at the beginning of year	**28,049**	**29,768**
Current service cost	1,951	1,678
Borrowing costs	524	470
Actuarial differences	4,432	(700)
Benefits paid	(1,581)	(1,818)
Exchange differences	(580)	(1,349)
Obligations at the end of year	**32,795**	**28,049**

At December 31, 2019 and 2018, the effect of a 1% change in discount rate would have resulted in a change to the provision of approximately $4,767 thousand and $3,664 thousand, respectively.

The following table reflects the gross benefit payments that are expected to be paid for the benefit plans for the year ended December 31, 2019:

	2019 US$'000
2020	1,020
2021	909
2022	1,400
2023	2,041
2024	2,249
Years 2025-2029	8,336

The subsidiary recognized provisions in this connection based on an actuarial study performed by an independent expert.

South Africa

Defined benefit plans relate to Retirement medical aid obligations and Retirement benefits. Actuarial valuations are performed periodically by independent third parties and in the actuary’s opinion the fund was in a sound financial position. The valuation was based upon the amounts as per the latest valuation report received from third party experts.

Retirement medical aid obligations

The Company provides post-retirement benefits by way of medical aid contributions for employees and dependents.

Retirement benefits

It is the policy of the Company to provide retirement benefits to all its employees and therefore membership of the retirement fund is compulsory. The Company has both defined contribution and defined benefit plans. The pension fund obligation is recognized in current provisions as the Company will contribute the difference to the plan assets within the next 12 months.

In this regard, the changes of this provision in 2019 and 2018 were as follows:

	2019 US$'000	2018 US$'000
Obligations at beginning of year	**5,429**	**7,872**
Current service cost	90	139
Borrowing costs	511	740
Actuarial differences	(1,291)	(2,000)
Benefits paid	(254)	(226)
Exchange differences	116	(1,096)
Obligations at end of year	**4,601**	**5,429**

At December 31, 2019 and 2018, the effect of a 1% change in the cost of the medical aid would have resulted in a change to the provision of approximately $562 thousand and $216 thousand, respectively.

The breakdown, in percentage, of the plan assets are as follows:

	2019	2018
Cash	1.50 %	1.72 %
Equity	42.25 %	47.42 %
Bond	15.64 %	13.62 %
Property	2.78 %	2.67 %
International	32.51 %	30.27 %
Others	5.32 %	4.30 %
Total	**100.00 %**	**100.00 %**

As of December 31, 2019 and 2018 the Plan assets amounted to $2,126 thousand and $1,906 thousand, respectively. Changes in the fair value of plan assets linked to the defined benefit plans in South Africa were as set forth in the following table:

	2019 US$'000	2018 US$'000
Fair value of plan assets at the beginning of the year	**1,906**	**2,248**
Interest income on assets	194	216
Benefits paid	—	(50)
Actuarial differences	(81)	(228)
Other	107	(280)
Fair value of plan assets at the end of the year	**2,126**	**1,906**
Actual return on assets	**113**	**(11)**

Venezuela

Benefit Plan

The company FerroVen has pension obligations to all of its employees who, once reaching retirement age, have accumulated at least 15 years of service to the company and receive a Venezuelan Social Security Institute (IVSS) pension. In addition to the pension paid by the IVSS, 80% of the basic salary accrued when the pension benefit is awarded is guaranteed and paid by means of a lifelong monthly pension.

The most recent of the present value of the defined benefit obligation actuarial valuation was determined at December 31, 2019 by independent actuaries. The present value of the obligation for defined benefit cost, the current service cost and past service cost were determined using the projected unit credit method.

In this regards, the changes of this provision in 2019 and 2018 were as follows:

	2019 US$'000	2018 US$'000
Obligations at the beginning of year	**534**	**1,883**
Current service cost	50	775
Borrowing costs	1,128	—
Benefits paid	(3)	(35)
Exchange differences	(1,200)	(2,089)
Other	2,068	—
Obligations at the end of year	**2,577**	**534**

The summary of the main actuarial assumptions used to calculate the aforementioned obligations is as follows:

	France		South Africa		Venezuela	
	2019	2018	2019	2018	2019	2018
Salary increase	1.60%-6.10%	1.60%-6.10%	7.10%-7.60%	7.2 %	7374 %	400000 %
Discount rate	0.75%	2%	9.5%-10.7%	9.9 %	7673 %	520004 %
Expected inflation rate	1.60%	1.60%	5.1%-6.1%	6.20 %	7374 %	500000 %
Mortality	TGH05/TGF05	TGH05/TGF05	SA 85-90 / PA (90)	SA 85-90 / PA (90)	UP94	UP94
Retirement age	65	65	63	63	62-63	64

North America

a. Defined Benefit Retirement and Post-retirement Plans

Globe Metallurgical Inc. (“GMI”) sponsors three non-contributory defined benefit pension plans covering certain employees, which were all frozen in 2003. Core Metals sponsors a non-contributory defined benefit pension plan covering certain employees, which was closed to new participants in April 2009.

Quebec Silicon Limited partnership (“QSLP”) sponsors a contributory defined benefit pension plan and postretirement benefit plan for certain employees, based on length of service and remuneration. Post-retirement benefits consist of a group insurance plan covering plan members for life insurance, disability, hospital, medical, and dental benefits. The contributory defined benefit pension plan was closed to new participants in December 2013. On December 27, 2013, the Communications, Energy and Paper Workers Union of Canada (“CEP”) ratified a new collective bargaining agreement, which resulted in a curtailment pertaining to the closure of the postretirement benefit plan for union employees retiring after January 31, 2016. The Company’s funding policy has been to contribute, as necessary, an amount in excess of the minimum requirements in order to achieve the Company’s long-term funding targets.

Benefit Obligations and Funded Status – The following provides a reconciliation of the benefit obligations, plan assets and funded status of the North American plans as of December 31, 2019 and 2018:

	2019				2018			
	USA	Canada			USA	Canada		
	Pension Plans US$'000	Pension Plans US$'000	Post-retirement Plans US$'000	Total US$'000	Pension Plans US$'000	Pension Plans US$'000	Post-retirement Plans US$'000	Total US$'000
Benefit obligation	37,272	25,626	8,739	71,637	35,062	22,393	7,377	64,832
Fair value of plan assets	(33,620)	(20,260)	—	(53,880)	(29,038)	(17,076)	—	(46,114)
Provision for pensions	**3,652**	**5,366**	**8,739**	**17,757**	**6,024**	**5,317**	**7,377**	**18,718**

All North American pension and post-retirement plans are underfunded. At December 31, 2019 and 2018, the accumulated benefit obligation was $62,898 thousand and $57,455 thousand for the defined pension plan and $8,739 thousand and $7,377 thousand for the post-retirement plans, respectively.

The assumptions used to determine benefit obligations at December 31, 2019 and 2018 for the North American plans are as follows:

	North America – 2019			North America – 2018		
	USA	Canada		USA	Canada	
	Pension Plan	Pension Plan	Postretirement Plan	Pension Plan	Pension Plan	Postretirement Plan
Salary increase	N/A	2.75% - 3.00%	N/A	N/A	2.75% - 3.00%	N/A
Discount rate	3.00%	3.15%	3.15%	4.00%	3.80%	3.90%
Expected inflation rate	N/A	N/A	N/A	N/A	N/A	N/A
Mortality	Pri-2012 Blue Collar Mortality	CPM2014-Private	CPM2014-Private Scale CPM-B	SOA RP-2014 Blue Collar Mortality	CPM2014-Private	CPM2014-Private
Retirement age	65	58-60	58-60	65	62	62

The discount rate used in calculating the present value of our pension plan obligations is developed based on the BPS&M Pension Discount Curve for 2019 and 2018 and the Mercer Proprietary Yield Curve for 2019 and 2018 for QSLP Pension and post-retirement benefit plans and the expected cash flows of the benefit payments.

The Company expects to make discretionary contributions of approximately $1,159 thousand to the defined benefit pension and post-retirement plans for the year ending December 31, 2020.

The following reflects the gross benefit payments that are expected to be paid in future years for the benefit plans for the year ended December 31:

	Pension Plans US$'000	Non-pension Postretirement Plans US$'000
2020	2,290	193
2021	2,286	198
2022	2,253	195
2023	2,313	211
2024	2,353	220
Years 2025-2029	12,494	1,477

The accumulated non-pension postretirement benefit obligation has been determined by application of the provisions of the Company's health care and life insurance plans including established maximums, relevant actuarial assumptions and health care cost trend rates projected at 5.3% for 2019 and decreasing to an ultimate rate of 4.0% in fiscal 2040. At December, 31 2019 and 2018, the effect of a 1% increase in health care cost trend rate on the non-pension postretirement benefit obligation is $1,809 thousand and $1,535 thousand, respectively. At December, 31 2019 and 2018 the effect of a 1% decrease in health care cost trend rate on the non-pension postretirement benefit obligation is ($1,374) thousand and ($1,194) thousand.

The changes to these obligations in the current year ended December 31, 2019 were as follows:

	2019			
	USA	Canada		
	Pension Plans US$'000	Pension Plans US$'000	Post-retirement Plans US$'000	Total US$'000
Obligations at the beginning of year	**35,062**	**22,393**	**7,377**	**64,832**
Service cost	136	131	287	**554**
Borrowing cost	1,359	852	291	**2,502**
Actuarial differences	2,842	1,971	563	**5,376**
Benefits paid	(2,036)	(864)	(162)	**(3,062)**
Exchange differences	—	1,143	383	**1,526**
Expenses	(91)	—	—	**(91)**
Obligations at the end of year	**37,272**	**25,626**	**8,739**	**71,637**

The plan assets of the defined benefit and retirement and post-retirement plans in North America are comprised of assets that have quoted market prices in an active market. The breakdown as of December 31, 2019 and 2018 of the assets by class are:

	2019	2018
Cash	1 %	1 %
Equity Mutual Funds	44 %	40 %
Fixed Income Securities	55 %	59 %
Total	**100 %**	**100 %**

For the year ended December 31, 2019, the changes in plan assets were as follows:

	2019		
	USA	Canada	
	Pension Plans US$'000	Pension Plans US$'000	Total US$'000
Fair value of plan assets at the beginning of the year	**29,038**	**17,076**	**46,114**
Interest income on assets	1,115	659	1,774
Benefits paid	(2,036)	(864)	(2,900)
Actuarial return on plan assets	5,580	1,662	7,242
Exchange differences	—	891	891
Other	(77)	836	759
Fair value of plan assets at the end of the year	**33,620**	**20,260**	**53,880**

b. Other Benefit Plans

The Company administers healthcare benefits for certain retired employees through a separate welfare plan requiring reimbursement from the retirees.

The Company's subsidiary, GMI, provides two defined contribution plans (401(k) plans) that allow for employee contributions on a pretax basis. The Company agrees to match 25% of participants' contributions up to a maximum of 6% of compensation. Additionally, the Company sponsors a defined contribution plan for employees of Core Metals. Under the plan, the Company may make discretionary payments to salaried and non-union participants in the form of profit sharing and matching funds.

Other benefit plans offered by the Company include a Section 125 cafeteria plan for the pretax payment of healthcare costs and flexible spending arrangements.

Environmental provision

Environmental provisions relate to $2,923 thousand of non-current environmental rehabilitation obligations (2018: $2,880 thousand) and $1,185 thousand of current environmental rehabilitation obligations (2018: $331 thousand).

Provisions for litigation

Certain employees of FerroPem, SAS, then known as Pechiney Electrometallurgie, S.A., may have been exposed to asbestos at its plants in France in the decades prior to FerroAtlántica's purchase of that business in December 2004. The Company has recognized a provision of $1,166 thousand during the year ended December 31, 2019 as part of the current portion of Provisions for litigation (2018: $1,775 thousand). The associated expense has been recorded to Staff costs in the Consolidated Income Statement. See Note 24 for further information.

The timing and amounts potential liabilities arising from such exposures is uncertain. The provision reflects the Company's best estimate of the expenditure required to meet resulting obligations.

Grupo FerroAtlántica, S.A.U. assumes expenses for litigation provisions of FerroManganese France, in relation to the dismissal of two employees of the latter company. The amount of the provision recognised as of December 31, 2019 is $1,161 thousand.

FerroManganese Norway registers a provision for litigation in December 2019, based on the settlement of the lawsuit against a crane supplier. The amount of the provision recognized as of December 31, 2019 is $1,048 thousand.

Provisions for third-party liability

Provisions for third-party liability relate to current obligations ($9,263 thousand) relating to health costs for retired employees (2018: $7,270 thousand).

Other provisions

Included in other provisions are current obligations arising from past actions that involve a probable outflow of resources that can be reliably estimated. Other provisions include taxes of $4,866 thousand (2018: $7,323 thousand) and other provisions of $16,134 thousand (2018: $15,458 thousand).

16. Bank borrowings

Bank borrowings comprise the following at December 31:

	2019			
	Limit US$'000	Non-Current Amount US$'000	Current Amount US$'000	Total US$'000
Borrowings carried at amortised cost:				
Credit facilities	100,000	45,449	12,600	58,049
Other loans	150,000	98,939	2,011	100,950
Total		**144,388**	**14,611**	**158,999**

	2018			
	Limit US$'000	Non-Current Amount US$'000	Current Amount US$'000	Total US$'000
Borrowings carried at amortised cost:				
Credit facilities	250,000	132,821	493	133,314
Other loans		—	7,698	7,698
Total		**132,821**	**8,191**	**141,012**

Credit facilities

Credit facilities comprise the following at December 31:

	2019 US$'000	2018 US$'000
Secured loans carried at amortised cost		
Principal amount	62,835	135,919
Unamortised issuance costs	(4,786)	(3,098)
Accrued interest	—	493
Total	**58,049**	**133,314**
Amount due for settlement within 12 months	12,600	493
Amount due for settlement after 12 months	45,449	132,821
Total	**58,049**	**133,314**

On February 27, 2018, Ferroglobe entered into a revolving credit facility that provided for borrowings up to an aggregate principal amount of $250,000 (the “Revolving Credit Facility”). The Revolving Credit Facility was amended on February 22, 2019, which included a reduction in the size of the facility from $250,000 to $200,000. The Revolving Credit Facility was amended further on September 30, 2019, reducing the size of the facility from $200,000 to $150,0000. On October 11, 2019, the Revolving Credit Facility was repaid using the proceeds from the ABL Revolver and existing cash and cash equivalents, in the amounts of $134,570 thousand.

On October, 11, 2019, Ferroglobe subsidiaries Globe Specialty Metals, Inc., and QSIP Canada ULC, as borrowers, entered into a Credit and Security Agreement for a new $100 million north American asset-based revolving credit facility (the “ABL Revolver”), with PNC Bank, N.A., as lender.

The maximum advances granted by the lender are up to the lesser of (a) $100 million and (b) the Formula Amount. The Formula Amount at any time will be determined by reference to the most recent Borrowing Base Certificate delivered to PNC Bank, N.A. (the Agent), and is equal to (a) up to 85% of Eligible Receivables plus (b) the lesser of:

- up to 75% of the cost of Eligible Inventory and eligible foreign-in transit inventory;
- up to 85% of the appraised net orderly liquidation value of Eligible inventory, minus (c) Reserves, if any.

The Formula Amount is subject to the following limits:

- inventory to account for up to 65% of the Formula Amount;
- Canadian inventory up to $20 million;
- eligible in-transit inventory of up to $10 million;
- consigned inventory of up to $10 million;
- consigned inventory of up to $7.5 million;
- stores and spare parts inventory of up to $2 million;
- packaging materials inventory of up to $500 thousand; and
- receivables aged 90 to 120 days due of up to $5 million.

Subject to certain exceptions, loans under the ABL Revolver may be borrowed, repaid and reborrowed at any time until the facility's expiration date. The legal maturity date of the ABL Revolver is October 11, 2024, which is five years after the initial drawdown under the facility. Notwithstanding this, the terms of the facility provide a spring forward provision which requires the ABL Revolver to be repaid on the date which is three (3) months prior to the maturity date of the senior Notes (March 1, 2022), which would currently imply a facility repayment date of December 1, 2021. This spring forward provision would adjust in respect of a refinancing of the senior Notes to be the date which is three (3) months prior to the date of any permitted refinancing of the Notes. There is a provision in the ABL Revolver credit agreement which requires the approval of PNC Bank, as agent on behalf of the lender, to the terms of any refinancing of the senior unsecured Notes and provides, *inter alia*, that the maturity date of such of refinancing shall be no earlier than January 9, 2025.

Interest Rates

Under the ABL Revolver, and in respect of LIBOR Rate Loans, the interest to be paid will be LIBOR plus aplicable margin, and in respect of Domestic Rate Loans, the interest will be ABR plus aplicable margin. ABR shall mean the highest of (i) the PNC Bank prime rate, (ii) overnight bank funding rate plus 0.5% and (iii) daily LIBOR plus 1.0%.

The aplicable margin is based on the average undrawn availability of the ABL Revolver. The undrawn availability is an amount equal to:

- the lesser of (i) $100 million and (ii) the Formula Amount; minus
- the maximum undrawn amount of $10 million all outstanding letters of credit; minus
- the outstanding amount of revolving advances and swing loans, with a limit of $45 million

Therefore, three levels are established depending on the average undrawn availabity. The Level I means that the average undrawn availability is higher than 66.7%, the applicable LIBOR rate margin will be 2.50% and the aplicable Domestic rate margin will be 1.50%. The Level II means that the average undrawn availability is more than 33.3% to less or equal 66.7%, the applicable LIBOR rate margin will be 2.75% and the applicable Domestic rate margin will be 1.75%. The Level III means if average undrawn availability is lower or equal to 33.3%, the applicable LIBOR rate margin will be 3.00% and the Domestic rate margin will be 2.00%. As a result, the applicable margin from the Closing date of the ABL Revolver to January 1, 2020, will be Level III rate. Thereafter, effective as of the first day of each calendar quarter, the rate corresponding to the average daily undrawn availability for the most recently completed calendar quarter.

Guarantees and security

Ferroglobe PLC was not required to provide a guarantee of the ABL Revolver, but entered into a Non-Recourse Pledge Agreement with lender in respect of its shares in Globe Specialty Metals, Inc.

Covenants

The ABL Revolver contains certain affirmative covenants relating to, among other things: (i) preservation of existence; (ii) payment of taxes; (iii) continuation of business; (iv) maintenance of insurance on its properties and assets; (v) maintenance and protection of rights of properties; (vi) visitation rights granted to the Administrative Agent and (vii) maintain and keep proper books of record and account. The ABL Revolver also contains certain negative covenants, relating to, among other things: (i) debt; (ii) liens; (iii) liquidations, mergers or consolidation; (iv) amendment of organizational documents; (v) restricted payments (including dividends, distributions, issuances of equity interests, redemptions and repurchases of equity interests); (vi) sale and leaseback transactions and (vii) further negative pledges. The ABL Revolver does not contain any leverage-based or financial ratio-based covenants, but requires minimum undrawn availability of $10,000 thousand and a restricted cash reserve of $22,500 thousand. See “Note 10.”

Under the ABL Revolver, Globe Specialty Metals, Inc., and QSIP Canada ULC pledged assets as collateral to PNC Bank as follows: eligible third party receivables in the sum of $31.5M, and eligible inventory including raw materials, WIP, finished goods, spare parts and packaging in the sum of $33M. Deducted from the eligible assets are outstanding letters of credit equaling $4.5M and a minimum undrawn availability of $10M, leaving a total ABL Revolver balance of $50.2M as at December 31, 2019.

Other Loans

As a result of the consolidation of the SPE since September 5, 2019, that part of the purchase price of the accounts receivable sold into the receivables securitization program not received in cash is deferred in the form of loans, in senior and subordinated tranches, held by the Company.

During 2019, following certain termination events under the current accounts receivable program, ING’s senior loan commitments were reduced to $75,000 thousand and the Company and ING agreed the program would terminate during the fourth quarter of 2019, unless otherwise refinanced.

On December 10, 2019, the Company refinanced the program and amended and restated its terms. The SPE repaid the remaining senior loans to ING with the proceeds of new senior loans issued by an affiliate of Sound Point Capital Management LP. The new senior lender’s commitments under the amended and restated securitization program are $150,000 thousand, of which $104,130 was drawn at December 31, 2019. Finacity remain an intermediate subordinated lender and the Company’s European subsidiaries continue as senior subordinated and junior subordinated lenders as well as having a new interest in the senior and intermediate subordinated loan tranches. The reconstituted program has a two-year term until December 10, 2021. See Note 10.

Foreign currency exposure of bank borrowings

The breakdown by currency of bank borrowings at December 31, is as follows:

	2019		
	Non-Current Principal Amount US$'000	Current Principal Amount US$'000	Total US$'000
Borrowings in US Dollars	144,388	14,611	158,999
Borrowings in Euros	—	—	—
Total	**144,388**	**14,611**	**158,999**

	2018		
	Non-Current Principal Amount US$'000	Current Principal Amount US$'000	Total US$'000
Borrowings in US Dollars	78,664	785	79,449
Borrowings in other currencies	57,255	6,913	64,168
Total	**135,919**	**7,698**	**143,617**

Contractual maturity of non-current bank borrowings

The contractual maturity of non-current bank borrowings at December 31, 2019, was as follows:

	2019		
	2021 US$'000	2024 US$'000	Total US$'000
Credit facilities	—	45,449	45,449
Other loans	98,939	—	98,939
Total	**98,939**	**45,449**	**144,388**

17. Leases

Lease obligations

Lease obligations as at December 31 are as follows:

	2019			2018		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Hydro-electrical installations (including power lines and concessions)	—	—	—	52,428	12,577	65,005
Other leases	16,972	8,900	25,872	1,044	422	1,466
Total	**16,972**	**8,900**	**25,872**	**53,472**	**12,999**	**66,471**

On May 25, 2012, FerroAtlàntica, S.A., as financial lessee, entered into a sale and leaseback agreement (the ‘‘Hydro-electric Finance Lease’’) with respect to certain hydro-electric assets in Spain. The financial lessee’s obligations under

the Hydro-electric Finance Lease were secured by such hydro-electric assets. Payments in respect of the Hydro-electric Finance Lease were to be made in 120 installments, which commenced on May 25, 2012 and were due to continue until maturity on May 25, 2022. The outstanding amounts under this loan accrued interest at a rate equal to six-month EURIBOR plus 3.5%. FAU prepaid the outstanding installments before the Company sold that entity on August 30, 2019.

During the year ended December, 31, 2019 the Company likewise terminated the leases of its Spanish hydroelectric facilities pursuant to the sale of FAU.

The detail, by maturity, of the non-current payment obligations under finance leases as of December 31, 2019 is as follows:

	2021 US$'000	2022 US$'000	2023 US$'000	2024 US$'000	2025 and after US$'000	Total US$'000
Other leases	6,898	4,835	3,603	920	716	16,972
Total	**6,898**	**4,835**	**3,603**	**920**	**716**	**16,972**

Future net minimum lease payments are as follows:

	Undiscounted minimum lease payments		Present value of minimum lease payments	
	2019 US$'000	2018 US$'000	2019 US$'000	2018 US$'000
Within 1 year	10,161	13,362	8,900	12,999
Between 1 and 5 years	17,569	61,556	16,256	53,472
After 5 years	911	—	716	—
Total minimum lease payments	**28,641**	**74,918**	**25,872**	**66,471**
Less: amounts representing finance lease charges	2,769	8,447	—	—
Present value of minimum lease payments	**25,872**	**66,471**	**25,872**	**66,471**

18. Debt instruments

Debt instruments comprise the following at December 31:

	2019 US$'000	2018 US$'000
Unsecured notes carried at amortised cost		
Principal amount	350,000	350,000
Unamortised issuance costs	(5,986)	(8,343)
Accrued coupon interest	10,937	10,937
Total	**354,951**	**352,594**
Amount due for settlement within 12 months	10,937	10,937
Amount due for settlement after 12 months	344,014	341,657
Total	**354,951**	**352,594**

On February 15, 2017, Ferroglobe and Globe (together, the "Issuers") issued $350,000 thousand aggregate principal amount of 9.375% senior unsecured notes due March 1, 2022 (the "Notes"). The proceeds were used primarily to repay existing indebtedness, including borrowings, certain credit facilities and other loans. Issuance costs of $12,116 thousand were incurred. The principal amounts of the senior Notes issued by each of Ferroglobe and Globe were $150,000 thousand and $200,000 thousand, respectively. Interest on the Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2017.

At any time prior to March 1, 2019, the Issuers might have redeemed all or a portion of the Notes at a redemption price based on a “make-whole” premium. At any time on or after March 1, 2019, the Issuers might redeem all or a portion of the Notes at redemption prices varying based on the period during which the redemption occurs. In addition, at any time prior to March 1, 2019, the Issuers might have redeemed up to 35% of the aggregate principal amount of the Notes with the net proceeds from certain equity offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest.

The Notes are senior unsecured obligations of the Issuers and are guaranteed on a senior basis by certain subsidiaries of Ferroglobe. The Notes are listed on the Irish Stock Exchange. The associated Indenture contains certain negative covenants. Additionally, if the Issuers experience a change of control the Indenture requires the Issuers to offer to redeem the Notes at 101% of their principal amount. Grupo Villar Mir S.A.U. owns 53.9% of the Company's outstanding shares and has pledged them to secure its obligations to certain banks. The Company would experience a change in control and would be required to offer redemption of bonds in accordance with the Indenture if Grupo Villar Mir S.A.U. defaults on the underlying loan. See Note 27 for further information.

The fair value of the Notes, determined by reference to the closing market price on the last trading day of the year, was $219,118 thousand as at December 31, 2019 (December 31, 2018: $288,022 thousand).

19. Other financial liabilities

Other financial liabilities comprise the following at December 31:

	2019			2018		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Financial loans from government agencies	33,557	23,382	56,939	9,325	52,524	61,849
Derivative financial instruments	9,600	—	9,600	23,463	—	23,463
Total	**43,157**	**23,382**	**66,539**	**32,788**	**52,524**	**85,312**

Financial loans from government agencies

On September 8, 2016, FerroAtlántica, S.A.U, as borrower, and the Spanish Ministry of Industry, Tourism and Commerce (the “Ministry”), as lender, entered into two loan agreements under which the Ministry made available to the borrower loans in aggregate principal amount of €44,999 thousand and €26,909 thousand, respectively, in connection with industrial development projects relating to the Company’s solar grade silicon project. The loan of €44,999 thousand is contractually due to be repaid in 7 installments over a 10-year period with the first three years as a grace period. The loan of €26,909 thousand was repaid in April 2018. Interest on outstanding amounts under each loan accrues at an annual rate of 2.29%. As of December 31, 2019, the amortized cost of the loan was €44,765 thousand (equivalent to $50,289 thousand) (2018: €44,706 thousand and $51,189 thousand). In November 2018, FAU agreed to transfer to OpCo certain assets which had been acquired with the proceeds of the REINDUS Loan and used exclusively by OpCo in connection with the joint venture in consideration of OpCo assuming liability for the REINDUS Loan.

The agreements governing the loans contain the following limitations on the use of the proceeds of the outstanding loan: (1) the investment of the proceeds must occur between January 1, 2016 and February 24, 2019; (2) the allocation of the proceeds must adhere to certain approved budget categories; (3) if the final investment cost is lower than the budgeted amount, the borrower must reimburse the Ministry proportionally; and (4) the borrower must comply with certain statutory restrictions regarding related party transactions and the procurement of goods and services. On May 24, 2019, a report on uses of the loan was presented to the Ministry. As of December 31, 2019, the balance of these loans have been presented in current liabilities for the amount due to non-compliance with the loan conditions ($22,961 thousand) and the rest as non-current liabilities ($27,328 thousand), the split of the loan between current and

non current liabilities has been done according to the report of uses presented to the Ministery, the portion related to the amount not used are showed in current liabilities.

The remaining non-current and current balances are related to loans granted mainly by French and Spanish government agencies.

Derivative financial instruments

Derivative financial instruments comprise the following at December 31:

	2019 US$'000	2018 US$'000
Derivatives designated as hedging instruments		
Cross currency swap	7,481	15,883
Derivatives not designated as hedging instruments		
Cross currency swap	2,119	4,501
Interest rate swaps	—	3,079
	9,600	**23,463**

Cross currency swap

The Company's operations generate cash flows predominantly in Euros and US dollars. The Company is exposed to exchange rate fluctuations between these currencies as it expects to convert Euros into US dollars to settle a proportion of the interest and principal of the Notes (see Note 18). To manage this currency risk, the Parent Company entered a cross-currency swap (the “CCS”) on May 12, 2017 where on a semi-annual basis it will receive interest of 9.375% on a notional of $192,500 thousand and pay interest of 8.062% on a notional of €176,638 thousand and it will exchange these Euro and US dollar notional amounts at maturity of the Notes in 2022. The timing of payments of interest and principal under the CCS coincide exactly with those of the Notes.

The fair value of the CCS at December 31, 2019 was $9,600 thousand (2018: $20,384 thousand) (see Note 28).

The Parent Company, which has a Euro functional currency, has designated $150,000 thousand of the notional amount of the CCS as a cash flow hedge of the variability of the Euro functional currency equivalents of the future US dollar cash flows of $150,000 thousand of the principal amount of the Notes. During the year ended December 31, 2019, the change in fair value of the CCS has resulted in a gain of $9,663 thousand recognized through other comprehensive income in the valuation adjustments reserve (2018: $10,006 thousand loss). During the year ended December 31, 2019, the change in value of the hedged item used as the basis for recognizing hedge ineffectiveness for the period was a gain of $8,401 thousand. This cash flow hedge was assessed to be highly effective at December 31, 2019 and therefore no ineffectiveness was recognized in the income statement. Amounts transferred from the valuation adjustments reserve to the income statement comprise a gain of $2,874 thousand transferred to exchange differences (2018: $7,024 thousand) and a gain of $1,639 thousand transferred to finance costs (2018: $951 thousand). At December 31, 2019, a balance of $3,417 thousand in respect of the cash flow hedge of the CCS remained in the valuation adjustment reserve and will be reclassified to the income statement as the hedged item affects profit or loss over the period to maturity of the Notes (2018: $8,567 thousand).

The remaining $42,500 thousand of the notional amount of the CCS is not designated as a cash flow hedge and is accounted for at fair value through profit or loss, resulting in a gain of $2,729 thousand for the year ended December 31, 2019, which is recorded in financial derivative gain in the consolidated income statement (2018: $2,838 thousand), see Note 30.

Interest rate swaps

The Company previously entered into interest rate swaps to manage the risk of changes in interest rates on certain non-current and current obligations. Since June 30, 2015, the interest rate swaps have been considered as ineffective hedges and as a result the changes in fair value of these derivatives are recognized through profit or loss. During the year ended December, 31, 2019 the Company disposed of the swap relating to the lease of hydroelectrical installations as part of the sale of its 100% interest in subsidiary FerroAtlántica, S.A.U. ("FAU") to investment vehicles affiliated with TPG Sixth Street Partners. At December 31, 2018, valuation adjustments reserve includes $2,602 thousand that relates hedgeaccounting, interest rate swap has been cancelled before FAU sale on August 30, 2019.

The following interest rate swaps were outstanding at December 31:

	2018				
	Nominal Amount US$'000	Maturity	Fixed Interest Rate	Reference Floating Interest Rate	Fair Value US$'000
Lease of hydroelectrical installations	137,400	2022	2.05	6-month Euribor	(3,079)
Total					**(3,079)**

20. Trade and other payables

Trade and other payables compose the following at December 31:

	2019 US$'000	2018 US$'000
Payable to suppliers	189,092	241,936
Trade notes and bills payable	137	14,887
Total	**189,229**	**256,823**

21. Other liabilities

Other liabilities comprise the following at December 31:

	2019			2018		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Payable to non-current asset suppliers	182	6,989	7,171	99	11,648	11,747
Guarantees and deposits	18	—	18	16	—	16
Remuneration payable	38	33,003	33,041	55	45,705	45,760
Tax payables	—	22,459	22,459	—	20,799	20,799
Contingent consideration	20,338	1,626	21,964	23,119	3,103	26,222
Other liabilities	5,330	32,352	37,682	1,741	22,315	24,056
Total	**25,906**	**96,429**	**122,335**	**25,030**	**103,570**	**128,600**

Tax payables

Tax payables comprise the following at December 31:

	2019		2018	
	Current US$'000	Total US$'000	Current US$'000	Total US$'000
VAT	8,234	8,234	6,491	6,491
Accrued social security taxes payable	7,781	7,781	5,001	5,001
Personal income tax withholding payable	1,351	1,351	1,436	1,436
Other	5,093	5,093	7,871	7,871
Total	**22,459**	**22,459**	**20,799**	**20,799**

Share-based compensation

a. Equity Incentive Plan

On May 29, 2016, the board of Ferroglobe PLC adopted the Ferroglobe PLC Equity Incentive Plan (the "Plan") and on June 29, 2016 the Plan was approved by the shareholders of the Company. The Plan is a discretionary benefit offered by Ferroglobe PLC for the benefit of selected senior employees of Ferroglobe PLC and its subsidiaries. The Plan's main purpose is to reward and foster performance through share ownership. Awards under the plan may be structured either as conditional share awards or options with a $nil exercise price (nil cost options). The awards are subject to a service condition of three years from the date of grant.

Details of the Plan awards during the current and prior years are as follows:

	Number of awards
Outstanding as of December 31, 2017	**757,365**
Granted during the period	485,860
Expired/forfeited during the period	(218,183)
Outstanding as of December 31, 2018	**1,025,042**
Granted during the period	1,184,441
Exercised during the period	(33,630)
Outstanding as of December 31, 2019	**2,175,853**
Exercisable as of December 31, 2019	155,595

The awards outstanding under the Plan at December 31, 2019 and December 31, 2018 were as follows:

Grant Date	Performance Period (three years ended)	Expiration Date	Exercise Price	Fair Value at Grant Date	2019	2018
March 13, 2019	December 31, 2022	March 13, 2029	nil	$ 2.69	1,184,441	—
June 14, 2018	N/A	June 13, 2028	nil	$ 9.34	129,930	129,930
March 21, 2018	December 31, 2021	March 20, 2028	nil	$ 22.56	287,080	287,080
June 20, 2017	December 31, 2020	June 20, 2027	nil	$ 15.90	17,342	17,342
June 1, 2017	N/A	June 1, 2027	nil	$ 10.96	19,463	19,463
June 1, 2017	December 31, 2020	June 1, 2027	nil	$ 16.77	382,002	382,002
November 24, 2016	December 31, 2019	November 24, 2026	nil	$ 16.66	155,595	189,225
					2,175,853	**1,025,042**

The awards outstanding as of December 31, 2019 had a weighted average remaining contractual life of 8.52 years (2018: 6.18 years).

At December 31, 2019, 2,026,460 of the outstanding awards were subject to performance conditions (2018: 875,649 awards). For those awards subject to performance conditions, upon completion of the three year service period, the recipient will receive a number of shares or nil cost options of between 0% and 200% of the above award numbers, depending on the financial performance of the Company during the performance period. The performance conditions can be summarized as follows:

Vesting Conditions
30% total shareholder return (“TSR”) relative to a comparator group
30% TSR relative to S&P Global 1200 Metals and Mining Index
20% return on invested capital (“ROIC”) relative to a comparator group
20% net operating profit after tax (“NOPAT”) relative to a comparator group

There were no performance obligations linked to 149,393 of the awards outstanding at December 31, 2019 (2018: 149,393 awards). These awards were issued as deferred bonus awards and vest subject to remaining in employment for three years.

Fair Value

The weighted average fair value of the awards granted during the year ended December 31, 2019 was $2.69 (2018: $18.62). The Company estimates the fair value of the awards using Stochastic and Black-Scholes option pricing models. Where relevant, the expected life used in the model has been adjusted for the remaining time from the date of valuation until options are expected to be received, exercise restrictions (including the probability of meeting market conditions attached to the option), and performance considerations. Expected volatility is calculated over the period commensurate with the remainder of the performance period immediately prior to the date of grant.

The following assumptions were used to estimate the fair value of the awards:

	Grant date			
	March 13, 2019	March 21, 2018	June 20, 2017	June 01, 2017
Fair value at grant date	$ 2.69	$ 22.56	$ 15.90	$ 16.77
Grant date share price	$ 2.44	$ 15.19	$ 10.50	$ 10.96
Exercise price	Nil	Nil	Nil	Nil
Expected volatility	53.54 %	49.86 %	43.15 %	43.09 %
Option life	3.00 years	3.00 years	3.00 years	3.00 years
Dividend yield	— %	— %	— %	— %
Risk-free interest rate	2.40 %	2.48 %	1.52 %	1.44 %
Remaining performance period at grant date	2.81	2.78	2.53	2.58
Company TSR at grant date	(48.1) %	2.1 %	(0.3)%	4.0 %
Median comparator group TSR at grant date	(4.8) %	(6.2)%	(7.2)%	(3.7)%
Median index TSR at grant date	10.9 %	(8.4)%	0.6 %	4.8 %

At the date of grant for these awards, all of the opening averaging period and some of the performance period had elapsed. The Company’s TSR relative to the median comparator group TSR and median index TSR at grant date may impact the grant date fair value; starting from an advantaged position increases the fair value and starting from a disadvantaged position decreases the fair value.

To model the impact of the TSR performance conditions, we have calculated the volatility of the comparator group using the same method used to calculate the Company’s volatility, using historical data, where available, which matches the length of the remaining performance period grant date.

The Company's correlation with its comparator group was assessed on the basis of all comparator group correlations, regardless of the degree of correlation, have been incorporated into the valuation model.
For the year ended December 31, 2019, share-based compensation expense related to this stock plan amounted to $4,881 thousand, which is recorded in staff costs (2018: $2,798 thousand).

Prior to the business combination, shares of Globe Specialty Metals common stock were registered pursuant to Section 12(b) of the Exchange Act and listed on NASDAQ. As a result of the business combination between Ferroglobe and Globe, each share of Globe common stock was converted into the right to receive one Ferroglobe ordinary share. The shares of Globe common stock were suspended from trading on NASDAQ effective as of the opening of trading on December 24, 2015. Ferroglobe ordinary shares were approved for listing on The NASDAQ Global Market. At the effective time of the business combination, GSM stock and stock-based awards were replaced with stock and stock-based awards of Ferroglobe in a one to one exchange.

There were not options that were exercised and 78,630 share options that expired during the year ended December 31, 2019 (2018: 59,980 options were exercised and 167,990 share options expired)

A summary of options outstanding is as follows:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Outstanding as of December 31, 2017	523,361	$ 15.12	0.89	580
Exercised during the period	(59,980)	5.89		
Expired/forfeited during the period	(167,990)	17.99		
Cancelled in lieu of cash settlement	(191,761)	12.54		
Outstanding as of December 31, 2018	103,630	$ 19.40	0.44	$ 1,774
Expired/forfeited during the period	(78,630)	20.25		
Outstanding as of December 31, 2019	25,000	$ 16.7	0.16	$ —
Exercisable as of December 31, 2019	25,000	$ 16.7	0.16	$ —

As of December 31, 2019 there are total vested options of 25,000 and no unvested options outstanding (2018: vested options of 103,630 and no unvested options).

For the year ended December 31, 2019, share based compensation income related to stock options under this plan was $ zero thousand (2018: $287 thousand). The expense is reported within staff costs in the consolidated income statement.

For the year ended December 31, 2019, the Company did not settled of the above options.

c. Executive bonus plan assumed under business combination with Globe

Prior to the business combination, the Globe also issued restricted stock units under the Company's Executive Bonus Plan. The fair value of restricted stock units is based on quoted market prices of the Company's stock at the end of each reporting period. These restricted stock units proportionally vest over three years, but are not delivered until the end of the third year. The Company will settle these awards by cash transfer, based on the Company's stock price on the date of transfer. For the year ended December 31, 2019, no restricted options were exercised and for the year ended December 31, 2018, 7,031 restricted options were exercised. As of December 31, 2019, and 2018 year end, restricted stock units of 26,268 were outstanding.

For the year ended December, 31, 2019, share based compensation income for these restricted stock units was $17 thousand before tax and $11 thousand after tax (2018: $584 thousand income before tax and $376 thousand income after tax). The income is reported within staff costs in the consolidated income statement. At December 31, 2019 and 2018, the liability associated with the restricted stock option was $26 thousand and $41 thousand, respectively included in other current liabilities.

d. Stock appreciation rights assumed under business combination with Globe

Globe issued cash-settled stock appreciation rights as an additional form of incentivized bonus. Stock appreciation rights vest and become exercisable in one-third increments over three years. The Company settles all awards by cash transfer, based on the difference between the Company's stock price on the date of exercise and the date of grant. The Company estimates the fair value of stock appreciation rights using the Black-Scholes option pricing model. There were 150,000 stock appreciation rights cancelled and nil stock appreciation rights exercised during the year ended December 31, 2019 (2018: 74,373 stock appreciation rights cancelled and 498,476 stock appreciation rights exercised).

As of December 31, 2019, and 2018, there were 460,021 and 610,021 stock appreciation rights outstanding, respectively.

For the year ended December 31, 2019 compensation income for these stock appreciation rights was $61 thousand before tax and $39 thousand after tax (2018: $5,848 thousand income before tax and $3,762 thousand income after tax). As of December 31, 2019, the liability associated with the stock appreciation rights is $2 thousand and is included in other current liabilities (2018: liability of $62 thousand included within other liabilities).

Contingent consideration

On February 1, 2018 the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France SAS. The Company completed the acquisition through its wholly-owned subsidiary Ferroatlántica., see Note 5. Consideration included both cash and contingent consideration.

The contingent consideration arrangement requires the Company to pay the former owners of Kintuck (France) SAS and Kintuck AS a sliding scale commission based on the silicomanganese and ferromanganese sales spreads of Ferroglobe Mangan Norge and Ferroglobe Manganèse France, up to a maximum amount of $60,000 thousand (undiscounted). The contingent consideration applies to sales made up to eight and a half years from the date of acquisition.

The potential undiscounted amount of all future payments that the Company could be required to make under the contingent consideration arrangement is between $0 thousand and $60,000 thousand.

The fair value of the contingent consideration arrangement as at December, 31, 2019 of $21,965 thousand (2018: $26,222 thousand) was estimated by applying the income approach based on a Monte Carlo simulation considering various scenarios of fluctuation of future manganese alloy spreads as well at the cyclicality of manganese alloy pricing. The fair value measurement is based on significant inputs that are not observable in the market, which IFRS 13 Fair Value Measurement refers to as Level 3 inputs. Key assumptions include discount rates of 11.5 percent and 11.0 percent for Ferroglobe Mangan Norge and Ferroglobe Manganèse France respectively (2018: 11.5 percent and 11.0 percent). Average simulated revenues in Ferroglobe Mangan Norge and Ferroglobe Manganèse France combined are between $157,276 thousand and $317,507 thousand per year (2018: between $269,256 thousand and $312,526 thousand).

22. Tax matters

The components of current and deferred income tax expense (benefit) are as follows:

	2019 US$'000	2018 US$'000	2017 US$'000
Consolidated income statement			
Current income tax			
Current income tax charge/(credit)	2,133	22,795	30,491
Adjustments in current income tax in respect of prior years	4,753	(865)	753
Adjustments in current income tax due to discounted operations	—	(3,776)	596
Total	**6,886**	**18,154**	**31,840**
Deferred tax			
Origination and reversal of temporary differences	(48,618)	2,500	(14,857)
Impact of tax rate changes	(46)	98	(31,688)
Adjustments in deferred tax in respect of prior years	237	(293)	480
Total	**(48,427)**	**2,305**	**(46,065)**
Income tax expense (benefit)	**(41,541)**	**20,459**	**(14,225)**

As the Company has significant business operations in Spain, France, South Africa and the United States, a weighted effective tax rate is considered to be appropriate in estimating the Company's expected tax rate. The following is a reconciliation of tax expense based on a weighted blended statutory income tax rate to our effective income tax expense for the years ended December 31, 2019, 2018, and 2017:

	2019 US$'000	2018 US$'000	2017 US$'000
Accounting profit/(loss) before income tax	(411,819)	35,568	(14,997)
Adjustment for discounted operations	(28,135)	—	—
Accounting profit/(loss) before income tax	(439,954)	—	—
At weighted effective tax rate of 24% (2018: 49% and 2017: 43%)	(105,369)	17,409	(6,399)
Non-taxable income/(expenses)	(17,020)	(14,856)	96
Non-deductible expenses	49,390	25,079	18,278
Movements in unprovided deferred tax	4,604	7,620	7,138
US Tax Reform - federal tax rate change	—	—	(31,257)
Differing territorial tax rates	(3,987)	(2,262)	2
Adjustments in respect of prior periods	2,160	(1,038)	1,233
Other items	20,407	(4,936)	(845)
Elimination of effect of interest in joint ventures	917	1,079	1,458
Other permanent differences	9,234	1,242	(1,685)
Incentives and deductions	(1,302)	(6,944)	(3,188)
US State taxes	(824)	1,235	348
Taxable capital gains	249	607	—
Adjustments in current income tax due to discounted operations	—	(3,776)	596
Income tax (expense)/benefit	**(41,541)**	**20,459**	**(14,225)**

The Tax Cuts and Jobs Act ("TCJA") was enacted into law on December 22, 2017. The material impact of the TCJA on the Company's 2017 position was a deferred tax credit of $31.2 million representing the remeasurement of the Company's U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018. A one-off tax charge of $1.7 million representing the Company's best estimate of its transition tax liability was recorded in 2017 and reversed in the prior period following a comprehensive review of the foreign historic earnings and profits subject to tax under the new law.

Current tax assets and liabilities

	2019 US$'000	2018 US$'000
Current tax assets		
Income tax receivable	27,930	27,404
Current tax liabilities		
Income tax payable	3,048	2,335
Net tax assets	**24,882**	**25,069**

Deferred tax assets and liabilities

For the year ended December 31, 2019:

	Opening Balance US$'000	Prior Year Charge US$'000	Recognised in P&L US$'000	Recognised in Equity/ OCI US$'000	Acquisitions/ Disposals US$'000	Exchange Differences US$'000	Closing Balance US$'000
Intangible assets	(419)	34	(29)	—	—	—	(414)
Biological assets	(2,840)	—	2,785	—	—	55	—
Provisions	19,950	(85)	(2,552)	(616)	(727)	(42)	15,928
Property, plant & equipment	(78,285)	748	5,974	—	9,599	(2,733)	(64,697)
Inventories	(2,633)	—	320	(14)	—	(216)	(2,543)
Hedging Instruments	1,010	—	—	—	(974)	(36)	—
Tax losses, incentives & credits	13,630	1,077	34,084	(46)	(5,408)	530	43,867
Partnership interest	(12,525)	—	2,850	—	—	(215)	(9,890)
Other	(678)	(1,965)	5,186	—	8	692	3,243
Total	**(62,790)**	**(191)**	**48,618**	**(676)**	**2,498**	**(1,965)**	**(14,506)**

Presented in the statement of financial position as follows:

	2019 US$'000	2018 US$'000
Deferred tax assets	59,551	14,589
Deferred tax liabilities	74,057	77,379
Net Total Deferred Tax Asset / (Liability)	**(14,506)**	**(62,790)**

Unrecognised deductible temporary differences, unused tax losses and unused tax credits

	2019 US$'000	2018 US$'000
Unused tax losses	428,665	396,119
Unused tax credits	7,949	7,963
Unrecognised deductible temporary differences	79,733	79,377
Total	**516,347**	**483,459**

Management of tax risks

The Company is committed to conducting its tax affairs consistent with the following objectives:

(i) to comply with relevant laws, rules, regulations, and reporting and disclosure requirements in whichever jurisdiction it operates;
(ii) to maintain mutual trust, transparency and respect in its dealings with all tax authorities; and
(iii) to adhere with best practice and comply with the Company's internal corporate governance procedures, including but not limited to its Code of Conduct

For further details please refer to the group's tax strategy which can be found here: http://investor.ferroglobe.com/corporate-governance.

The Group's tax department maintains a tax risk register on a jurisdictional basis.

In the jurisdictions in which the Company operates, tax returns cannot be deemed final until they have been audited by the tax authorities or until the statute-of-limitations has expired. The number of open tax years subject to examination varies depending on the tax jurisdiction. In general, the Company has the last four years open to review. The criteria that the tax authorities might adopt in relation to the years open for review could give rise to tax liabilities which cannot be quantified.

23. Related party transactions and balances

Continued operations

Balances with related parties at December 31 are as follows:

	2019			
	Receivables		Payables	
	Non-Current US$'000	Current US$'000	Non-Current US$'000	Current US$'000
Inmobiliaria Espacio, S.A.	—	2,953	—	—
Villar Mir Energía, S.L.U.	2,247	—	—	2,022
Espacio Information Technology, S.A.U.	—	—	—	2,651
Other related parties	—	2	—	157
Total	**2,247**	**2,955**	**—**	**4,830**

	2018			
	Receivables		Payables	
	Non-Current US$'000	Current US$'000	Non-Current US$'000	Current US$'000
Inmobiliaria Espacio, S.A.	—	2,953	—	7
Grupo Villar Mir, S.A.U.	—	79	—	—
Enérgya VM Generación, S.L	—	(1)	—	—
Villar Mir Energía, S.L.U.	2,288	33	—	8,941
Espacio Information Technology, S.A.U.	—	—	—	1,514
Blue Power Corporation, S.L.	—	—	—	134
Other related parties	—	2	—	461
Total	**2,288**	**3,066**	**—**	**11,057**

The loan granted to Inmobiliaria Espacio, S.A. accrues a market interest and has a maturity in the short-term that is renewed tacitly upon maturity, unless the parties agreed it's repaid until maturity, extended it automatically for one year.

The balance with the other related parties arose as a result of the commercial transactions performed with them (see explanation of main transactions below).

Discontinued operations

At 31 December, 2019, there were not discontinued operations considered with Related Parties. At 31 December, 2018, Balances with related parties were as follows:

	2018			
	Receivables		Payables	
	Non-Current US$'000	Current US$'000	Non-Current US$'000	Current US$'000
Enérgya VM Generación, S.L	—	11,154	—	70
Villar Mir Energía, S.L.U.	—	5	—	—
Other related parties	—	—	—	2
Total	**—**	**11,159**	**—**	**72**

Continued operations

Transactions with related parties in 2019, 2018 and 2017 are as follows:

	2019			
	Sales and Operating Income US$'000	Cost of Sales US$'000	Other Operating Expenses US$'000	Finance Income (Note 25.4) US$'000
Inmobiliaria Espacio, S.A.	—	—	1	68
Villar Mir Energía, S.L.U.	—	65,406	681	—
Espacio Information Technology, S.A.U.	—	—	3,566	—
Enérgya VM Generación, S.L	1	—	1	—
Enérgya VM Gestión, S.L	—	1	89	—
Aurinka	—	—	3,206	—
Other related parties	143	—	7	—
Total	**144**	**65,407**	**7,551**	**68**

	2018			
	Sales and Operating Income US$'000	Cost of Sales US$'000	Other Operating Expenses US$'000	Finance Income (Note 25.4) US$'000
Inmobiliaria Espacio, S.A.	—	—	6	72
Villar Mir Energía, S.L.U.	—	99,939	803	—
Espacio Information Technology, S.A.U.	—	—	4,226	—
Enérgya VM Generación, S.L	11,874	—	48	—
Enérgya VM Gestión, S.L	—	—	76	—
Other related parties	20	—	119	—
Total	**11,894**	**99,939**	**5,278**	**72**

	2017			
	Sales and Operating Income US$'000	Cost of Sales US$'000	Other Operating Expenses US$'000	Finance Income (Note 25.4) US$'000
Inmobiliaria Espacio, S.A.	—	—	2	70
Villar Mir Energía, S.L.U.	—	94,049	1,697	—
Espacio Information Technology, S.A.U.	—	—	3,807	—
Enérgya VM Generación, S.L	7,420	—	112	—
Enérgya VM Gestión, S.L	—	—	14	—
Other related parties	—	—	1,440	154
Total	**7,420**	**94,049**	**7,072**	**224**

“Cost of sales” of the related parties vis-à-vis Villar Mir Energía, S.L.U. relates to the purchase of energy from the latter by the Company’s Electrometallurgy – Europe segment. FerroAtlántica pays VM Energía a service charge in addition to paying for the cost of energy purchase from the market. Under contracts entered into with FAU on June 22, 2010 and December 29, 2010 (assigned to FerroAtlántica de Boo, S.L.U. (“FAU Boo”) and to FerroAtlántica de Sabon, S.L.U. (“FAU Sabon”) in August 2019 in anticipation of the FAU Disposal), and with Hidro Nitro Española on December 27, 2012 (assigned to FerroAtlántica del Cinca when Hidro Nitro Española was sold in December 2018), VM Energía supplies the energy needs of the Boo, Sabón and Monzón electrometallurgy facilities, as a broker for FAU (now FAU Boo or FAU Sabon, as appropriate) and Hidro Nitro Española (now FerroAtlántica del Cinca) in the wholesale power market. The contracts allow FAU (now FAU Boo or FAU Sabon, as appropriate) and Hidro Nitro Española (now FerroAtlántica del Cinca) to buy energy from the grid at market conditions without incurring costs normally associated with operating in the complex wholesale power market, as well as to apply for fixed price arrangements in advance from VM Energía, based on the energy markets for the power, period and profile applied for. For the fiscal year ended December 31, 2019, FAU Boo, FAU Sabon and FerroAtlantica del Cinca’s obligations to make payments to VM Energía under their respective agreements for the purchase of energy plus the service charge amounted to $27,355 thousand, $16,939 thousand and $20,736 thousand, respectively. For the period from January 1, 2019 to August 30, 2019 FAUs obligations to make payments to VM Energía under their respective agreements for the purchase of energy plus the service charge amounted to $376 thousand.

For the fiscal years ended December 31, 2018 and 2017, FAU and Hidro Nitro Española’s obligations to make payments to VM Energía under their respective agreements – for the purchase of energy plus the service charge – amounted to $99,939 thousand and $94,949 thousand, respectively. These contracts are similar to contracts FerroAtlántica signs with other third-party brokers.

“Other operating expenses” relates to service fees paid to Espacio Information Technology, S.A.U. for managing and maintenance services rendered related, basically, to the enterprise resource planning (‘ERP’) that some Company entities use; and other IT development projects. Additionally, in 2019 FerroAtlántica paid the sum of $2,800 thousand to Aurinka in satisfaction of any claim Aurinka PV might otherwise have in relation to the termination of the Solar JV.

"Sales and operating income" relates mainly to sales from Hidro Nitro Española to Enérgya VM for the sales made by its hydroelectric plant of $11,874 thousand and $7,419 thousand for the fiscal years ended December 31, 2018 and 2017, Hidro Nitro Española was sold out of the Company on December 31, 2018. FerroAtlántica sales to Enérgya VM for the sales made by its hydroelectric plant of $31,898 thousand and $9,803 thousand for the fiscal years ended December 31, 2018 and 2017.

During 2018 and 2017, under the solar joint venture agreement FerroAtlántica and other subsidiaries have purchased property, plant and equipment of $4,252 thousand and $3,611 thousand respectively, from Aurinka and Blue Power Corporation, S.L. In July 2019, the Solar JV was unwound. See "Item 7.B.—Related Party Transactions—Aurinka and the Solar JV."

Discontinued operations

Transactions with related parties in 2019, 2018 and 2017 are as follows:

	2019		
	Sales and Operating Income US$'000	Cost of Sales US$'000	Other Operating Expenses US$'000
Villar Mir Energía, S.L.U.	—	—	373
Enérgya VM Generación, S.L	12,635	—	117
Enérgya VM Gestión, S.L	—	66	—
Total	**12,635**	**66**	**490**

	2018		
	Sales and Operating Income US$'000	Cost of Sales US$'000	Other Operating Expenses US$'000
Villar Mir Energía, S.L.U.	—	—	664
Enérgya VM Generación, S.L	31,898	—	224
Enérgya VM Gestión, S.L	—	42	43
Total	**31,898**	**42**	**931**

	2017		
	Sales and Operating Income US$'000	Cost of Sales US$'000	Other Operating Expenses US$'000
Villar Mir Energía, S.L.U.	—	—	1,665
Enérgya VM Generación, S.L	9,802	—	114
Enérgya VM Gestión, S.L	—	—	8
Total	**9,802**	**—**	**1,787**

24. Guarantee commitments to third parties and contingent liabilities

Guarantee commitments to third parties

As of December 31, 2019 and 2018, the Company has provided bank guarantees commitments to third parties amounting $17,260 thousand and $14,427 thousand, respectively. Management believes that any unforeseen liabilities at December 31, 2019 and 2018 that might arise from the guarantees given would not be material.

Contingent liabilities

In the ordinary course of its business, Ferroglobe is subject to lawsuits, investigations, claims and proceedings, including, but not limited to, contractual disputes and employment, environmental, health and safety matters. Although we cannot predict with certainty the ultimate resolution of lawsuits, investigations, claims and proceedings asserted against it, we do not believe any currently pending legal proceeding to which it is a party will have a material adverse effect on its business, prospects, financial condition, cash flows, results of operations or liquidity.

Asbestos-related claims

Certain employees of FerroPem, SAS, then known as Pechiney Electrometallurgie, S.A. ("PEM"), may have been exposed to asbestos at its plants in France in the decades prior to FerroAtlántica Group's purchase of that business in December 2004. During the period in question, PEM was wholly-owned by Pechiney Bâtiments, S.A., which had certain indemnification obligations to FerroAtlántica pursuant to the 2004 Share Sale and Purchase Agreement under which FerroAtlántica acquired PEM. As of the date of this annual report, approximately 96 such employees have "declared" asbestos-related injury to the French social security agencies, based either on the occurrence of work accidents ("accident du travail") or on administrative recognition of an occupational disease ("*maladie professionelle*"). Of these, approximately 75 cases are closed, approximately 21 are pending before the French social security agencies or courts and, of the latter, 12 include assertions of "inexcusable negligence" ("*faute inexcusable*") which, if upheld, may lead to material liability on the part of FerroPem. Other employees may declare further asbestos-related injuries in the future, and may likewise assert inexcusable negligence. Litigation against, and material liability on the part of, FerroPem will not necessarily arise in each case, and to date a majority of such declared injuries have been minor and have not led to significant liability on Ferropem's part. Whether material liability will arise is determined case-by-case, often over a period of years, depending on, *inter alia*, the evolution of the claimant's asbestos-related condition, the possibility that the claimant was exposed while working for other employers and, where asserted, the claimant's ability to prove inexcusable negligence on PEM's part. Because of these and other uncertainties, no reliable estimate can be made of FerroPem's eventual liability in these matters, with exception of three grave cases that were litigated through the appeal process and in which claimants' assertions of inexcusable negligence were upheld against FerroPem. Liabilities in respect to asbestos-related claims have been recorded at December 31, 2019 at an estimated amount of $1,166 thousand in Provisions for litigation in progress.

Environmental matters

On August 31, 2016, the U.S. Department of Justice (the "DOJ") requested a meeting with GMI to discuss potential resolution of a July 1, 2015 NOV/FOV that GMI received from the U.S. Environmental Protection Agency (the "EPA") alleging certain violations of the Prevention of Significant Deterioration ("PSD") and New Source Performance Standards provisions of the Clean Air Act associated with a 2013 project performed at GMI's Beverly facility. Specifically, the July 2015 NOV/FOV alleges violations of the facility's existing operating and construction permits, including allegations related to opacity emissions, sulfur dioxide and particulate matter emissions, and failure to keep necessary records and properly monitor certain equipment. On January 4, 2017, GMI received a second NOV/FOV dated December 6, 2016, arising from the same facts as the July 2015 NOV/FOV and subsequent EPA inspections. The second NOV/FOV alleges opacity exceedances at certain units, failure to prevent the release of particulate emissions through the use of furnace hoods at a certain unit, and the failure to install Reasonably Available Control Measures (as defined) at certain emission units at the Beverly facility. Since that time, GMI and the authorities have exchanged information and engaged in negotiations regarding potential resolution of the NOV/FOVs, which

negotiations are ongoing. To resolve the NOVs/FOVs, GMI may be required to install additional pollution control equipment or implement other measures to reduce emissions from the facility as well as a pay civil penalty. At this time, however, GMI is unable to determine the extent of potential injunctive relief or the amount of civil penalty a negotiated resolution of this matter may entail. Should the DOJ and GMI be unable to reach a negotiated resolution of the NOVs/FOVs, the authorities could institute formal legal proceedings for injunctive relief and civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April 2013 to the present.

25. Income and expenses

25.1 Sales

Sales by segment for the years ended December 31 are as follows:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Electrometallurgy - North America	551,500	710,716	541,143
Electrometallurgy - Europe	1,049,576	1,447,973	1,083,200
Electrometallurgy - South Africa	136,292	208,543	122,504
Other segments	43,147	62,075	50,782
Eliminations	(165,293)	(187,305)	(65,353)
Total	**1,615,222**	**2,242,002**	**1,732,276**

Sales by geographical area for the years ended December 31 are as follows:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Spain	183,969	242,733	244,574
Germany	249,911	359,737	245,152
Italy	99,796	138,796	94,590
Other EU Countries	329,988	487,340	340,877
USA	533,764	674,243	547,309
Rest of World	217,794	339,153	259,774
Total	**1,615,222**	**2,242,002**	**1,732,276**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

25.2 Staff costs

Staff costs are comprised of the following for the years ended December 31:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Wages, salaries and similar expenses	208,317	263,794	221,341
Pension plan contributions	12,787	12,084	13,582
Employee benefit costs	63,925	62,984	65,112
Total	**285,029**	**338,862**	**300,035**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

25.3 Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs are comprised of the following for the years ended December 31:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Amortization of intangible assets (Note 8)	7,305	9,312	8,440
Depreciation of property, plant and equipment (Note 9)	112,824	104,532	89,924
Other write-downs and reversals	65	(7)	2,038
Total	**120,194**	**113,837**	**100,402**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

Included within other write-downs and reversals for the year ended December 31, 2017 are $1,784 thousand, relating to the change in impairment losses on uncollectible trade receivables.

25.4 Finance income and finance costs

Finance income is comprised of the following for the year ended December 31:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Finance income of related parties (Note 23)	68	72	224
Other finance income	1,312	4,786	2,185
Total	**1,380**	**4,858**	**2,409**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

Finance costs are comprised of the following for the year ended December 31:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Interest on debt instruments	33,705	34,188	28,961
Interest on loans and credit facilities	15,533	8,249	15,834
Interest on note and bill discounting	373	205	7,403
Interest on leases	1,972	119	163
Trade receivables securitization expense (Note 10)	9,192	11,708	7,256
Other finance costs	2,450	2,597	352
Total	**63,225**	**57,066**	**59,969**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

25.5 Impairment losses and net loss (gain) due to changes in the value of assets

Impairment losses and net loss (gain) due to changes in the value of assets are comprised of the following for the years ended December 31:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Impairment of goodwill (Note 7)	174,008	—	30,618
Impairment of intangible assets (Note 8)	211	16,073	443
Impairment of property, plant and equipment (Note 9)	1,224	42,846	(104)
Impairment of non-current financial assets	456	—	684
Impairment losses	**175,899**	**58,919**	**31,641**
(Increase) decrease in fair value of biological assets (Note 28)	530	7,615	(7,504)
Other loss	1,044	8	—
Net (gain) loss due to changes in the value of assets	**1,574**	**7,623**	**(7,504)**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

25.6 Loss (gain) on disposal of non-current assets

Loss (gain) on disposal of non-current assets is comprised of the following for the years ended December 31:

	2019 US$'000	2018 (*) US$'000	2017 (*) US$'000
Loss on disposal of intangible assets	—	—	503
Gain on disposal of property, plant and equipment	(353)	(2,950)	(1,779)
Loss on disposal of property, plant and equipment	1,761	162	3,733
(Gain) loss on disposal of other non-current assets	(6)	(29)	1,859
Loss (gain) on disposal of subsidiary	821	(11,747)	—
Total	**2,223**	**(14,564)**	**4,316**

(*) Our Spanish hydroelectric operations were disposed in August 2019. Accordingly, the consolidated income statements for prior periods 2018 and 2017 have been restated to reclassify the results of the Spanish energy business within "Profit (loss) for the year from discontinued operations."

On September 19, 2019, Ferroglobe closed on the sale of its subsidiary Ultracore Polska ZOO, which manufactures cored wire in Poland, recognized a loss on disposal of $821 thousand. On December, 2018, the Company completed the sale of its majority interest in its Spanish subsidiary Hidro Nitro Española S.A. to an entity sponsored by a Sapnish renewable energies fund. The Company received net cash proceeds of $20,533 thousand and recognized a gain on disposal of $11,747 thousand.

26. Remuneration of key management personnel

The remuneration of the key management personnel, which comprises the Company's management committee, during the years ended December 31 is as follows:

	2019 US$'000	2018 US$'000	2017 US$'000
Fixed remuneration	5,404	6,068	5,625
Variable remuneration	254	—	3,710
Contributions to pension plans and insurance policies	350	379	215
Share-based compensation	4,882	1,777	1,738
Termination benefits	1,147	2,284	—
Other remuneration	7	23	17
Total	**12,044**	**10,531**	**11,305**

During 2019, 2018 and 2017, no loans and advances have been granted to key management personnel.

27. Financial risk management

Ferroglobe operates in an international and cyclical industry which exposes it to a variety of financial risks such as currency risk, liquidity risk, interest rate risk, credit risk and risks relating to the price of finished goods, raw materials and power.

The Company's management model aims to minimize the potential adverse impact of such risks upon the Company's financial performance. Risk is managed by the Company's executive management, supported by the Risk Management, Treasury and Finance functions. The risk management process includes identifying and evaluating financial risks in conjunction with the Company's operations and quantifying them by project, region and subsidiary. Management provides written policies for global risk management, as well as for specific areas such as foreign currency risk, credit risk, interest rate risk, liquidity risk, the use of hedging instruments and derivatives, and investment of surplus liquidity.

The financial risks to which the Company is exposed in carrying out its business activities are as follows:

a) Market risk

Market risk is the risk that the Company's future cash flows or the fair value of its financial instruments will fluctuate because of changes in market prices. The primary market risks to which the Company is exposed comprise foreign currency risk, interest rate risk and risks related to prices of finished goods, raw materials and power.

Foreign currency risk

Ferroglobe generates sales revenue and incurs operating costs in various currencies. The prices of finished goods are to a large extent determined in international markets, primarily in US dollars and Euros. Foreign currency risk is partly mitigated by the generation of sales revenue, the purchase of raw materials and other operating costs being denominated in the same currencies. Although it has done so on occasions in the past, and may decide to do so in the future, the Company does not generally enter into foreign currency derivatives in relation to its operating cash flows. At December 31, 2019, and December 31, 2018, the Company was not party to any foreign currency forward contracts.

In February 2017, the Company completed a restructuring of its finances which included the issue of $350,000 thousand of senior unsecured Notes due 2022 (see Note 18) and the repayment of certain existing indebtedness denominated in a number of currencies across its subsidiaries. The Company is exposed to foreign exchange risk as the interest and principal of the Notes is payable in US dollars, whereas its operations principally generate a combination of US dollar and Euro cash flows. Following approval by the Board, the Company entered into a cross currency interest rate swap to exchange 55% of the principal and interest payments in US dollars for principal and interest payments in Euros (see Note 19). The Company has designated a proportion of the cross currency swap as a cash flow hedge (see Note 19), with the remainder accounted for at fair value through profit or loss.

Interest rate risk

Ferroglobe is exposed to interest rate risk in respect of its financial liabilities that bear interest at floating rates. These primarily comprise credit facilities (see Note 16).

During the year ended December 31, 2019 and 2018, the Company did not enter into any interest rate derivatives in relation to its interest bearing credit facilities. At December 31, 2019, the Company had drawn down $62,835 thousand under its credit facilities (2018: $135,919).

b) Credit risk

Credit risk refers to the risk that a customer or counterparty will default on its contractual obligations resulting in financial loss. The Company's main credit risk exposure related to financial assets is set out in Note 10 and includes trade receivables, other receivables and other financial assets.

Trade receivables consist of a large number of customers, spread across diverse industries and geographical areas. The Company has established policies, procedures and controls relating to customer credit risk management. Ongoing credit evaluation is performed on the financial condition of accounts receivable and, where appropriate, the Company insures its trade receivables with reputable credit insurance companies.

Since August 2017, the Company has operated an accounts receivable securitization program (see Note 10).

c) Liquidity risk

The purpose of the Company's liquidity and financing policy is to ensure that the Company keeps sufficient funds available to meet its financial obligations as they fall due. The Company's main sources of financing are as follows:

- $350,000 thousand aggregate principal amount of 9.375% senior unsecured notes due March 1, 2022 (the "Notes"). The proceeds from the Notes, issued by Ferroglobe and Globe (together, the "Issuers") on February 15, 2017, were primarily used to repay certain existing indebtedness of the Parent Company and its subsidiaries. Interest is payable semi-annually on March 1 and September 1 of each year. If Ferroglobe

experiences a change of control, the Company is required to offer to redeem the Notes at 101% of their principal amount (further information below).

- $150,000 thousand Accounts Receivables Securitization Program. Trade receivables held by the Company's subsidiaries in Spain and France are sold to a special purpose "designated activity company" domiciled and incorporated in Ireland (the "SPE"). Eligible receivables are sold to the SPE on an on-going basis at an agreed upon purchase price of approximately 98% (2018: 99%) of their invoiced amount. The program has a two-year term until December 10, 2021. In respect of trade receivables outstanding at December 31, 2019 the SPE had provided upfront cash consideration of approximately $58,339 thousand (2018: $227,360 thousand).

- $100,000 thousand North-American asset-based, revolving credit facility. Loans under the ABL Revolver may be borrowed, repaid and reborrowed at any time until the facility's expiration date. The legal final maturity date of the ABL Revolver is October 11, 2024. The terms of the facility provide a spring forward provision which requires the ABL Revolver to be repaid on the date which is three months prior to the maturity date of the senior unsecured Notes (March 1, 2022), which would currently imply a facility repayment date of December 1, 2021. At December 31, 2019 $58,049 thousand was utilized.

The Indenture governing the Notes includes change of control provisions that would require the Company to offer to redeem the outstanding Notes at a purchase price in cash equal to 101% of the principal amount of the Notes, plus any accrued and unpaid interest in the event of a change of control. A change in control is defined in the indenture as the occurrence of any of the following:

1. If the Company becomes aware, that any person or group, other than one of the Permitted Holders (which is defined as Grupo Villar Mir (GVM), Alan Kestenbaum or members of senior management) or affiliates of those Permitted Holders, directly or indirectly controls 35% or more of the Company's voting stock and the aggregate voting stock of the Permitted Holders is the same or a lesser percentage;
2. If the Company sells or otherwise disposes of all or substantially all of its assets;
3. If the Company ceases to hold directly or indirectly 100% of the capital stock of Globe; or
4. If the shareholders or the Company or the U.S. subsidiary approve the liquidation or dissolution of either the Company or Globe.

GVM currently owns approximately 54% of the Company's voting stock, and a significant majority of GVM's shares in the Company are pledged as collateral for GVM's obligations to certain of its lenders. A change of control may occur if a person other than a Permitted Holder were to acquire 35% or more of the Company's outstanding shares at a time when the Permitted Holders held an equal or lesser percentage. While GVM maintains its current shareholding, a change of control cannot occur. Based on the provisions cited above, a change of control as defined in the Indenture is unlikely to occur but the matter it is beyond the Company's control. If a change of control were to occur, the company may not have sufficient financial resources available to satisfy all of its obligations.

Management has evaluated the potential impact from the coronavirus outbreak on the Company results of operations and liquidity finding difficult to develop a reliable estimate of the potential impact on the results of operations and cash flow at this time, but the downside scenario analysis supports an expectation that the Company will have cash headroom to continue to operate throughout the following twelve months (see Note 3).

Quantitative information

i. Interest rate risk:

At December 31, the Company's interest-bearing financial liabilities were as follows:

	2019		
	Fixed rate	**Floating rate**	**Total**
	US$'000	**US$'000**	**US$'000**
Bank borrowings	—	158,999	158,999
Obligations under lease agreements	—	25,872	25,872
Debt instruments	354,951	—	354,951
Other financial liabilities (*)	56,939	—	56,939
	411,890	**184,871**	**596,761**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments (see Note 19).

	2018		
	Fixed rate	**Floating rate**	**Total**
	US$'000	**US$'000**	**US$'000**
Bank borrowings	—	141,012	141,012
Obligations under finance leases	—	66,471	66,471
Debt instruments	352,594	—	352,594
Other financial liabilities (*)	61,849	—	61,849
	414,443	**207,483**	**621,926**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments (see Note 19).

In respect of the above financial liabilities, at December 31, 2019, the Company had no floating to fixed interest rate swaps in place covering its exposure to floating interest rates (2018: 31%).

Analysis of sensitivity to interest rates

At December 31, 2019, an increase of 1% in interest rates would have given rise to additional borrowing costs of $2,232 thousand (2018: $1,425 thousand).

ii. Foreign currency risk:

Notes and cross currency swap

The Parent Company is exposed to exchange rate fluctuations as it has a Euro functional currency and future commitments to pay interest and principal in US dollars in respect of its outstanding debt instruments of $150,000 thousand (see Note 18). To manage this foreign currency risk, the Parent Company has entered into a cross currency swap and designated a portion of this as an effective cash flow hedge of the future interest and principal amounts due on its debt instruments. As discussed in Note 19, the notional amount of the cross currency swap exceeds the principal amount of the Parent Company's debt instruments by $42,500 thousand and therefore a portion of the cross currency swap is not designated as a hedge and is accounted for at fair value through profit or loss. The Company has performed a sensitivity analysis that indicates that if the Euro was to strengthen (weaken) against the US Dollar by 10% it would record a loss (gain) of $4,724 thousand in respect of the portion of the cross currency swap accounted for at fair value through profit or loss (2018: $4,615 thousand).

In March, 2020, the Company closed out the cross currency swap (see note 30).

Foreign currency swaps in relation to trade receivables and trade payables

At December 31, 2019 and 2018, the Company has no foreign currency swaps in place in respect of foreign currency accounts receivable and accounts payable.

iii. Liquidity risk:

The table below summarizes the maturity profile of the Company's financial liabilities at December 31, 2019, based on contractual undiscounted payments. The table includes both interest and principal cash flows. The cash flows for debt instruments assume that principal of the Notes is repaid at maturity in March 2022 (see Note 18).

	2019				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Bank borrowings	23,743	163,154	—	—	186,897
Leases	10,161	7,356	10,213	911	28,641
Debt instruments	32,813	32,813	366,406	—	432,032
Financial loans from government agencies	27,311	10,527	15,992	9,513	63,343
Derivative financial instruments	2,049	2,049	(4,911)	—	(813)
Payables to related parties	4,830	—	—	—	4,830
Payable to non-current asset suppliers	7,283	182	—	—	7,465
Contingent consideration	1,626	5,006	18,170	8,916	33,718
Trade and other payables	189,229	—	—	—	189,229
	299,045	**221,087**	**405,870**	**19,340**	**945,342**

	2018				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Bank borrowings	8,191	—	132,821	—	141,012
Finance leases	12,999	13,817	39,655	—	66,471
Debt instruments	32,813	32,813	399,219	—	464,845
Financial loans from government agencies	58,758	6,996	1,822	507	68,083
Derivative financial instruments	(491)	(939)	7,559	—	6,129
Payables to related parties	11,128	—	—	—	11,128
Payable to non-current asset suppliers	11,648	99	—	—	11,747
Contingent consideration	3,103	6,193	18,530	12,758	40,584
Trade and other payables	256,823	—	—	—	256,823
	394,972	**58,979**	**599,606**	**13,265**	**1,066,822**

The amounts disclosed in the table above for derivative financial instruments are the net undiscounted cash flows. The following table shows the gross inflows and outflows and the corresponding reconciliation of those amounts to the net carrying value of the derivatives.

	2019				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Inflows	18,047	18,047	201,523	—	237,617
Outflows	(15,998)	(15,998)	(206,434)	—	(238,430)
Net cash flow	2,049	2,049	(4,911)	—	(813)
Discounted at the applicable interbank rates	1,859	1,437	(12,896)	—	(9,600)

	2018				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Inflows	18,047	18,047	219,570	—	255,664
Outflows	(17,556)	(17,108)	(227,129)	—	(261,793)
Net cash flow	491	939	(7,559)	—	(6,129)
Discounted at the applicable interbank rates	82	52	(23,597)	—	(23,463)

Changes in liabilities arising from financing activities

The changes in liabilities arising from financing activities during the year ended December 31, 2019 and 2018 were as follows:

	January 1, 2019	Changes from financing cash flows	Effect of changes in foreign exchange rates	Changes in fair values	Change in scope of consolidation	Other changes	December 31, 2019
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Bank borrowings	141,012	(98,989)	(1,485)	—	112,226	6,235	158,999
Obligations under finance leases	66,471	(55,352)	(1,895)	—	—	16,648	25,872
Debt instruments	352,594	—	—	—	—	2,357	354,951
Financial loans from government agencies (Note 19)	61,849	—	(1,147)	—	—	(3,763)	56,939
Derivative financial instruments (Note 19)	23,463	—	(532)	(12,770)	—	(561)	9,600
Total liabilities from financing activities	**645,389**	**(154,341)**	**(5,059)**	**(12,770)**	**112,226**	**20,916**	**606,361**
Dividends paid		—					
Proceeds from stock option exercises		—					
Other amounts paid due to financing activities		(26,631)					
Payments to acquire or redeem own shares		—					
Net cash (used) by financing activities		**(180,972)**					

	January 1, 2018	Changes from financing cash flows	Effect of changes in foreign exchange rates	Changes in fair values	Change in scope of consolidation	Other changes	December 31, 2018
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Bank borrowings	1,003	140,781	(772)	—	—	—	141,012
Obligations under finance leases	82,633	(12,948)	(3,214)	—	—	—	66,471
Debt instruments	350,270	—	—	—	—	2,324	352,594
Financial loans from government agencies (Note 19)	99,391	(33,096)	(4,446)	—	—	—	61,849
Derivative financial instruments (Note 19)	38,040	—	(1,677)	(12,841)	—	(59)	23,463
Total liabilities from financing activities	**571,337**	**94,737**	**(10,109)**	**(12,841)**	**—**	**2,265**	**645,389**
Dividends paid		**(20,642)**					
Proceeds from stock option exercises		240					
Other amounts paid due to financing activities		(932)					
Payments to acquire or redeem own shares		(20,100)					
Net cash provided by financing activities		**53,303**					

28. Fair value measurement

Fair value of assets and liabilities that are measured at fair value on a recurring basis

The following table provides the fair value measurement hierarchy of the Company's assets and liabilities that are carried at fair value in the statement of financial position:

	December 31, 2019			
	Total US$'000	Quoted prices in active markets (Level 1) US$'000	Significant observable inputs (Level 2) US$'000	Significant unobservable inputs (Level 3) US$'000
Other financial assets (Note 10):				
Listed equity securities	**5,544**	5,544	—	—
Other financial liabilities (Note 19):				
Derivative financial instruments - cross currency swap	**(9,600)**	—	(9,600)	—
Derivative financial instruments - interest rate swaps	**—**	—	—	—
Other liabilities (Note 21)				
Contingent consideration in a business combinations	**(21,965)**	—	—	(21,965)

	December 31, 2018			
	Total US$'000	Quoted prices in active markets (Level 1) US$'000	Significant observable inputs (Level 2) US$'000	Significant unobservable inputs (Level 3) US$'000
Other assets (Note 12):				
Biological assets	**7,790**	—	—	7,790
Other financial assets (Note 10):				
Debt investments	**67,079**	—	—	67,079
Listed equity securities	**2,523**	2,523	—	—
Other financial liabilities (Note 19):				
Derivative financial instruments - cross currency swap	**(20,384)**	—	(20,384)	—
Derivative financial instruments - interest rate swaps	**(3,079)**	—	(3,079)	—
Other liabilities (Note 21)				
Contingent consideration in a business combinations	**(26,222)**	—	—	(26,222)

Cross currency swap

The cross currency swap is valued using a discounted cash flow technique. The valuation model incorporates foreign exchange spot and forward rates, yield curves of the respective currencies, currency basis spreads between the respective currencies and forward interest rates. The valuation also incorporates a credit risk adjustment, calculated based on credit spreads derived from current credit default swap prices (see Note 19).

The fair value of the swap at December 31, 2019 was a liability of $9,600 thousand, which is categorized as a level 2 measurement in the fair value hierarchy as it is based on valuation techniques for which the inputs are directly or indirectly observable. The fair value is calculated as the present value of the estimated future cash flows and is subject to a credit risk adjustment that reflect the credit risk of the Company; this is calculated based on credit spreads derived from current credit default swap prices.

In March, 2020, the Company closed out the cross currency swap resulting in the receipt of cash proceeds of $3,608 thousand

Interest rate swaps

Interest rate swaps are valued using a discounted cash flow technique. Future cash flows are estimated based on forward interest rates (from observable yield curves at the end of the reporting period) and contract interest rates, discounted at a rate that reflects the credit risk of various counterparties.

Biological assets

Biological assets comprise timber farms in South Africa, which are a source of raw materials used for the production of silicon metal. The timber farms plantations are measured at fair value less the incremental costs to be incurred until the related products are at the point of sale. The changes in the fair value of this asset are recognized in the income statement in the line “net gain (loss) due to changes in the value of assets” (see Note 25.5).

During the year ended December 31, 2019, the Company divested of certain timber farm plantations and associated property, plant and equipment, which resulted in proceeds of $8,668 thousand.

The fair value of the remaining timber farm plantations at December 31, 2019 is based on indicative offers received. In the prior year, the fair value of the biological assets was based on a valuation model for which the key assumptions were as follows:

- the arm's length price (market price) used by the market for wood of varying ages;
- the wood pulp industry Mean Annual Increment (MAI) index of 15 for gum and 10.5 for pine is used to determine the annual growth rate of the plantations; and
- the density index used to convert cubic meters of wood to metric tons is 0.94 for pine and 1 for wood pulp.

The changes in fair value of biological assets classified at level 3 in the hierarchy were as follows:

	Level 3 US$'000
January 1, 2018	**27,279**
Loss recognised in profit or loss (Note 25.5)	(7,615)
Disposal of biological assets	(12,168)
Translation differences	294
December 31, 2018	**7,790**
Loss recognised in profit or loss (Note 25.5)	(530)
Disposal of biological assets	(7,365)
Translation differences	105
December 31, 2019	**—**

29. Non-current assets held for sale and discontinued operations

Discontinued operations

On June 2, 2019 the Company entered into an agreement with Kehlen Industries Management, S.L., a wholly-owned subsidiary of TSSP Adjacent Opportunities Partners, L.P., for the sale of the entire share capital of FerroAtlántica, S.A.U ("FAU"), the owner and operator of the Group's hydro-electric assets in Galicia (the “Spanish Hydroelectric Business”) and its smelting facility at Cee-Dumbria. The Spanish Hydroelectric Business was classified as disposal group held for sale in the second quarter of 2019 and has been accounted for as a discontinued operation. Prior to completion of the sale, all other assets of FAU unrelated to the Spanish Hydroelectric Business and the Cee-Dumbria smelting facility were transferred to other Group entities.

Following the satisfaction of conditions precedent, the sale of FAU completed on August 30, 2019, resulting in gross cash proceeds of $177,627 thousand and a profit on disposal of $85,102 thousand. Under the terms of the transaction, the Group will become exclusive off-taker of finished products produced at the smelting plant at Cee-Dumbria and supplier of key raw materials to that facility pursuant to a tolling agreement expiring in 2060.

Analysis of the result for the period from the discontinued operations

The results of the discontinued operations included in the (loss) profit after taxes from discontinued operations are set out below. The comparative results of the Spanish Hydroelectric Business at December 31, 2019, 2018 and 2017 have been represented them as profit (loss) from discontinued operations.

The profit and loss statement from discontinued operations is as follows:

	2019 US$'000	2018 US$'000	2017 US$'000
Sales	13,164	32,035	9,417
Cost of sales	(271)	(677)	(120)
Other operating income	365	193	99
Staff costs	(1,450)	(2,201)	(1,928)
Other operating expense	(1,995)	(6,370)	(5,527)
Depreciation and amortization charges, operating allowances and write-downs	(2,830)	(5,300)	(4,128)
Impairment losses	—	—	684
Gain on sale of discontinued operation	85,102	—	—
Operating Profit (loss)	**92,085**	**17,680**	**(1,503)**
Net finance expense	(6,433)	(4,440)	(4,143)
(LOSS) PROFIT BEFORE TAXES FROM DISCONTINUED OPERATIONS	**85,652**	**13,240**	**(5,646)**
Income tax expense	(1,015)	(3,776)	596
(LOSS) PROFIT AFTER TAXES FROM DISCONTINUED OPERATIONS	**84,637**	**9,464**	**(5,050)**

Basic earnings (loss) per ordinary share are calculated by dividing the consolidated profit (loss) for the year attributable to the Discontinued Operations by the weighted average number of ordinary shares outstanding during the year, excluding the average number of treasury shares held in the year, if any. Dilutive earnings (loss) per share assumes the exercise of stock options, provided that the effect is dilutive. The Earnings per share is showed as follows:

	2019	2018	2017
Basic earnings (loss) per ordinary share computation			
Numerator:			
Profit (loss) attributable to Discontinued Operations (US$'000)	84,637	9,464	(5,050)
Denominator:			
Weighted average basic shares outstanding	169,152,905	171,406,272	171,949,128
Basic earnings (loss) per ordinary share (US$)	**0.50**	**0.05**	**(0.02)**
Diluted earnings (loss) per ordinary share computation			
Numerator:			
Profit (loss) attributable to Discontinued Operations (US$'000)	84,637	9,464	(5,050)
Denominator:			
Weighted average basic shares outstanding	169,152,905	171,406,272	171,949,128
Effect of dilutive securities	—	123,340	—
Weighted average dilutive shares outstanding	169,152,905	171,529,612	171,949,128
Diluted earnings (loss) per ordinary share (US$)	**0.50**	**0.05**	**(0.02)**

The statement of cash flows from discontinued operations is showed as follows:

	2019 US$'000	2018 US$'000
Cash flows from operating activities:		
Profit for the period	**84,637**	**9,464**
Adjustments to reconcile net (loss) profit to net cash provided by operating activities:		
Income tax expense (benefit)	1,015	3,776
Depreciation and amortization charges, operating allowances and write-downs	2,830	5,300
Net Finance expense	6,433	4,440
Gains on disposals of non-current and financial assets	(85,102)	—
Changes in working capital		
Decrease / (increase) in accounts receivable	(10,341)	3,280
Decrease / (increase) in inventories	2	3
Increase / (Decrease) in accounts payable	89	(1,826)
Other changes in operating assets and liabilities		
Other, net	69,243	(5,218)
Income tax paid	—	—
Interest paid	(2,307)	(962)
Total cash flow from operating activities	**66,499**	**18,257**
Cash flows from investing activities:		
Payments due to investments:		
Property, plant and equipment	(126)	(6,135)
Disposals:		
Disposal of business, net of cash	—	—
Total cash flow from investing activities	**(126)**	**(6,135)**
Cash flows from financing activities:		
Other financing activities	(66,457)	(12,355)
Total cash flow from financing activities	**(66,457)**	**(12,355)**
INCREASE / (DECREASE) IN CASH	**(84)**	**(233)**
CASH AT BEGINNING OF PERIOD	108	341
CASH AT END OF PERIOD	**24**	**108**

30. Events after the reporting period

New receivables funding agreement

On February 6, 2020, the Company entered into an amended and restated accounts receivables securitization program (the "Amended Program") where trade receivables held by certain of the Company's subsidiaries in Spain and France (the "Originators") are financed, either directly or indirectly (through a French fonds commun de titrisation named "FCT Ferro" (the "FCT")), by a special purpose "designated activity company" domiciled and incorporated in Ireland (the "SPE"). The constitution of the FCT into the Amended Program allowed for the sale of certain EUR denominated receivables that were not eligible under the previous structure and increased the available funding from the SPE to the Originators.

Subsequent to entering into the Amended Program, the Company has repaid $34,500 thousand of senior loans in order to optimise the level of borrowings of the SPE with the level of receivables in the securitization. There has been no change to the senior lender's maximum commitment of $150,000 thousand and the Company can request additional senior loans up to the maximum commitment when needed.

Impact of COVID-19 pandemic in Company´s business

In early 2020, the outbreak of coronavirus disease ("COVID-19") in China spread to other jurisdictions, including locations where the Company conducts business. As of the date of the issuance of the consolidated financial statements, the COVID-19 outbreak has not yet had a material effect on the Company's liquidity or financial position. Management continue to monitor the impact that the COVID-19 pandemic is having on the Company, the specialty chemical industry and the economies in which the Company operates. Given the speed and frequency of continuously evolving developments with respect to this pandemic and the uncertainties this may bring for the Company and the demand for its products it is difficult to forecast the level of trading activities and hence cash flow in the next twelve months. Management have developed an impact assessment to stress test and assess potential responses to a downside scenario. The assessment involves application of key assumptions around market demand and prices, including the extent of the decrease that might be experienced in summer 2020 and the subsequent timing and level of recovery. Additionally, judgment is required around the level and extent of mitigating actions such as reductions in operating costs and capital expenditure. Developing a reliable estimate of the potential impact on the results of operations and cash flow at this time is difficult as markets and industries react to the pandemic and the measures implemented in response to it, but the downside scenario analysis supports an expectation that the Company will have cash headroom to continue to operate throughout the following twelve months. The key assumption underlying this assessment is a recovery in forecast trading activity in the latter part of 2020.

Cancellation of Cross-currency swap

In March, 2020, the Company closed out the cross currency swap (see Note 28) resulting in the receipt of cash proceeds of $3,608 thousand.

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of May 25, 2020, the ordinary shares of Ferroglobe PLC ("Ordinary Shares") constitute the only class of securities it has registered under Section 12 of the Securities Exchange Act of 1934, as amended.

Description of Ordinary Shares

The following description is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Articles of Association adopted 26 October 2017 (the "Articles of Association"), which are incorporated by reference as an exhibit to the Annual Report on Form 20-F of which this Exhibit 2.1 is a part. We encourage you to read our Articles of Association for additional information.

Authorized Share Capital

Our authorized share capital consists of 170,863,773 Ordinary Shares, $0.01 par value per share. The outstanding Ordinary Shares are fully paid. Of the 170,863,773 Ordinary Shares in issue, 1,703,863 shares are held in treasury as of May 25, 2020.

Voting Rights

Each of the Ordinary Shares has one vote attaching to it for voting purposes in respect of all matters on which voting shares in the capital of the Company have voting rights and shall form a single class with the other voting shares in the capital of the Company for such purposes. The holders of Ordinary Shares shall be entitled to receive notice of, attend and speak at and vote at, general meetings of the Company. The Company's Ordinary Shares do not have cumulative voting rights.

Dividend Rights

Holders of Ordinary Shares are entitled to receive dividends, if any, as may be declared from time to time by the Board of Directors in its discretion out of funds legally available for the payment of dividends.

Liquidation Rights

Holders of Ordinary Shares will share rateably in all assets legally available for distribution to our shareholders in the event of dissolution.

Other Rights and Preferences

Our Ordinary Shares have no redemption provisions or preemptive, conversion or exchange rights.

Listing

The Ordinary Shares are traded on the Nasdaq Global Select Stock Market under the trading symbol "GSM."

Exhibit 4.4

Execution Version

CREDIT AND SECURITY AGREEMENT

PNC BANK, NATIONAL ASSOCIATION
(AS AGENT)

AND

THE OTHER LENDERS FROM TIME TO TIME THAT
ARE PARTY HERETO

WITH

GLOBE SPECIALTY METALS, INC.,
QSIP CANADA ULC,
AND EACH PERSON THAT IS JOINED TO THIS AGREEMENT
AS A BORROWER FROM TIME TO TIME
(BORROWERS)

AND

THE OTHER CREDIT PARTIES THAT
ARE PARTY HERETO

October 11, 2019

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LIST OF EXHIBITS AND SCHEDULES

Exhibits

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CREDIT AND SECURITY AGREEMENT

Credit and Security Agreement dated as of October 11, 2019 among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower and each other Person joined or party hereto as a borrower from time to time, collectively, the "Borrowers", and each a "Borrower"), each other Credit Party party hereto from time to time, the financial institutions which are now or which hereafter become a party hereto (collectively, the "Lenders" and each individually a "Lender") and PNC BANK, NATIONAL ASSOCIATION ("PNC"), as agent for Lenders (PNC, in such capacity, the "Agent").

IN CONSIDERATION of the mutual covenants and undertakings herein contained, Borrowers, the other Credit Parties party hereto, Lenders and Agent hereby agree as follows:

I. DEFINITIONS.

1.1 Accounting Terms. As used in this Agreement, the Other Documents or any certificate, report or other document made or delivered pursuant to this Agreement, accounting terms not defined in Section 1.2 or elsewhere in this Agreement and accounting terms partly defined in Section 1.2 to the extent not defined shall have the respective meanings given to them under IFRS; provided, however, that, whenever such accounting terms are used for the purposes of determining compliance with financial covenants in this Agreement, such accounting terms shall be defined in accordance with IFRS as in effect on the Closing Date applied on a basis consistent with those used in preparing the Statements referred to in Section 5.6(a). If there occurs after the Closing Date any change in IFRS that affects in any respect the calculation of any covenant contained in this Agreement or the definition of any term defined under IFRS used in such calculations, Agent, Lenders and Borrowers shall negotiate in good faith to amend the provisions of this Agreement that relate to the calculation of such covenants with the intent of having the respective positions of Agent, Lenders and Borrowers after such change in IFRS conform as nearly as possible to their respective positions as of the Closing Date; provided that, until any such amendments have been agreed upon, the covenants in this Agreement shall be calculated as if no such change in IFRS had occurred and Borrowers shall provide additional financial statements or supplements thereto, attachments to Compliance Certificates and/or calculations regarding financial covenants as Required Lenders may reasonably require in order to provide the appropriate financial information required hereunder both reflecting any applicable changes in IFRS and as necessary to demonstrate compliance with any covenant contained in this agreement before giving effect to the applicable changes in IFRS.

1.2 General Terms. For purposes of this Agreement the following terms shall have the following meanings:

"2022 Indenture" shall mean the Indenture dated February 15, 2017 among Holdings and US Borrower, as issuers thereunder, certain guarantors party thereto and Wilmington Trust National Association, as trustee, registrar, transfer agent and paying agent (as amended, restated, replaced, supplemented or otherwise modified from time to time in accordance with the terms hereof).

"2022 Notes" shall mean the 9.375% senior notes due March 1, 2022 issued by Holdings and US Borrower pursuant to, and governed by, the 2022 Indenture.

"ABL Priority Collateral" shall mean any and all of the following that constitute Collateral: (a) all accounts (other than accounts arising under agreements for sale of Non-ABL Priority Collateral described in clauses (a) through (d) of the definition of such term to the extent constituting identifiable proceeds of such Non-ABL Priority Collateral), (b) all payment intangibles and all other rights of payment, including all corporate and other tax refunds and all credit card receivables and all other rights to payment arising therefrom in a credit-card, debit- card, prepaid-card or other payment-card transaction (other than any payment intangibles constituting identifiable proceeds of Non-ABL Priority Collateral described in clauses (a) through (e) of the definition of such term); (c) all inventory; (d) all deposit accounts, securities accounts and commodity accounts and all cash, cash equivalents and other assets contained in, or credit to, and all securities entitlements arising from, any such deposit accounts, securities accounts or commodity accounts (in each case, other than any identifiable proceeds of Non-ABL Priority Collateral described in clauses (a) through (e) of the definition of such term); (e) all claims under, proceeds of and rights to business interruption insurance and all claims under, proceeds of and rights to credit insurance with respect to any accounts (in each case, regardless of whether Agent is a loss payee thereof); (f) to the extent evidencing, governing, securing or otherwise relating to any of the items constituting ABL Priority Collateral under clauses (a) through (e) above, (i) all general intangibles (excluding Intellectual Property and any equity interests in any Credit Party or any Subsidiary of a Credit Party, but including Indebtedness (or any evidence thereof) between or among the Credit Parties and the Subsidiaries of the Credit Parties, all contract rights as against operators of storage facilities and as against other transporters of Inventory and all rights as consignor or consignee, whether arising by contract, statute or otherwise), (ii) instruments (including promissory notes), (iii) documents (including each warehouse receipt or bill of lading covering any Inventory), (iv) claims under, proceeds of and rights to insurance policies (regardless of whether Agent is a loss payee thereof), (v) licenses from any Governmental Authority to sell or to manufacture any Inventory and (vi) chattel paper; (g) all collateral and guarantees given by any other Person with respect to any of the foregoing, and all other supporting obligations (including letters of credit and letter-of-credit rights) with respect to any of the foregoing; (h) all books and records (including customer lists) to the extent relating to any of the foregoing; and (i) all products and proceeds of the foregoing. Notwithstanding the foregoing, the term "ABL Priority Collateral" shall not include any assets referred to in clauses (a) through (e) of the definition of the term "Non-ABL Priority Collateral".

"Account Grace Period" shall have the meaning set forth in the definition of "Controlled Accounts".

"Activation Instruction" shall have the meaning set forth in Section 4.8(g).

"Adjustment Date" shall have the meaning set forth in the definition of "Applicable Margin".

"Advance Rates" shall have the meaning set forth in Section 2.1(a)(ii).

"Advances" shall mean and include the Revolving Advances (including Protective Advances and Intentional Overadvances), Letters of Credit, Letter of Credit Borrowings and the Swing Loans.

"Affected Lender" shall have the meaning set forth in Section 3.12.

"Affiliate" of any Person shall mean any other Person (a) which directly or indirectly controls, is controlled by, or is under common control with such Person, (b) which beneficially owns or holds 10% or more of any class of the voting or other equity interests of such Person or (c) 10% or more of any class of voting interests or other equity interests of which is beneficially owned or held, directly or indirectly, by such Person. For purposes of this definition, "control" of a Person means the power, directly or indirectly, to direct or cause the direction of the management and policies of such Person, whether by contract or otherwise.

"Agent" shall have the meaning set forth in the preamble to this Agreement and shall include its successors and assigns.

"Agreement" shall mean this Credit and Security Agreement, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"Alternate Base Rate" shall mean, for any day, a rate per annum equal to the highest of (a) the Base Rate in effect on such day, (b) the sum of the Overnight Bank Funding Rate in effect on such day plus one-half of one percent (0.5%), and (c) the sum of the Daily LIBOR Rate in effect on such day plus one percent (1.0%), so long as a Daily LIBOR Rate is offered, ascertainable and not unlawful. Any change in the Alternate Base Rate (or any component thereof) shall take effect at the opening of business on the day such change occurs.

"AML Legislation" shall have the meaning set forth in Section 16.19(a).

"Anti-Terrorism Laws" shall mean any Laws relating to terrorism, trade sanctions programs and embargoes, import/export licensing, money laundering or bribery, and any regulation, order, or directive promulgated, issued or enforced pursuant to such Laws, in each case, applicable to such Person, all as amended, supplemented or replaced from time to time.

"Applicable Law" shall mean all Laws applicable to the Person, conduct, transaction, covenant, or contract in question.

"Applicable Margin" shall mean, with respect to any Revolving Advances and Swing Loans: (a) as of the Closing Date and through the first day of the first full calendar quarter following the Closing Date, the applicable percent per annum set forth in Level III below, and (b) thereafter, effective as of the first day of each calendar quarter (each such day, including the first day of the first full calendar quarter following the Closing Date, an "Adjustment Date"), the applicable percent per annum set forth in the pricing table below corresponding to the Average Undrawn Availability for the most recently completed calendar quarter prior to the applicable Adjustment Date:

Level	Average Undrawn Availability	Applicable Eurodollar Rate Margin	Applicable Domestic Rate Margin
I	> 66.7%	2.50%	1.50%
II	≤ 66.7% but > 33.3%	2.75%	1.75%
III	≤ 33.3%	3.00%	2.00%

"Application Date" shall have the meaning set forth in Section 2.8(b).

"Application Event" shall mean the occurrence of (a) a failure by Borrowers to repay all of the Obligations in full on the Maturity Date or if sooner, the date the Obligations are declared due and payable pursuant to the terms hereof, or (b) an Event of Default and the election by Required Lenders to require that payments and proceeds of Collateral be applied pursuant to Section 11.5.

"Approved Electronic Communication" shall mean each notice, demand, communication, information, document and other material transmitted, posted or otherwise made or communicated by e-mail, E-Fax, the Credit Management Module of PNC's PINACLE® system, or any other equivalent electronic service agreed to by Agent, whether owned, operated or hosted by Agent, any Lender, any of their Affiliates or any other Person, that any party is obligated to, or otherwise chooses to, provide to Agent pursuant to this Agreement or any Other Document, including any financial statement, financial and other report, notice, request, certificate and other information material; provided that Approved Electronic Communications shall not include any notice, demand, communication, information, document or other material that Agent specifically instructs a Person to deliver in physical form.

"Approved Fund" shall mean any fund that is engaged in making, purchasing, holding or investing in bank loans and similar extensions of credit in the ordinary course of business and that is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) an entity, or an Affiliate of an entity, that administers or manages a Lender.

"Asset Sale" shall mean any direct or indirect sale, lease, transfer, conveyance and other disposition (or series of related sales, leases, transfers, conveyances or other dispositions) by any Credit Party or any of its Subsidiaries to any Person (other than a Credit Party or by a Subsidiary that is not a Credit Party to another Subsidiary that is not a Credit Party) of (a) any of the Equity Interests of any of any Credit Party's Subsidiaries, (b) all or substantially all of the assets of any division or line of business of any Credit Party or any of its Subsidiaries or (c) any other assets (whether tangible or intangible) of any Credit Party or any of its Subsidiaries.

"Average Undrawn Availability" shall mean, for any calendar quarter, an amount equal to the average daily Undrawn Availability during such calendar quarter.

"Bail-In Action" shall mean the exercise of any Write-Down and Conversion Powers.

"Bail-In Legislation" shall mean (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) in relation to any other state, any analogous law or regulation from time to time which requires contractual recognition of any Write-down and Conversion Powers contained in that law or regulation.

"Bank Product Provider" shall have the meaning set forth in Section 14.17.

"Base Rate" shall mean the interest rate per annum announced from time to time by Agent at its principal office in Pittsburgh, Pennsylvania as its then prime rate, which rate may not be the lowest or most favorable rate then being charged commercial borrowers or others by Agent. Any change in the Base Rate shall take effect at the opening of business on the day such change is announced.

"Beneficial Owner" shall mean, for each Borrower and solely to the extent such information is required to be certified under the Beneficial Ownership Regulation, each of the following: (a) each individual, if any, who, directly or indirectly, owns 25% or more of such Borrower's Equity Interests; and (b) a single individual with significant responsibility to control, manage, or direct such Borrower.

"Beneficial Ownership Regulation" shall mean 31 CFR § 1010.230.

"Benefited Lender" shall have the meaning set forth in Section 2.6(e).

"BIA" means the Bankruptcy and Insolvency Act (Canada).

"Blocking Law" shall mean (a) any provision of Council Regulation (EC) No 2271/1996 of 22 November 1996 (or any law or regulation implementing such Regulation in any member state of the European Union or the United Kingdom), (b) section 7 of the German Foreign Trade Regulation (*Außenwirtschaftsverordnung*) or (c) any similar blocking or anti-boycott law in the United Kingdom.

"Borrower" or "Borrowers" shall have the meaning set forth in the preamble to this Agreement and shall extend to all permitted successors and assigns of such Persons.

"Borrowers' Account" shall have the meaning set forth in Section 2.10.

"Borrowing Agent" shall mean US Borrower.

"Borrowing Base Certificate" shall mean a certificate in substantially the form of Exhibit 1.2(a) hereto duly executed by a Responsible Officer of Borrowing Agent and delivered to Agent, appropriately completed, by which such officer shall certify to Agent the Formula Amount (other than with respect to Reserves) and calculation thereof as of the date of such certificate.

"Business Day" shall mean any day other than Saturday or Sunday or a legal holiday on which commercial banks are authorized or required by Law to be closed for business in East

Brunswick, New Jersey, or New York, New York, and, if the applicable Business Day relates to any LIBOR Rate Loans, such day must also be a day on which dealings are carried on in the London interbank market and if the applicable Business Day relates to an Equivalent Amount, any day other than Saturday or Sunday or a legal holiday on which the European Central Bank is closed for business in Frankfurt, Germany.

"Canadian Benefit Plan" shall mean any plan, fund, program, or policy, whether oral or written, formal or informal, funded or unfunded, insured or uninsured, providing material employee benefits, including medical, hospital care, dental, sickness, accident, disability, life insurance, pension, retirement or savings benefits, under which any Credit Party has any liability with respect to any employee or former employee in Canada, but excluding any Canadian Pension Plans.

"Canadian Borrower" shall have the meaning set forth in the preamble to this Agreement and shall extend to all permitted successors and assigns of such Person.

"Canadian Collateral" shall mean all Collateral under any Canadian Collateral Document from time to time.

"Canadian Collateral Documents" shall mean collectively all agreements, instruments or documents delivered by any Canadian Credit Party pursuant to this Agreement or any of the Other Documents in order to grant to Agent a Lien on certain assets of the Canadian Credit Parties.

"Canadian Credit Party" shall mean Canadian Borrower and each Canadian Guarantor.

"Canadian Defined Benefit Plan" shall mean a Canadian Pension Plan which contains a "defined benefit provision" as defined in subsection 147.1(1) of the *Income Tax Act* (Canada).

"Canadian Dollar" and "C$" shall mean the lawful money of Canada.

"Canadian Guarantor" shall mean any Guarantor that is incorporated or organized under the laws of Canada or any province thereof.

"Canadian Pension Plan" shall mean a pension plan that is subject to applicable pension standards laws of any jurisdiction in Canada including the *Pension Benefits Act* (Ontario) (or a similar legislation of any other Canadian jurisdiction) and the *Income Tax Act* (Canada) and that is either (a) maintained, administered or sponsored by any Credit Party or in respect of which any Credit Party has any liability for employees or former employees in Canada or (b) maintained pursuant to a collective bargaining agreement, or other arrangement under which more than one employer makes contributions and to which a Credit Party is making or accruing an obligation to make contributions or has within the preceding five years made or accrued such contributions with respect to employees or former employees in Canada and that, for greater certainty, does not include the Canada Pension Plan or the Quebec Pension Plan as maintained by the Government of Canada or the Province of Quebec, respectively.

"Canadian Pension Termination Event" shall mean (a) the withdrawal of any Credit Party from a Canadian Defined Benefit Plan which is a "multi-employer pension plan", as defined

under the *Pension Benefits Act* (Ontario), or a similar type of plan registered under other applicable pension standards legislation in Canada, during a plan year; or (b) the filing of a notice of interest to terminate in whole or in part a Canadian Defined Benefit Plan or the filing of an amendment with the applicable Governmental Body which terminates a Canadian Defined Benefit Plan, in whole or in part, or the treatment of an amendment as a termination or partial termination of a Canadian Defined Benefit Plan; or (c) the institution of proceedings by any Governmental Body to terminate a Canadian Defined Benefit Plan in whole or in part or have a replacement administrator or trustee appointed to administer a Canadian Defined Benefit Plan; or (d) any other event or condition or declaration or application which might constitute grounds for the termination or winding up of a Canadian Defined Benefit Plan, in whole or in part, or the appointment by any Governmental Body of a replacement administrator or trustee to administer a Canadian Defined Benefit Plan.

"Canadian Priority Payables Reserve" shall mean, with respect to any Canadian Credit Party, a reserve established in Agent's Permitted Discretion with respect to (a) all obligations, liabilities or indebtedness which (i) have a trust, deemed trust or statutory Lien imposed to provide for payment or a Lien, choate or inchoate, ranking or capable of ranking senior to or pari passu with Liens securing the Obligations on any Collateral under any Applicable Law or (ii) have a right imposed to provide for payment ranking or capable of ranking senior to or pari passu with the Obligations under any Applicable Law, including, but not limited to, claims for unremitted and/or accelerated rents, utilities, taxes (including sales taxes and goods and services taxes and harmonized sales taxes and withholding taxes), amounts payable to an insolvency administrator, wages (including, wages under the *Wage Earner Protection Program Act* (Canada)), employee withholdings or deductions and vacation pay, severance and termination pay, workers' compensation obligations, government royalties and pension fund obligations (including any amounts representing any unfunded liability, solvency deficiency or wind-up deficiency with respect to any Canadian Defined Benefit Plan) and (b) amounts owing to suppliers in respect of Inventory which Agent, in good faith, and on a reasonable basis, considers is or may be subject to retention of title by a supplier (other than a Credit Party) or a right of a supplier (other than a Credit Party) to recover possession thereof, where such supplier's right has priority over the Liens securing the Obligations, including, without limitation, Inventory subject to a right of a supplier (other than a Credit Party) to repossess goods pursuant to Section 81.1 of the *Bankruptcy and Insolvency Act* (Canada) or any other Applicable Laws granting revendication or similar rights to unpaid suppliers or any similar laws of Canada or any other applicable jurisdiction.

"Capital Expenditures" shall mean for any period, with respect to any Person, the aggregate of all expenditures by such Person for the acquisition of fixed or capital assets or additions to equipment (including replacements, capitalized repairs and improvements during such period) which are required to be capitalized under IFRS on a consolidated balance sheet of such Person, excluding (a) any such expenditures made to restore, replace or rebuild assets to the condition of such assets immediately prior to any casualty or other insured damage to, or any taking under power of eminent domain or by condemnation or similar proceeding of, such assets to the extent such expenditures are made with insurance proceeds, condemnation awards or damage recovery proceeds relating to any such casualty, damage, taking, condemnation or similar proceeding and (b) any such expenditures constituting Permitted Acquisitions or any other acquisition of all the Equity Interests in, or all or substantially all the assets of (or the assets

constituting a business unit, division, product line or line of business of) any Person. Capital Expenditures for any such period shall include the principal portion of Capital Lease Obligations or Synthetic Lease Obligations paid by any such Person in any such period.

"Capitalized Lease Obligations" shall mean the obligations of any Person to pay rent or other amounts under any lease of (or other arrangement conveying the right to use) real or personal, immovable or movable, property, or a combination thereof, which obligations are required to be accounted for as capital leases on a balance sheet of such Person in accordance with IFRS, and the amount of such obligations shall be the capitalized amount thereof determined in accordance with IFRS.

"Cash" shall mean money, currency or a credit balance in a deposit account.

"Cash Dominion Period" shall have the meaning set forth in Section 4.8(g).

"Cash Management Liabilities" shall have the meaning provided in the definition of "Cash Management Products and Services".

"Cash Management Products and Services" shall mean agreements or other arrangements under which PNC or any Affiliate of PNC provides any of the following products or services to any Credit Party: (a) credit cards; (b) credit card processing services; (c) debit cards and stored value cards; (d) commercial cards; (e) ACH transactions; and (f) cash management and treasury management services and products, including, without limitation, controlled disbursement accounts or services, lockboxes, automated clearinghouse transactions, overdrafts and interstate depository network services. The indebtedness, obligations and liabilities of any Credit Party to the provider of any Cash Management Products and Services (including all obligations and liabilities owing to such provider in respect of any returned items deposited with such provider) (the "Cash Management Liabilities") shall be "Obligations" and otherwise treated as Obligations for purposes of this Agreement and each of the Other Documents.

"CEA" shall mean the Commodity Exchange Act (7 U.S.C.§1 et seq.), as amended from time to time, and any successor statute.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§9601 et seq.

"Certificate of Beneficial Ownership" shall mean, for each Borrower, a certificate in form and substance satisfactory to Agent, certifying, among other things, the Beneficial Owner of such Borrower.

"CFC" shall mean (a) any Person that is a "controlled foreign corporation" (within the meaning of Section 957), but only if a US Person that is an Affiliate of a Credit Party is, with respect to such Person, a "United States shareholder" (within the meaning of Section 951(b)) described in Section 951(a)(1); and (b) each Subsidiary of any Person described in clause (a) other than a Subsidiary of a Protected CFC. For purposes of this definition, all Section references are to the Code. Each of Canadian Borrower and Dutch Guarantor shall not be treated as a CFC for any purpose under this Agreement or any Other Document.

"CFTC" shall mean the Commodity Futures Trading Commission.

"Change in Law" shall mean the occurrence, after the Closing Date, of any of the following: (a) the adoption or taking effect of any Applicable Law; (b) any change in any Applicable Law or in the administration, implementation, interpretation or application thereof by any Governmental Body; or (c) the making or issuance of any request, rule, guideline or directive (whether or not having the force of Law) by any Governmental Body; provided that notwithstanding anything herein to the contrary, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, regulations, guidelines, interpretations or directives thereunder or issued in connection therewith (whether or not having the force of Applicable Law) and (y) all requests, rules, regulations, guidelines, interpretations or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States of America or foreign regulatory authorities (whether or not having the force of Law), in each case pursuant to Basel III, shall in each case be deemed to be a Change in Law regardless of the date enacted, adopted, issued, promulgated or implemented.

"Change of Control" shall mean (a) any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act), other than the Permitted Holders, shall become, or obtain rights (whether by means of warrants, options or otherwise) to become, the "beneficial owner" (as defined in Rules 13(d)-3 and 13(d)-5 under the Exchange Act), directly or indirectly, of more than thirty-five percent (35%) of the issued and outstanding Equity Interests of Holdings, which Equity Interests, at such time, amount to more of the issued and outstanding Equity Interests of Holdings than those held by the Permitted Holders, (b) Holdings shall cease to own, directly or indirectly through Wholly Owned Subsidiaries, one hundred percent (100%) of the issued and outstanding Equity Interests of each Credit Party that is a Wholly Owned Subsidiary as of the Closing Date and no less than the percentage of the issued and Outstanding Equity Interests of each non-Wholly Owned Subsidiary that is a Credit Party held, directly or indirectly, by Holdings on the Closing Date, (c) US Borrower shall cease to own, directly or indirectly through Wholly Owned Subsidiaries, one hundred percent (100%) of the issued and outstanding Equity Interests of each Credit Party that is a Wholly Owned Subsidiary as of the Closing Date and no less than the percentage of the issued and Outstanding Equity Interests of each non-Wholly Owned Subsidiary that is a Credit Party held, directly or indirectly, by US Borrower on the Closing Date, or (d) a "Change of Control" or "Change in Control" or any similar term as defined in the 2022 Indenture (and any Permitted Refinancing thereof); provided that, in the case of clause (b) or (c) above, any disposition or sale of Equity Interests of a Credit Party (other than either Borrower) shall not be deemed to result in a "Change of Control" hereunder so long as such disposition or sale is permitted under this Agreement.

"CIP Regulations" shall have the meaning set forth in Section 14.12.

"Claims" shall have the meaning set forth in Section 16.5.

"Closing Date" shall mean October 11, 2019.

"Code" shall mean the Internal Revenue Code of 1986, as the same may be amended or supplemented from time to time.

"Collateral" shall mean and include (i) all assets owned by any Credit Party (other than any FSHCO or any CFC that is not a Protected CFC) under this Agreement or any Other Document to secure the Obligations, including all right, title and interest of each Credit Party (other than any FSHCO or any CFC that is not a Protected CFC) in all of the following property and assets of such Credit Party, in each case whether now owned or existing or hereafter created, acquired or arising and wherever located:

(a) all Receivables and all supporting obligations relating thereto;

(b) all Equipment and fixtures;

(c) all general intangibles (including all payment intangibles and all software) and all supporting obligations related thereto;

(d) all Inventory;

(e) securities, financial assets and investment property (including all Equity Interests issued by a Subsidiary of a Credit Party to such Credit Party);

(f) all contract rights, rights of payment which have been earned under a contract rights, chattel paper (including electronic chattel paper and tangible chattel paper), commercial tort claims (whether now existing or hereafter arising), documents (including all warehouse receipts and bills of lading), deposit accounts, goods, instruments (including promissory notes), letters of credit (whether or not the respective letter of credit is evidenced by a writing) and letter-of-credit rights, cash, certificates of deposit, insurance proceeds (including hazard, flood and credit insurance), security agreements, eminent domain proceeds, condemnation proceeds, tort claim proceeds and all supporting obligations;

(g) all ledger sheets, ledger cards, files, correspondence, records, books of account, business papers, computers, computer software (owned by any Credit Party or in which it has an interest), computer programs, tapes, disks and documents, including all of such property relating to the property described in clauses (a) through (f) of this definition; and

(h) all collateral subject to any Canadian Collateral Document or Dutch Collateral Document to secure the Obligations;

(i) all real property subject to a lien under clause (z) of the definition of "Permitted Liens"; and

(j) all proceeds and products of the property described in clauses (a) through (i) of this definition, in whatever form; and

(ii) the Pledged Collateral (as defined in the Non-Recourse Pledge Agreement).

It is the intention of the parties that if Agent shall fail to have a perfected Lien in any particular property or assets of any Credit Party for any reason whatsoever, but the provisions of this Agreement and/or of the Other Documents, together with all financing statements and other public filings relating to Liens filed or recorded by Agent against any Credit Party, would be

sufficient to create a perfected Lien in any property or assets that such Credit Party may receive upon the sale, lease, license, exchange, transfer or disposition of such particular property or assets, then all such "proceeds" of such particular property or assets shall be included in the Collateral as original collateral that is the subject of a direct and original grant of a security interest as provided for herein and in the Other Documents (and not merely as proceeds (as defined in Article 9 of the Uniform Commercial Code or the PPSA, as applicable) in which a security interest is created or arises solely pursuant to Section 9-315 of the Uniform Commercial Code or the PPSA, as applicable).

Notwithstanding the foregoing, Collateral shall not include any Excluded Property.

"Collateral Documents" shall mean the Non-Recourse Pledge Agreement, the Canadian Collateral Documents, the Dutch Collateral Documents and the US Collateral Documents.

"Collection Account" shall mean a deposit account of a Credit Party maintained at a Controlled Account Bank which is used exclusively for deposits of collections and proceeds of Collateral and not as a disbursement or operating account upon which checks or other drafts may be drawn.

"Commitment Transfer Supplement" shall mean a document in the form of Exhibit 16.3 hereto, properly completed and otherwise in form and substance satisfactory to Agent by which the Purchasing Lender purchases and assumes a portion of the obligation of a Lender to make Advances under this Agreement.

"Compliance Certificate" shall mean a compliance certificate substantially in the form of Exhibit 1.2(b) hereto to be signed by a Responsible Officer of Borrowing Agent.

"Consents" shall mean all licenses, permits, consents, approvals, authorizations, qualifications and orders of Governmental Bodies and other third parties, domestic or foreign, necessary to carry on any Credit Party's business or necessary (including to avoid a conflict or breach under any agreement, instrument, other document, license, permit or other authorization) for the execution, delivery or performance of this Agreement or the Other Documents.

"Consigned Inventory" shall mean Inventory of any Credit Party that is in the possession of another Person on a consignment, sale or return, or other basis that does not constitute a final sale and acceptance of such Inventory.

"Contract Rate" shall have the meaning set forth in Section 3.1.

"Controlled Account Bank" shall have the meaning set forth in Section 4.8(g).

"Controlled Accounts" shall mean a deposit account or securities account (or, as to each such term, an equivalent account otherwise named under the Applicable Laws of a jurisdiction other than the United States of America) owned by a Credit Party that is (a) subject to (i) a perfected Lien in favor of Agent securing the Obligations pursuant to, as applicable, with respect to a Credit Party, the security agreement to which such Credit Party is a party and (ii) in respect of such accounts in Canada, be also subject to a deposit account control agreement with the applicable bank, financial or securities intermediary, and (b) free and clear of all other Liens

(other than any Lien of the type set forth in the definition of "Permitted Liens"); provided that, for a period of sixty (60) days following the Closing Date or such later date approved in writing by Agent in its sole discretion (such sixty (60) day period, as it may so be extended by Agent, the "Account Grace Period"), each deposit account listed on Schedule 1.2(a) (each a "Liquidity Account") shall be deemed to be a Controlled Account notwithstanding that the requirements of clauses (a) and (b) above have not been satisfied with respect thereto; and provided, further, that if the requirements of clauses (a) and (b) above have not been satisfied with respect to any such Liquidity Account on or before the last day of the Account Grace Period, then, effective at the opening of business of the immediately following Business Day, such Liquidity Account shall cease to be a Controlled Account and the property credited thereto shall cease to be included in the computation of Consolidated Liquidity, in each case unless and until the requirements of clauses (a) and (b) above have been satisfied with respect to such Liquidity Account.

"Controlled Group" shall mean, at any time, each Credit Party and all members of a controlled group of corporations and all trades or businesses (whether or not incorporated) under common control and all other entities which, together with any Credit Party, are treated as a single employer under Section 414 of the Code.

"Corresponding Debt" shall have the meaning set forth in Section 14.19(b).

"Covenant Liquidity" shall mean, at any date of determination, the sum of (a) Liquidity as of such date plus (b) Undrawn Availability as of such date.

"Covered Entity" shall mean (a) each Credit Party, each of Credit Party's Subsidiaries and all pledgors of Collateral and (b) each Person that, directly or indirectly, is in control of a Person described in clause (a) above. For purposes of this definition, control of a Person shall mean the direct or indirect (x) ownership of, or power to vote, twenty-five percent (25%) or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"Credit Party" shall mean each Borrower and each Guarantor; and "Credit Parties" shall mean all such Persons, collectively. For the avoidance of doubt, Holdings shall not be a Credit Party.

"Credit Party Joinder" shall mean a joinder by a Person as a Borrower or Guarantor under this Agreement and the Other Documents in the form of Exhibit 1.2(c).

"Currency Due" shall have the meaning set forth in Section 3.13.

"Customer" shall mean the account debtor with respect to any Receivable and/or the prospective purchaser of goods, services or both with respect to any contract or contract right, and/or any party who enters into or proposes to enter into any contract or other arrangement with any Credit Party, pursuant to which such Credit Party is to deliver any personal property or perform any services.

"Daily LIBOR Rate" shall mean, for any day, the rate per annum determined by Agent by dividing (x) the Published Rate by (y) a number equal to 1.00 minus the Reserve Percentage on such day. Notwithstanding the foregoing, if the Daily LIBOR Rate as determined above would be less than zero (0), such rate shall be deemed to be zero (0) for purposes of this Agreement.

"Default" shall mean an event, circumstance or condition which, with the giving of notice or passage of time or both, would constitute an Event of Default.

"Default Rate" shall have the meaning set forth in Section 3.1.

"Defaulting Lender" shall mean any Lender that: (a) has failed, within two (2) Business Days of the date required to be funded or paid, to (i) fund any portion of its applicable Revolving Commitment Percentage of Advances, (ii) if applicable, fund any portion of its applicable Participation Commitment in Letters of Credit or Swing Loans or (iii) pay over to Agent, Issuer, Swing Loan Lender or any Lender any other amount required to be paid by it hereunder, unless, in the case of clause (i) above, such Lender notifies Agent in writing that such failure is the result of such Lender's good-faith determination that a condition precedent to funding (specifically identified and including a particular Default or Event of Default, if any) has not been satisfied; (b) has notified Borrowers or Agent in writing, or has made a public statement to the effect, that it does not intend or expect to comply with any of its funding obligations under this Agreement (unless such writing or public statement indicates that such position is based on such Lender's good-faith determination that a condition precedent (specifically identified and including a particular Default or Event of Default, if any) to funding an Advance under this Agreement cannot be satisfied) or generally under other agreements in which it commits to extend credit; (c) has failed, within two (2) Business Days after request by Agent, acting in good faith, to provide a certification in writing from an authorized officer of such Lender that it will comply with its obligations (and is financially able to meet such obligations) to fund prospective Advances and, if applicable, participations in then outstanding Letters of Credit and Swing Loans under this Agreement, provided that such Lender shall cease to be a Defaulting Lender pursuant to this clause (c) upon Agent's receipt of such certification in form and substance satisfactory to Agent; (d) has become the subject of an Insolvency Event; (e) has failed at any time to comply with the provisions of Section 2.6(e) with respect to purchasing participations from the other Lenders, whereby such Lender's share of any payment received, whether by setoff or otherwise, is in excess of its pro rata share of such payments due and payable to all of the Lenders; or (f) becomes the subject of a Bail-In Action.

"Designated Lender" shall have the meaning set forth in Section 16.2(d).

"Document" shall have the meaning given to the term"document" in the Uniform Commercial Code.

"Dollar" and the sign "$" shall mean lawful money of the United States of America.

"Dollar Equivalent" shall mean, with respect to any amount of any currency, as of any applicable date of computation, the Equivalent Amount of such currency converted into Dollars in accordance with IFRS.

"Domestic Rate Loan" shall mean any Advance that bears interest based upon the Alternate Base Rate.

"Drawing Date" shall have the meaning set forth in Section 2.14(b).

"Dutch Collateral" shall mean all Collateral under any Dutch Collateral Document from time to time.

"Dutch Collateral Documents" shall mean, collectively, all Dutch law governed agreements, instruments or documents delivered by any Credit Party pursuant to this Agreement or any of the Other Documents in order to grant to the Secured Parties, or to Agent as a creditor of its Parallel Debt, a lien on certain assets of that relevant Credit Party.

"Dutch Credit Party" shall mean GSM Netherlands, B.V., a Beslooten Venootschaap incorporated or organized under the laws of the Netherlands.

"EDGAR Website" shall have the meaning set forth in Section 9.10.

"EEA Member Country" shall mean any of the member states of the European Union, Iceland, Liechtenstein and Norway.

"Effective Date" shall mean, with respect to a Swap, the date indicated in a document or agreement to be the date on which such document or agreement becomes effective, or, if there is no such indication, the date of execution of such document or agreement.

"Eligibility Date" shall mean, with respect to each Borrower and Guarantor and each Swap, the date on which this Agreement or any Other Document becomes effective with respect to such Swap (for the avoidance of doubt, the Eligibility Date shall be the Effective Date of such Swap if this Agreement or any Other Document is then in effect with respect to such Borrower or Guarantor, and otherwise it shall be the Effective Date of this Agreement and/or such Other Document(s) to which such Borrower or Guarantor is a party).

"Eligible Contract Participant" shall mean an "eligible contract participant" as defined in the CEA and regulations thereunder.

"Eligible Customs Broker" shall mean a customs broker that has its principal assets and principal place of business in the United States and which is acceptable to Agent and with which Agent has entered into a freight forwarder agreement, in form and substance acceptable to Agent in its Permitted Discretion.

"Eligible Foreign In-Transit Inventory" shall mean Inventory that would be Eligible Inventory but for the fact that it is Foreign In-Transit Inventory, but only if:

(a) such Foreign In-Transit Inventory is the subject of a Negotiable Document that designates a Credit Party as the consignee and has been properly endorsed to Agent;

(b) such Foreign In-Transit Inventory has been paid for by the applicable Credit Party or Agent has otherwise satisfied itself that a final sale of such Inventory to such Credit Party has occurred and title has passed to such Credit Party;

(c) Agent has received assurances satisfactory to it that all of the original Documents evidencing such Foreign In-Transit Inventory (all of which Documents shall be Negotiable Documents) have been issued by the applicable carrier and have been forwarded to an Eligible Customs Broker (and, if such Documents are not actually received by an Eligible Customs Broker within ten (10) days after the sending thereof, such Foreign In-Transit Inventory shall thereupon cease to be Eligible Foreign In-Transit Inventory), or, if required by Agent in the exercise of its Permitted Discretion, all of such original Documents are in the possession, in the United States, of Agent or an Eligible Customs Broker (as specified by Agent);

(d) no default exists under any agreement in effect between the vendor of such Inventory and such Credit Party that would permit such vendor under any Applicable Law to divert, reclaim, reroute, or stop shipment of such Inventory;

(e) such Foreign In-Transit Inventory is fully insured by marine cargo or other similar insurance, in such amounts, with such insurance companies and subject to such deductibles as are satisfactory to Agent and in respect of which Agent has been named as lender loss payee; and

(f) Agent has received an executed freight forwarder agreement (in form and substance acceptable to Agent) with respect to such Inventory from an Eligible Customs Broker;

provided that, for a period of ninety (90) days following the Closing Date or such later date approved in writing by Agent in its Permitted Discretion, no Foreign In-Transit Inventory shall be excluded from Eligible Foreign In-Transit Inventory due to the fact that the applicable customs broker has not yet become an Eligible Customs Broker by entering into an acceptable freight forwarder agreement with Agent.

"Eligible Insured Foreign Receivable" shall mean a Receivable that meets the requirements of an Eligible Receivable, except clause (g) of such definition, provided that such Receivable is credit insured (the insurance carrier, amount and terms of such insurance shall be acceptable to Agent in its Permitted Discretion and shall name Agent as beneficiary or loss payee, as applicable).

"Eligible Inventory" shall mean Inventory (including Inventory acquired in a Permitted Acquisition but only so long as, at the request of Agent, a field examination and appraisal (prepared by an appraiser reasonably acceptable to Agent pursuant to a methodology reasonably acceptable to Agent) have been conducted with respect to such Inventory and the results thereof are reasonably satisfactory to Agent), of a Credit Party valued at the lower of cost or market value, determined on a first-in-first-out basis, which is not, in Agent's Permitted Discretion, obsolete, slow moving or unmerchantable and which Agent, in its Permitted Discretion, shall deem Eligible Inventory, based on such considerations as Agent may from time to time deem appropriate in its Permitted Discretion; provided that so long as no Default has occurred and is continuing, Agent shall not change the criteria by which Inventory is deemed Eligible Inventory

except upon not less than three days' prior notice to Borrowing Agent. In addition, Inventory shall not be Eligible Inventory if it:

(a) is not subject to a perfected, first-priority security interest in favor of Agent under the laws of the jurisdiction where such Inventory is located and no other Lien (other than a Permitted Lien);

(b) does not conform to all standards imposed by any Governmental Body which has regulatory authority over such goods or the use or sale thereof;

(c) is Foreign In-Transit Inventory or in-transit within the United States of America or Canada;

(d) is located outside the continental United States of America or Canada at a location that is not otherwise in compliance with this Agreement;

(e) constitutes Consigned Inventory unless it is subject to a Lien Waiver Agreement in favor of Agent (or Agent shall elect to establish Rent Reserves against the Formula Amount with respect thereto as Agent shall deem appropriate in its Permitted Discretion);

(f) is the subject of an Intellectual Property Claim;

(g) is subject to a License Agreement that limits, conditions or restricts the applicable Credit Party's or Agent's right to sell or otherwise dispose of such Inventory, unless Agent is a party to a Licensor/Agent Agreement with the Licensor under such License Agreement (or Agent shall elect to establish Reserves against the Formula Amount with respect thereto as Agent shall deem appropriate in its Permitted Discretion); or

(h) is situated at a location not owned by a Credit Party unless the owner or occupier of such location has executed in favor of Agent a Lien Waiver Agreement (or Agent shall elect to establish Rent Reserves against the Formula Amount with respect thereto as Agent shall deem appropriate in its Permitted Discretion);

provided that, for a period of ninety (90) days following the Closing Date or such later date approved in writing by Agent in its sole discretion (such ninety (90) period, as it may so be extended by Agent, the "Lien Waiver Grace Period"), any Inventory that meets the requirements of Eligible Inventory except for clause (e) or clause (h) above shall be deemed to be Eligible Inventory notwithstanding that the requirement of clause (e) or clause (h) has not been satisfied with respect thereto; provided, further that if the requirement of clause (e) or clause (h) has not been satisfied with respect to such Inventory on or before the last day of the Lien Waiver Grace Period, then, effective at the opening of business of the immediately following Business Day, such Inventory shall cease to be Eligible Inventory unless and until such Inventory meets the requirements of Eligible Inventory.

"Eligible Receivables" shall mean each Receivable constituting an account of a Credit Party arising in the Ordinary Course of Business (including Receivables acquired in a Permitted Acquisition but only so long as, at the request of Agent, a field examination has been conducted with respect to such Receivables and the results thereof are satisfactory to Agent) and which

Agent, in its Permitted Discretion, shall deem to be an Eligible Receivable, based on such considerations as Agent may from time to time deem appropriate in its Permitted Discretion; provided that so long as no Default has occurred and is continuing, Agent shall not change the criteria by which Receivables are deemed Eligible Receivables except upon not less than three days' prior notice to Borrowing Agent. In addition, no Receivable shall be an Eligible Receivable if:

(a) it is not subject to Agent's first-priority perfected security interest and no other Lien (other than Permitted Lien), or is not evidenced by an invoice or other documentary evidence satisfactory to Agent in its Permitted Discretion;

(b) it arises out of a sale made by any Credit Party to an Affiliate of any Credit Party or to a Person controlled by an Affiliate of any Credit Party;

(c) it is due or unpaid more than one hundred twenty (120) days after the original invoice date or more than sixty (60) days after the original due date;

(d) fifty percent (50%) or more of the Receivables from such Customer are not deemed Eligible Receivables hereunder pursuant to clause (c) above;

(e) that does not comply in all material respects with any representation or warranty in respect of Eligible Receivables contained in this Agreement;

(f) an Insolvency Event shall have occurred with respect to such Customer;

(g) the sale is to a Customer outside the continental United States or a province of Canada, unless the sale is on letter of credit, guaranty or acceptance terms, in each case acceptable to Agent or such Receivable constitutes an Eligible Insured Foreign Receivable;

(h) the sale to the Customer is on a bill-and-hold, guaranteed sale, sale-and- return, sale on approval, consignment or any other repurchase or return basis or is evidenced by chattel paper;

(i) Agent believes, in its Permitted Discretion, that collection of such Receivable is insecure or that such Receivable may not be paid by reason of the Customer's financial inability to pay;

(j) the Customer is the United States of America, Canada, any state or province or any department, agency or instrumentality of any of them, unless the applicable Credit Party assigns its right to payment of such Receivable to Agent pursuant to the Assignment of Claims Act of 1940, as amended (31 U.S.C. Sub-Section 3727 et seq. and 41 U.S.C. Sub- Section 15 et seq.), or the *Financial Administration Act* (Canada), or has otherwise complied with other applicable statutes or ordinances;

(k) the goods giving rise to such Receivable have not been delivered to and accepted by the Customer or the services giving rise to such Receivable have not been performed by the applicable Credit Party and accepted by the Customer or the Receivable otherwise does not represent a final sale;

(l) the Receivables of the Customer exceed 20% (or such greater percentage acceptable to Agent in its Permitted Discretion with respect to any individual Customer) of all Eligible Receivables to the extent such Receivable exceeds such limit;

(m) (i) the Receivable is subject to any offset, deduction, defense, dispute, credits or counterclaim (but such Receivable shall only be ineligible to the extent of such offset, deduction, defense, credit or counterclaim), (ii) the Customer is also a creditor or supplier of a Credit Party and has asserted, or is reasonably likely to assert, a right of setoff, or has disputed, or is reasonably likely to dispute, its obligation to pay all or any portion of the Receivable, in each case, solely to the extent of such claim, right of setoff or dispute or (iii) the Receivable is contingent in any respect or for any reason;

(n) the applicable Credit Party has made any agreement with any Customer for any deduction therefrom, except for discounts or allowances made in the Ordinary Course of Business for prompt payment, all of which discounts or allowances are reflected in the calculation of the face value of each respective invoice related thereto;

(o) any return, rejection or repossession of the merchandise has occurred or the rendition of services has been disputed;

(p) such Receivable is not payable to a Credit Party in Canadian Dollars, Dollars or Euros; or

(q) such Receivable arises from a transaction that is subject to a performance bond, bid bond, customs bond, appeal bond, surety bond, performance guarantee, completion guarantee or similar obligation.

"Environmental Complaint" shall have the meaning set forth in Section 9.3(b).

"Environmental Laws" shall mean all Applicable Laws relating to the protection of the environment or human health and/or governing the use, storage, treatment, generation, transportation, processing, handling, production or disposal of hazardous or toxic substances or wastes.

"Equipment" shall mean equipment as defined in the Uniform Commercial Code or the PPSA, as applicable.

"Equity Interests" shall mean (a) shares of capital stock, partnership interests, membership interests in a limited liability company, beneficial interests in a trust or other equity ownership interests in a Person or (b) any warrants, options or other rights to acquire any such shares or interests described in clause (a).

"Equivalent Amount" shall mean, at any time, as determined by Agent (which determination shall be conclusive absent manifest error), with respect to an amount of any currency (the "Reference Currency") which is to be computed as an equivalent amount of another currency (the "Equivalent Currency"), the amount of such Equivalent Currency converted from such Reference Currency at the rate determined by the European Central Bank

for such Reference Currency as of 16:00 Central European Time on the second Business Day immediately preceding the event for which such calculation is made.

"Equivalent Currency" shall have the meaning set forth in the definition of "Equivalent Amount".

"ERISA" shall mean the Employee Retirement Income Security Act of 1974, as the same may be amended or supplemented from time to time and the rules and regulations promulgated thereunder.

"EU Bail-In Legislation Schedule" shall mean the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

"EU Regulation" shall have the meaning set forth in Section 5.10(e).

"EU Regulation (recast)" shall have the meaning set forth in Section 5.10(e).

"Euro" or the sign "€" shall mean the single currency of participating member states of the European Union.

"Event of Default" shall have the meaning set forth in Article X.

"Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

"Excluded Deposit Account" shall mean a deposit account of the Credit Parties that is (a) an account, the funds in which are used solely for the payment of salaries and wages, workers' compensation, employee benefit plans (including funds held by Holdings or any Subsidiary in trust for any director, officer or employee of the US Borrower or any Subsidiary with respect thereto) or health benefit obligations and similar expenses (including payroll Taxes) in the Ordinary Course of Business, (b) an account that is a zero-balance disbursement account, (c) an account, the funds in which consist solely of cash earnest money deposits or funds deposited under escrow or similar arrangements in connection with any letter of intent or purchase agreement for a Permitted Acquisition or any other transaction permitted by this Agreement, (d) an account which, when combined with other accounts referred to in this clause (d), has amounts on deposit which do not exceed $250,000 in the aggregate for all such accounts at any one time or (e) a withholding tax account, trust account or fiduciary account. For the avoidance of doubt, any proceeds of other Collateral from time to time held in any such account described in this definition shall continue to constitute Collateral hereunder.

"Excluded Equity Interests" means (i) any Equity Interest in an issuer to the extent that the grant of a security interest in such issuer is prohibited by the organizational documents of such issuer, (ii) any Equity Interest if, under the terms of such Equity Interest or Applicable Law with respect thereto, the grant of a security interest or lien therein would be prohibited as a matter of law or under the terms of such Equity Interest (or the grant of a security interest or lien therein would invalidate such Equity Interest or breach, default or create a right of termination in favor of any other party thereto) and such prohibition or restriction has not been waived or the consent of the other party to such Equity Interest has not been obtained (provided that (A) the

foregoing exclusions of this clause (ii) shall in no way be construed (1) to apply to the extent that any described prohibition or restriction is ineffective under Applicable Law or (2) to apply to the extent that any consent or waiver has been obtained that would permit Agent's security interest or lien to attach notwithstanding the prohibition or restriction on the pledge of such Equity Interest (provided that no Pledgor shall be under any obligation to obtain such consent or waiver), and (B) the foregoing exclusions of this clause (ii) shall in no way be construed to limit, impair or otherwise affect any of Agent's continuing security interests in and liens upon any rights or interests of any Credit Party in or to (1) Receivables or monies due or to become due under or in connection with any described Equity Interest or (2) any proceeds (including any Equity Interests) from the sale, license, lease or other dispositions of any such Equity Interest), (iii)(a) more than 65% of the outstanding voting Equity Interests of any first-tier CFC (other than a Non- Protected CFC) or FSHCO, (b) any of the outstanding voting Equity Interests of any CFC (other than a Non-Protected CFC) that is not a first-tier CFC and (c) any assets or property of a CFC (other than a Non-Protected CFC) or FSHCO and (iv) any Equity Interests in Quebec Silicon General Partner Inc. or Quebec Silicon Limited Partnership. None of the Equity Interests of any Credit Party executing this Agreement on the Closing Date or Dutch Guarantor shall constitute Excluded Equity Interests for purposes of this Agreement or any other Document.

"Excluded Equity Issuance" shall mean (a) in the event that Holdings or any of its Subsidiaries forms any Subsidiary in accordance with this Agreement, the issuance by such Subsidiary of Equity Interests to Holdings or such Subsidiary, as applicable, (b) the issuance of Equity Interests by Holdings to finance the purchase consideration (or a portion thereof) in connection with a Permitted Acquisition (including the issuance of Equity Interests by Holdings to the seller in a Permitted Acquisition) or to finance any Capital Expenditures to the extent permitted under this Agreement, (c) the issuance of Equity Interests by Holdings (i) pursuant to the exercise of options or warrants, (ii) pursuant to the conversion of any debt securities to equity or the conversion of any class of equity securities to any other class of equity securities, (iii) issued, sold or granted in lieu of paying management fees or consulting fees in cash, or (iv) to any member of management, officer, independent director or employee of any Credit Party, (d) the issuance of any director's qualifying shares and (e) the issuance of Equity Interests that is a Permitted Dividend.

"Excluded Hedge Liability or Liabilities" shall mean, with respect to each Borrower and Guarantor, each of its Swap Obligations if, and only to the extent that, all or any portion of this Agreement or any Other Document that relates to such Swap Obligation is or becomes illegal under the CEA, or any rule, regulation or order of the CFTC, solely by virtue of such Borrower's and/or Guarantor's failure to qualify as an Eligible Contract Participant on the Eligibility Date for such Swap. Notwithstanding anything to the contrary contained in the foregoing or in any other provision of this Agreement or any Other Document, the foregoing is subject to the following provisos: (a) if a Swap Obligation arises under a master agreement governing more than one Swap, this definition shall apply only to the portion of such Swap Obligation that is attributable to Swaps for which such guaranty or security interest is or becomes illegal under the CEA, or any rule, regulations or order of the CFTC, solely as a result of the failure by such Borrower or Guarantor for any reason to qualify as an Eligible Contract Participant on the Eligibility Date for such Swap; (b) if a guarantee of a Swap Obligation would cause such obligation to be an Excluded Hedge Liability but the grant of a security interest would not cause such obligation to be an Excluded Hedge Liability, such Swap Obligation shall constitute an Excluded Hedge

Liability for purposes of the guaranty but not for purposes of the grant of the security interest; and (c) if there is more than one Borrower or Guarantor executing this Agreement or the Other Documents and a Swap Obligation would be an Excluded Hedge Liability with respect to one or more of such Persons, but not all of them, the definition of Excluded Hedge Liability or Liabilities with respect to each such Person shall only be deemed applicable to (i) the particular Swap Obligations that constitute Excluded Hedge Liabilities with respect to such Person, and (ii) the particular Person with respect to which such Swap Obligations constitute Excluded Hedge Liabilities.

"Excluded Property" shall mean (i) any rights or interest in any General Intangible, contract, lease, permit, license or license agreement of any Credit Party, if under the terms of such General Intangible, contract, lease, permit, license or license agreement, or Applicable Law with respect thereto, the grant of a security interest or lien therein is prohibited as a matter of law or under the terms of such General Intangible, contract, lease, permit, license or license agreement (or the grant of a security interest or lien therein would invalidate such General Intangible, contract, lease, permit, license or license agreement or breach, default or create a right of termination in favor of any other party thereto) and such prohibition or restriction has not been waived or the consent of the other party to such General Intangible, contract, lease, permit, license or license agreement has not been obtained (provided that (A) the foregoing exclusions of this paragraph shall in no way be construed (1) to apply to the extent that any described prohibition or restriction is ineffective under Section 9-406, 9-407, 9-408 or 9-409 of the Uniform Commercial Code or other Applicable Law or (2) to apply to the extent that any consent or waiver has been obtained that would permit Agent's security interest or lien to attach notwithstanding the prohibition or restriction on the pledge of such General Intangible, contract, lease, permit, license or license agreement, and (B) the foregoing exclusions of this clause (i) shall in no way be construed to limit, impair or otherwise affect any of Agent's continuing security interests in and liens upon any rights or interests of any Credit Party in or to (1) Receivables or monies due or to become due under or in connection with any described General Intangible, contract, lease, permit, license, license agreement or (2) any proceeds from the sale, license, lease or other dispositions of any such General Intangible, contract, lease, permit, license or license agreement (including any Equity Interests)); (ii) any United States intent-to-use trademark applications for which an amendment to allege use or a statement of use has not been filed and accepted by the Patent and Trademark Office, to the extent that, and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use trademark applications under applicable federal law, provided that upon submission and acceptance by the Patent and Trademark Office of an amendment to allege use or a statement of use pursuant to 15 U.S.C. Section 1051(c) or (d) (or any successor provision), such intent-to-use trademark application shall be considered Collateral; (iii) any asset or property of a Credit Party that is subject to a perfected Lien that constitutes a Permitted Lien under clause (g), (h), (p), (u) or (w) of the definition of "Permitted Liens" if and for so long as the grant of a security interest therein to Agent in such asset or property shall constitute or result in a breach or termination pursuant to the terms of, or a default under, the agreement entered into in connection with such Permitted Lien on such asset or property, provided, however, that such security interest shall attach immediately at such time as the term restricting the attachment of a security interest in such asset or property is no longer operative or the attachment of a security interest in such asset or property would not constitute or result in a breach or termination pursuant to the terms of, or a default under, such agreement; (iv) Excluded

Equity Interests; (v) any Real Property (including fixtures) owned by a Credit Party (unless subject to a Lien under clause (z) of the definition of "Permitted Liens"); (vi) leasehold interests of any Credit Party in Real Property; (viii) any Equity Interest of a joint venture existing as of the Closing Date to the extent that the grant of a security interest in such joint venture is prohibited by the organizational documents of such joint venture; (ix) any assets or property for which any Lien created or perfected with respect thereto results in costs that are disproportionate to the benefit obtained by the beneficiaries of such Lien (as determined by Agent in its Permitted Discretion); or (x) a portion of the cash proceeds of Permitted Non-ABL Indebtedness required to be deposited in a fully-blocked deposit account to secure such Permitted Non-ABL Indebtedness pursuant to the Permitted Non-ABL Indebtedness Documents.

"Excluded Taxes" shall mean, with respect to any payment to be made to a Recipient by or on account of any Obligation: (a) Taxes imposed on or measured by net income or capital (however denominated), franchise Taxes in lieu of net income Taxes and branch profits taxes, in each case (i) by the jurisdiction (or any political subdivision thereof) under the Laws of which such Recipient is organized or in which its principal office or applicable lending office is located or (ii) that are Other Connection Taxes, (b) U.S. federal or Canadian withholding Taxes imposed on amounts payable to or for the account of such Recipient with respect to an applicable interest in an Obligation pursuant to the Applicable Law in effect on the date on which (i) such Recipient acquired such interest in such Obligation (other than pursuant to an assignment request by any Credit Party) or (ii) such Recipient changes its lending office (other than a change in office made at the request of any Credit Party), except in each case to the extent that, pursuant to Section 3.10(a), amounts with respect to such Taxes were payable either to such Recipient's assignor immediately before such Recipient acquired the applicable interest in such Obligation or to such Recipient immediately before it changed its lending office, (c) Taxes attributable to such Recipient's failure to comply with Section 3.10(e) or (f) or (d) any U.S. federal withholding Taxes imposed under FATCA. For greater certainty, for purposes of clause (b) above, Excluded Taxes shall not include (x) any Taxes imposed under Part XIII of the *Income Tax Act* (Canada) or any successor provision thereto as a result of an assignee pursuant to an assignment request by any Credit Party being a “specified non-resident shareholder” (within the meaning of the *Income Tax Act* (Canada)) of a Canadian Credit Party or not dealing at arm’s length for the purposes of the *Income Tax Act* (Canada) with a “specified shareholder” (within the meaning of the *Income Tax Act* (Canada)) of a Canadian Credit Party or (y) any withholding Tax imposed on amounts payable to or for the account of such Recipient under Part XIII of the *Income Tax Act* (Canada), solely as a result of such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, or enforced this Agreement or any other Other Document.

"Existing Credit Agreement" shall mean the Revolving Credit Facility Credit Agreement by and among Holdings, the Guarantors party thereto, the lenders party thereto, and PNC, as Administrative Agent, Issuing Lender and Swing Line Loan Lender, as amended by the First Amendment to Credit Agreement, dated as of October 31, 2018, the Second Amendment to Credit Agreement dated as of February 22, 2019, the Third Amendment to Credit Agreement dated as of July 15, 2019, the Fourth Amendment to Credit Agreement dated as of July 15, 2019 and the Fifth Amendment to Credit Agreement dated as of September 30, 2019.

"Existing Letters of Credit" shall have the meaning set forth in Section 2.11(a).

"Facility Fee" shall have the meaning set forth in Section 3.3.

"FATCA" shall mean Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations thereunder or official interpretations thereof and any intergovernmental agreements entered into to implement such Sections of the Code, and any laws, rules and practices adopted by a non-U.S. jurisdiction to effect any such intergovernmental agreement.

"Federal Funds Effective Rate" shall mean, for any day, the rate per annum (based on a year of 360 days and actual days elapsed and rounded upward to the nearest 1/100 of 1%) calculated by the Federal Reserve Bank of New York (or any successor), based on such day's federal funds transactions by depositary institutions, as determined in such matter as such Federal Reserve Bank (or any successor) shall set forth on its public website from time to time, and as published on the next succeeding Business Day by such Federal Reserve Bank as the "Federal Funds Effective Rate"; provided, if such Federal Reserve Bank (or its successor) does not publish such rate on any day, the "Federal Funds Effective Rate" for such day shall be the Federal Funds Effective Rate for the last day on which such rate was announced.

"Fee Letter" shall mean the fee letter dated as of the Closing Date, among Borrowers and PNC, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"Flood Laws" shall mean all Applicable Laws relating to policies and procedures that address requirements placed on federally regulated lenders under the National Flood Insurance Reform Act of 1994 and other Applicable Laws related thereto.

"Foreign Currency Hedge" shall mean any foreign exchange transaction, including spot and forward foreign currency purchases and sales, listed or over-the-counter options on foreign currencies, non-deliverable forwards and options, foreign currency swap agreements, currency exchange rate price hedging arrangements, and any other similar transaction providing for the purchase of one currency in exchange for the sale of another currency entered into by any Credit Party and/or any of their respective Subsidiaries.

"Foreign Currency Hedge Liabilities" shall have the meaning assigned in the definition of Lender-Provided Foreign Currency Hedge.

"Foreign In-Transit Inventory" shall mean Inventory of a Credit Party that is in transit from a location outside the United States of America and Canada to any location within the United States of America or Canada of such Credit Party or a Customer of such Credit Party.

"Foreign Lender" shall mean (a) with respect to Borrowers that are US Persons, a Lender that is not a US Person and (b) with respect to Borrowers that are not US Persons, a Lender that is resident or organized under the laws of a jurisdiction other than that in which Borrowers are resident for Tax purposes.

"Formula Amount" shall have the meaning set forth in Section 2.1(a).

"Free Cash" shall mean, as of any date, the sum of (a) aggregate amount of unrestricted Cash and Permitted Investments of the Credit Parties and their Subsidiaries on a consolidated basis and free of Liens, other than (i) Liens securing the Obligations and (ii) Liens of the type described in clause (c)(ii) of the definition of Permitted Liens, plus (b) Qualified Restricted Cash.

"Freight and Duty Reserve" shall mean on any date, a reserve equal to Agent's estimate of the costs and expenses associated with the importation of Foreign In-Transit Inventory as of such date, including an estimate for all customs broker fees then due or to become due with respect to Foreign In-Transit Inventory.

"FSHCO" shall mean any Subsidiary that is a US Person, all of the assets of which (other than a de minimis amount) consist directly or indirectly of equity or equity and debt of one or more CFCs (other than Protected CFCs).

"FSRA" shall mean the Financial Services Regulatory Authority of Ontario or like body in another jurisdiction in Canada with whom a Canadian Pension Plan is required to be registered in accordance with Applicable Law and any other Governmental Body succeeding to the functions thereof.

"Governmental Acts" shall mean any act or omission, whether rightful or wrongful, of any present or future de jure or de facto Governmental Body.

"Governmental Body" shall mean any nation or government, any state, province or other political subdivision thereof or any entity, authority, agency, division or department exercising the executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to a government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including, without limitation, the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

"Guarantor" shall mean each Subsidiary of US Borrower that is designated as a "Guarantor" on a signature page hereof, and any other Person who hereafter joins this Agreement as a Guarantor, and "Guarantors" means collectively all such Persons.

"Guaranty" shall mean (a) the Continuing Agreement of Guaranty and Suretyship, dated as of the Closing Date, among each of the guarantors listed on the signature pages thereto and PNC Bank, National Association and (b) any other instrument providing for a guaranty of the Obligations entered into by any Credit Party after the Closing Date, in each case as may be amended, restated, supplemented or otherwise modified from time to time.

"Hazardous Discharge" shall have the meaning set forth in Section 9.3(b).

"Hazardous Materials" shall mean, without limitation, any flammable explosives, radon, radioactive materials, asbestos, urea formaldehyde foam insulation, polychlorinated biphenyls, petroleum and petroleum products, methane, hazardous materials, Hazardous Wastes, hazardous or Toxic Substances or related materials defined in or subject to regulation as hazardous or toxic under Environmental Laws.

"Hazardous Wastes" shall mean all waste materials subject to regulation under CERCLA, RCRA or analogous Environmental Law now in force or hereafter enacted relating to the disposal of such wastes.

"Hedge Liabilities" shall mean, collectively, the Foreign Currency Hedge Liabilities and the Interest Rate Hedge Liabilities.

"HM Revenue & Customs" shall mean Her Majesty's Revenue and Customs or any successor authority.

"Holdings" shall mean Ferroglobe PLC, a public limited company incorporated under the laws of England and Wales with a registered number 09425113.

"Holdings on a Consolidated Basis" shall mean the consolidation in accordance with IFRS of the accounts or other applicable items of Holdings and its Subsidiaries.

"Hypothecary Representative" shall have the meaning set forth in Section 14.19.

"IFRS" shall mean International Financial Reporting Standards and applicable accounting requirements set by the International Accounting Standards Board or any successor thereto, as in effect from time to time.

"Indebtedness" shall mean, as to any Person at any time, any and all indebtedness, obligations or liabilities (whether matured or unmatured, liquidated or unliquidated, direct or indirect, absolute or contingent, or joint or several) of such Person for or in respect of: (a) borrowed money, (b) amounts raised under or liabilities in respect of any note purchase or acceptance credit facility, (c) reimbursement obligations (contingent or otherwise) under any letter of credit agreement, (d) obligations under any currency swap agreement, interest rate swap, cap, collar or floor agreement or other interest rate management device, (e) any other transaction (including Capitalized Lease Obligations, Synthetic Lease Obligations and conditional sales agreements) having the commercial effect of a borrowing of money entered into by such Person to finance its operations or capital requirements (but not including trade payables and accrued expenses incurred in the Ordinary Course of Business which are not represented by a promissory note and which are not more than sixty (60) days past due), or (f) any guaranty of Indebtedness for borrowed money.

"Indemnified Party" shall have the meaning set forth in Section 16.5.

"Indemnified Taxes" shall mean (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Credit Party under this Agreement or Other Document and (b) to the extent not otherwise described in clause (a), Other Taxes.

"Ineligible Securities" shall mean any securities which may not be underwritten or dealt in by member banks of the Federal Reserve System under Section 16 of the Banking Act of 1933 (12 U.S.C. Section 24, Seventh), as amended.

"Information" shall have the meaning set forth in Section 5.12.

"Insolvency Event" shall mean, with respect to any Person, with respect to any Person, (a) a case, action or proceeding with respect to such Person (i) before any court or any other Governmental Body under any bankruptcy, insolvency, reorganization or other similar Law now or hereafter in effect (including any proceeding under Title 11 of the United States Code or Canadian Insolvency Laws), or (ii) for the appointment of a receiver, liquidator, administrator, assignee, custodian, trustee, sequestrator, conservator (or similar official) of such Person or otherwise relating to the liquidation, administration, dissolution, winding-up or relief of such Person, or (b) any general assignment for the benefit of creditors, composition, marshaling of assets for creditors, or other, similar voluntary or involuntary arrangement in court or out of court in respect of such Person's creditors generally or any substantial portion of its creditors; undertaken under any Law.

Without limiting the generality of the foregoing, (1) with respect to Holdings, "Insolvency Event" shall include any other applicable insolvency proceedings that are commenced against Holdings including where any corporate action, legal proceedings or other procedure or step is taken in relation to: (i) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of any Holdings; (ii) a composition, compromise, assignment or arrangement with any creditor of Holdings or any of its assets; (iii) the appointment of a liquidator, receiver, administrative receiver, administrator, compulsory manager or other similar officer in respect of Holdings or any of its assets; or (iv) enforcement of any Lien over any assets of Holdings, in each case other than any winding-up petition which is frivolous or vexatious and is discharged, stayed or dismissed within 14 days of commencement; (2) with respect to a Canadian Person, "Insolvency Event" shall also include, in respect of such Canadian Person: (i) such Person ceases to carry on its business; or commits an act of bankruptcy or becomes insolvent (as such terms are used in the BIA); or makes an assignment for the benefit of creditors, files a petition in bankruptcy, makes a proposal or commences a proceeding under Insolvency Legislation; or petitions or applies to any tribunal for, or consents to, the appointment of any receiver, receiver/manager, trustee or similar liquidator in respect of all or a substantial part of its property; or admits the material allegations of a petition or application filed with respect to it in any proceeding commenced in respect of it under Insolvency Legislation; or (ii) any proceeding or filing is commenced against such Person seeking to have an order for relief entered against it as debtor or to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding-up, reorganization, arrangement, adjustment or composition of it or its debts under any Insolvency Legislation, or seeking appointment of a receiver, receiver/manager, trustee, custodian or other similar official for it or any of its property or assets; and (3) with respect to any Dutch Guarantor, "Insolvency Event" shall include any other applicable insolvency proceedings that are commenced against such Dutch Guarantor, including: (i) any "*surséance van betaling*" or "*faillissement*" as set out under the Dutch Bankruptcy Act; and (ii) the appointment of a curator, *bewindvoerder* or other similar officer in respect of such Dutch Guarantor or any of its assets.

"Insolvency Legislation" means legislation in any applicable jurisdiction relating to reorganization, arrangement, compromise or re-adjustment of debt, dissolution or winding-up, or any similar legislation, and specifically includes for greater certainty the BIA, the *Companies' Creditors Arrangement Act* (Canada), the *Winding-Up and Restructuring Act* (Canada), and any

applicable corporations legislation to the extent the relief sought under such corporations legislation relates to or involves the compromise, settlement, adjustment or arrangement of debt.

"Insolvency Regulation" shall mean Regulation (EU) 2015/848 of 20 May 2015 on insolvency proceedings.

"Intellectual Property" shall mean property constituting a patent, copyright, trademark (or any application in respect of the foregoing), service mark, copyright, copyright application, trade name, mask work, trade secrets, design right, assumed name or license or other right to use any of the foregoing under Applicable Law.

"Intellectual Property Claim" shall mean all right, title and interest in any property constituting a patent, issued patent, patent application, trademark or service mark registration, trademark or service mark application, trade name, assumed name, logo and other source or business identifier and, in each case, all goodwill symbolized by and associated therewith, copyright, copyright registration, copyright application, mask work, trade secrets, design right or license or other right to use any of the foregoing under Applicable Law.

"Intellectual Property Security Agreement" shall mean the Intellectual Property Security Agreement, dated as of the Closing Date, among each of the grantors party thereto and Agent, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"Intentional Overadvance" shall have the meaning set forth in Section 16.2(e).

"Intercompany Subordination Agreement" shall mean the Intercompany Subordination Agreement dated as of the Closing Date, among Credit Parties, certain Affiliates of Credit Parties and Agent, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"Interest Period" shall mean the period provided for any LIBOR Rate Loan pursuant to Section 2.2(b).

"Interest Rate Hedge" shall mean an interest rate exchange, collar, cap, swap, floor, adjustable strike cap, adjustable strike corridor or similar agreements entered by any Credit Party or a Subsidiary or any Subsidiary of a Credit Party in order to provide protection to, or minimize the impact upon, any Credit Party or any Subsidiary of a Credit Party of increasing floating rates of interest applicable to Indebtedness.

"Interest Rate Hedge Liabilities" shall have the meaning assigned in the definition of Lender-Provided Interest Rate Hedge.

"Internet Posting" shall have the meaning set forth in Section 16.6.

"Inventory" shall mean as to each Credit Party all of such Credit Party's inventory (as defined in Article 9 of the Uniform Commercial Code or the PPSA, as applicable) and all of such Credit Party's goods, merchandise and other personal property, wherever located, to be furnished under any consignment arrangement, contract of service or held for sale, lease or use, all raw materials, work in process, finished goods and materials and supplies of any kind, nature or

description which are or might be used or consumed in such Credit Party's business or used in selling or furnishing such goods, merchandise and other personal property, and all Documents.

"Inventory Advance Rate" shall have the meaning set forth in Section 2.1(a)(ii).

"Inventory NOLV Advance Rate" shall have the meaning set forth in Section 2.1(a)(ii).

"Investment" shall have the meaning set forth in Section 7.4.

"Issuer" shall mean (i) PNC in its capacity as the issuer of Letters of Credit under this Agreement and (ii) any other Revolving Lender which at the request of Borrowing Agent and with the consent of Agent in its discretion shall be designated as the issuer of and cause to issue any particular Letter of Credit under this Agreement in place of Agent as issuer.

"Joint Venture" shall mean a corporation, partnership, limited liability company or other entity in which any Person other than the Credit Parties and their Subsidiaries holds, directly or indirectly, an equity interest.

"Judgment Currency" shall have the meaning set forth in Section 3.13.

"Law" and "Laws" shall mean any law(s) (including common law and equitable principles), constitution, statute, treaty, regulation, rule, ordinance, opinion, issued guidance, code, release, ruling, order, executive order, injunction, writ, decree, bond, judgment, authorization or approval, lien or award of or any settlement arrangement, by agreement, consent or otherwise, with any Governmental Body, foreign or domestic.

"Lender" and "Lenders" shall mean the collective reference to Revolving Lenders and shall include each Person which becomes a transferee, successor or assign of any Lender.

"Lender-Provided Foreign Currency Hedge" shall mean (i) the Foreign Currency Hedge with Reference Number LTAAB67S33333M3CQRT.0.0.0/059703538, dated as of May 19, 2017, under the Specified Currency Swap Agreement and (ii) any other Foreign Currency Hedge which is provided by PNC or any Affiliate of PNC that: (a) is documented in a standard International Swap Dealers Association, Inc. Master Agreement or another reasonable and customary manner; (b) provides for the method of calculating the reimbursable amount of the provider's credit exposure in a reasonable and customary manner; and (c) is entered into for hedging (rather than speculative) purposes. The liabilities owing to the provider of any Lender- Provided Foreign Currency Hedge (the "Foreign Currency Hedge Liabilities") by any Borrower or any Guarantor that is party to such Lender-Provided Foreign Currency Hedge shall, for purposes of this Agreement and all Other Documents be Obligations hereunder, and otherwise treated as Obligations for purposes of the Other Documents, except to the extent constituting Excluded Hedge Liabilities of such Person.

"Lender-Provided Interest Rate Hedge" shall mean an Interest Rate Hedge which is provided by PNC or any Affiliate of PNC that: (a) is documented in a standard International Swap Dealers Association, Inc. Master Agreement or another reasonable and customary manner; (b) provides for the method of calculating the reimbursable amount of the provider's credit exposure in a reasonable and customary manner; and (c) is entered into for hedging (rather than

speculative) purposes. The liabilities owing to the provider of any Lender-Provided Interest Rate Hedge (the "Interest Rate Hedge Liabilities") by any Borrower or any Guarantor that is party to such Lender-Provided Interest Rate Hedge shall, for purposes of this Agreement and all Other Documents be Obligations hereunder, and otherwise treated as Obligations for purposes of the Other Documents, except to the extent constituting Excluded Hedge Liabilities of such Person.

"Letter of Credit Application" shall have the meaning set forth in Section 2.12(a).

"Letter of Credit Borrowing" shall have the meaning set forth in Section 2.14(d).

"Letter of Credit Fees" shall have the meaning set forth in Section 3.2(a).

"Letter of Credit Sublimit" shall mean $45,000,000.

"Letters of Credit" shall have the meaning set forth in Section 2.11(a).

"LIBOR Alternate Source" shall have the meaning set forth in the definition of "LIBOR Rate".

"LIBOR Rate" shall mean, with respect to the Advances to which the LIBOR Rate applies for any Interest Period, the interest rate per annum determined by Agent by dividing (the resulting quotient rounded upwards, if necessary, to the nearest 1/100th of one percent (1%) per annum) (i) the rate which appears on the Bloomberg Page BBAM1 (or on such other substitute Bloomberg page that displays rates at which US dollar deposits are offered by leading banks in the London interbank deposit market), or the rate which is quoted by another source selected by Agent as an authorized information vendor for the purpose of displaying rates at which US dollar deposits are offered by leading banks in the London interbank deposit market (for purposes of this definition, a "LIBOR Alternate Source"), at approximately 11:00 a.m., London time, two (2) Business Days prior to the commencement of such Interest Period as the London interbank offered rate for Dollars for an amount comparable to such LIBOR Rate Loan and having a borrowing date and a maturity comparable to such Interest Period (or (x) if there shall at any time, for any reason, no longer exist a Bloomberg Page BBAM1 (or any substitute page) or any LIBOR Alternate Source, a comparable replacement rate determined by Agent at such time (which determination shall be conclusive absent manifest error), (y) if the LIBOR Rate is unascertainable as set forth in Section 3.8.2(i), a comparable replacement rate determined in accordance with Section 3.8.2), by (ii) a number equal to 1.00 minus the Reserve Percentage. Notwithstanding the foregoing, if the LIBOR Rate with respect any Revolving Advances and Swing Loans as determined under any method above would be less than zero (0), such rate shall be deemed to be zero (0) for purposes of this Agreement.

The LIBOR Rate shall be adjusted with respect to any Advance to which the LIBOR Rate applies that is outstanding on the effective date of any change in the Reserve Percentage as of such effective date. Agent shall give prompt notice to Borrowing Agent of the LIBOR Rate as determined or adjusted in accordance herewith, which determination shall be conclusive absent manifest error.

"LIBOR Rate Loan" shall mean any Advance that bears interest based on the LIBOR Rate.

"LIBOR Termination Date" shall have the meaning set forth in Section 3.8.2(a).

"License Agreement" shall mean any agreement between any Credit Party and a Licensor pursuant to which such Credit Party is authorized to use any Intellectual Property in connection with the manufacturing, marketing, sale or other distribution of any Inventory of such Credit Party or otherwise in connection with such Credit Party's business operations.

"Licensor" shall mean any Person from whom any Credit Party obtains the right to use (whether on an exclusive or non-exclusive basis) any Intellectual Property in connection with such Credit Party's manufacture, marketing, sale or other distribution of any Inventory or otherwise in connection with such Credit Party's business operations.

"Licensor/Agent Agreement" shall mean an agreement between Agent and a Licensor, in form and substance satisfactory to Agent, by which Agent is given the unqualified right, vis-à-vis such Licensor, to enforce Agent's Liens with respect to and to dispose of any Credit Party's Inventory with the benefit of any Intellectual Property applicable thereto, irrespective of such Credit Party's default under any License Agreement with such Licensor.

"Lien" shall mean any mortgage, deed of trust, pledge, hypothec, hypothecation, assignment, security interest, lien (whether statutory or otherwise), charge, claim or encumbrance, or preference, priority or other security agreement or preferential arrangement held or asserted in respect of any asset of any kind or nature whatsoever including any conditional sale or other title retention agreement, any lease having substantially the same economic effect as any of the foregoing, and the filing of, or agreement to give, any financing statement under the Uniform Commercial Code, the PPSA or comparable law of any jurisdiction.

"Lien Waiver Agreement" shall mean an agreement which is executed in favor of Agent by a Person who owns or occupies premises at which any Inventory may be located from time to time in form and substance reasonably satisfactory to Agent.

"Liquidity" shall mean, at any date of determination, the sum of the Dollar Equivalent aggregate amount of (a) Free Cash that at such time is credited to all Controlled Accounts and (b) Qualified Restricted Cash. With respect to a Controlled Account that is a deposit account, only collected funds credited thereto shall be included in Liquidity; and with respect to Free Cash in a Controlled Account that is a securities account, the amount thereof on any date of determination shall be the Dollar Equivalent fair market value (as determined in good faith by Borrowing Agent) of Permitted Investments credited thereto as of such date, if such date is the last day of a fiscal month of the Credit Parties or, if not, the fiscal month most recently ended.

"Liquidity Account" shall have the meaning specified in the definition of "Controlled Accounts".

"LLC Division" shall mean, in the event a US Credit Party is a limited liability company, the division of any such US Credit Party into two (2) or more newly formed limited liability companies (whether or not such US Credit Party is a surviving entity following any such division) pursuant to Section 18-217 of the Delaware Limited Liability Company Act or any similar provision under any similar act governing limited liability companies organized under the laws of any other State or Commonwealth or of the District of Columbia.

"Material Adverse Effect" shall mean a material adverse effect on (a) the financial condition, results of operations, assets, business, or properties of the Credit Parties, taken as a whole, (b) any Credit Party's ability to duly and punctually pay or perform the Obligations in accordance with the terms thereof taken as a whole, or (c) the practical realization of the rights and remedies of Agent and Lenders under this Agreement and the Other Documents.

"Material Subsidiary" shall mean each Subsidiary of US Borrower now existing or hereafter acquired or formed by US Borrower or one of its Subsidiaries which, on a consolidated basis for such Subsidiary and its Subsidiaries, for the most recent fiscal year (a) generated more than one percent (1%) of the consolidated EBITDA of US Borrower and its Subsidiaries or (b) had total assets (including equity interests in other Subsidiaries and excluding investments that are eliminated in consolidation) of greater than one percent (1%) of the consolidated total assets of US Borrower and its Subsidiaries, in each case on a pro forma basis (if applicable).

"Maturity Date" shall mean (i) at any time prior to the date that is ninety (90) days prior to the scheduled maturity date of the 2022 Notes (the "Maturity Trigger Date"), October 11, 2024 (such date, the "Initial Maturity Date") and (ii) on or following the Maturity Trigger Date, the Maturity Trigger Date; provided that if the principal amount of the Obligations is accelerated in accordance with Section 11.3, the Maturity Date shall mean the date of such acceleration.

"Maximum Revolving Advance Amount" shall mean $100,000,000.

"Maximum Swing Loan Advance Amount" shall mean $10,000,000.

"Maximum Undrawn Amount" shall mean, with respect to any outstanding Letter of Credit as of any date, the face amount of such Letter of Credit, including all automatic increases provided for in such Letter of Credit, whether or not any such automatic increase has become effective.

"Modified Commitment Transfer Supplement" shall have the meaning set forth in Section 16.3(d).

"Mortgage" shall mean any mortgage on the Real Property securing the Obligations.

"Multiemployer Plan" shall mean a "multiemployer plan" as defined in Sections 3(37) or 4001(a)(3) of ERISA to which contributions are required or, within the preceding five plan years, were required by any Credit Party or any member of the Controlled Group.

"Multiple Employer Plan" shall mean a Plan which has two (2) or more contributing sponsors (including any Credit Party or any member of the Controlled Group) at least two (2) of whom are not under common control, as such a plan is described in Section 4064 of ERISA.

"Negotiable Document" shall mean a Document that is "negotiable" within the meaning of Article 7 of the Uniform Commercial Code.

"Net Cash Proceeds" shall mean, with respect to any issuance of Equity Interests by any Credit Party or any Subsidiary of a Credit Party, the aggregate amount of cash received (directly or indirectly) from time to time (whether as initial consideration or through the payment or

disposition of deferred consideration) by or on behalf of such Person or such Subsidiary, in connection therewith after deducting therefrom only (a) expenses, costs, transaction fees, brokerage commissions, underwriting fees and similar fees, related thereto incurred by such Person or such Subsidiary in connection therewith and (b) the amount of all taxes paid (or reasonably estimated to be paid).

"Non-ABL Priority Collateral" shall mean all of the following assets that constitute Collateral, whether now owned or hereafter acquired and wherever located: (a) all equipment, all real property and interests therein (including both fee and leasehold interests) and all fixtures; (b) all Intellectual Property (other than any computer programs and any support and information relating thereto that constitute Inventory); (c) all Equity Interests in any of the Credit Parties and any Subsidiary of a Credit Party and other investment property (other than investment property constituting ABL Priority Collateral under clause (d) or (f) of the definition of such term); (d) [intentionally omitted]; (e) all insurance policies relating to Non-ABL Priority Collateral and not otherwise constituting ABL Priority Collateral, but, for the avoidance of doubt, excluding business interruption insurance and credit insurance with respect to any accounts; (f) except to the extent constituting ABL Priority Collateral under clause (d) of the definition of such term, all documents, all general intangibles, all instruments and all letter of credit rights; (g) all other Collateral not constituting ABL Priority Collateral; (h) all collateral and guarantees given by any other Person with respect to any of the foregoing, and all supporting obligations (including letter- of-credit rights) with respect to any of the foregoing; (i) all books and records to the extent relating to any of the foregoing; and (j) all products and proceeds of the foregoing. Notwithstanding the foregoing, the term "Non-ABL Priority Collateral" shall not include any assets referred to in clauses (a) through (e) of the definition of the term "ABL Priority Collateral".

"Non-Defaulting Lender" shall mean, at any time, any Revolving Lender that is not a Defaulting Lender at such time.

"Non-Qualifying Party" shall mean any Credit Party that on the Eligibility Date fails for any reason to qualify as an Eligible Contract Participant.

"Non-Recourse Pledge Agreement" shall mean that certain Non-Recourse Pledge Agreement executed by Holdings in favor of Agent dated as of the Closing Date, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"Non-US Subsidiary" shall mean a Subsidiary that is not a US Subsidiary.

"Notes" shall mean collectively, the Revolving Credit Note and the Swing Loan Note.

"Notice" shall have the meaning set forth in Section 16.6.

"Obligations" shall mean and include (i) any and all loans (including without limitation, all Advances and Swing Loans), advances, debts, liabilities or obligations (including without limitation all reimbursement obligations and cash collateralization obligations with respect to Letters of Credit issued hereunder) of any Borrower or any Guarantor under this Agreement or any Other Document (and any amendments, extensions, renewals or increases thereto) owed to Issuer, Swing Loan Lender, Lenders or Agent (or to any other direct or indirect subsidiary or

affiliate of Issuer, Swing Loan Lender, any Lender or Agent) of any kind or nature, present or future (including any interest or other amounts accruing thereon, any fees accruing under or in connection therewith (including, the Facility Fee), any costs and expenses of any Person payable by any Borrower or any Guarantor and any indemnification obligations payable by any Borrower or any Guarantor under this Agreement or any Other Document arising or payable after maturity, or after the filing of any petition in bankruptcy, or the commencement of any insolvency, reorganization or like proceeding relating to any Borrower or any Guarantor, whether or not a claim for post-filing or post-petition interest, fees or other amounts is allowable or allowed in such proceeding), whether direct or indirect (including those acquired by assignment or participation), absolute or contingent, joint or several, due or to become due, now existing or hereafter arising, contractual or tortious, liquidated or unliquidated, in each case arising under or pursuant to this Agreement or any Other Document, including all costs and expenses of Agent, Issuer, Swing Loan Lender and any Lender payable by any Borrower or Guarantor pursuant to this Agreement or any Other Document, (ii) all Hedge Liabilities and (iii) all Cash Management Liabilities. Notwithstanding anything to the contrary contained in the foregoing, the Obligations shall not include any Excluded Hedge Liabilities.

"Order" shall have the meaning set forth in Section 2.19(b).

"Ordinary Course of Business" shall mean, with respect to any Credit Party or any of its Subsidiaries, the ordinary course of such Credit Party's or such Subsidiary's business as conducted on or prior to the Closing Date and reasonable extensions thereof.

"Organizational Documents" shall mean, with respect to any Person, any charter, articles or certificate of incorporation, certificate of organization, registration or formation, certificate of partnership or limited partnership, bylaws, operating agreement, memorandum of association, limited liability company agreement, or partnership agreement of such Person and any and all other applicable documents relating to such Person's formation, organization, incorporation or entity governance matters (including any shareholders' or equity holders' agreement or voting trust agreement) and specifically includes, without limitation, any certificates of designation for preferred stock or other forms of preferred equity.

"Other Connection Taxes" shall mean, with respect to any recipient of a payment under this Agreement or any Other Document, Taxes imposed as a result of a present or former connection between such recipient (or an agent or affiliate thereof) and the jurisdiction imposing such Tax (other than connections arising solely from such recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under or enforced this Agreement or any Other Document or sold or assigned an interest in any Advance, this Agreement or any Other Document).

"Other Documents" shall mean any Note, the Perfection Certificates, the Fee Letter, any Guaranty, the Intercompany Subordination Agreement, the Intellectual Property Security Agreement, the Pledge Agreement, any Canadian Collateral Document, any Dutch Collateral Document, any US Collateral Document, and any and all other agreements, instruments and documents, including intercreditor agreements, guaranties, pledges, powers of attorney, consents, or other similar agreements and all other writings heretofore, now or hereafter executed by any Borrower or any Guarantor and/or delivered to Agent or any Lender in respect of the transactions

contemplated by this Agreement, in each case together with all extensions, renewals, amendments, supplements, modifications, substitutions and replacements thereto and thereof.

"Other Taxes" shall mean all present or future stamp or documentary Taxes or any other excise, value added or property taxes, charges or similar levies arising from any payment made hereunder or under any Other Document or from the execution, delivery or enforcement of, or otherwise with respect to, this Agreement or any Other Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment by a Lender after the date hereof, other than any assignment made at the request of any Credit Party or during an Event of Default described in Section 10.1, 10.7 or 10.9.

"Out-of-Formula Loan" shall mean any Advance in excess of the lesser of the Maximum Revolving Advance Amount and the Formula Amount.

"Overnight Bank Funding Rate" shall mean, for any, day the rate per annum (based on a year of 360 days and actual days elapsed) comprised of both overnight federal funds and overnight Eurocurrency borrowings by U.S.-managed banking offices of depository institutions, as such composite rate shall be determined by the Federal Reserve Bank of New York, as set forth on its public website from time to time, and as published on the next succeeding Business Day as the overnight bank funding rate by such Federal Reserve Bank (or by such other recognized electronic source (such as Bloomberg) selected by Agent for the purpose of displaying such rate); provided that if such day is not a Business Day, the Overnight Bank Funding Rate for such day shall be such rate on the immediately preceding Business Day; provided further that if such rate shall at any time, for any reason, no longer exist, a comparable replacement rate determined by Agent at such time (which determination shall be conclusive absent manifest error). If the Overnight Bank Funding Rate determined as above would be less than zero (0), then such rate shall be deemed to be zero (0). The rate of interest charged shall be adjusted as of each Business Day based on changes in the Overnight Bank Funding Rate without notice to Borrowers.

"Parallel Debt" shall have the meaning set forth in Section 14.19(b).

"Participant" shall mean each Person who shall be granted the right by any Lender to participate in any of the Advances in accordance with this Agreement and who shall have entered into a participation agreement in form and substance satisfactory to such Lender.

"Participant Register" shall have the meaning set forth in Section 16.3(e).

"Participation Advance" shall have the meaning set forth in Section 2.14(d).

"Participation Commitment" shall mean the obligation hereunder of each Revolving Lender to buy a participation equal to its Revolving Commitment Percentage (subject to any reallocation pursuant to Section 2.22(b)(iii)) in the Swing Loans made by Swing Loan Lender hereunder as provided for in Section 2.4(c) and in the Letters of Credit issued hereunder as provided for in Section 2.14(a).

"Payment Conditions" shall mean, with respect to any Proposed Payment, each of the following:

(a) no Default or Event of Default shall have occurred and be continuing or would result from the making of such Proposed Payment;

(b) (i) for each day during the thirty (30) consecutive calendar days prior to the date of the Proposed Payment, (1) the sum of Liquidity (exclusive of Qualified Restricted Cash) plus (2) Undrawn Availability has been greater than $12,500,000, and (ii) after giving pro forma effect to the Proposed Payment, the sum of (1) Liquidity (exclusive of Qualified Restricted Cash) plus (2) Undrawn Availability is greater than $12,500,000; and

(c) Borrowing Agent has delivered a certificate to Agent certifying that all conditions set forth in clauses (a) and (b) above have been satisfied with respect to the Proposed Payment.

"Payment Office" shall mean initially Two Tower Center Boulevard, East Brunswick, New Jersey 08816; thereafter, such other office of Agent, if any, which it may designate by notice to Borrowing Agent and to each Lender to be the Payment Office.

"PBGC" shall mean the Pension Benefit Guaranty Corporation established pursuant to Subtitle A of Title IV of ERISA or any successor.

"Pension Benefit Plan" shall mean at any time any "employee pension benefit plan" as defined in Section 3(2) of ERISA (including a Multiple Employer Plan, but not a Multiemployer Plan) which is covered by Title IV of ERISA or is subject to the minimum funding standards under Sections 412, 430 or 436 of the Code and either (a) is maintained or to which contributions are required by any Credit Party or any member of the Controlled Group or (b) has at any time within the preceding five (5) years been maintained or to which contributions have been required by any Credit Party or any entity which was at such time a member of the Controlled Group.

"Perfection Certificates" shall mean, collectively, the US Perfection Certificate and the Canadian Perfection Certificate, in each case dated as of the Closing Date, delivered to Agent by Borrowing Agent, as amended, modified or supplemented from time to time.

"Permitted Acquisitions" shall mean any acquisition by a Credit Party or a Subsidiary of a Credit Party of Equity Interests in a Person or assets constituting a business or a division or line of business of a Person (a "Target"), if (a) the business or businesses engaged in by such Person, or such business, division or line of business, as applicable, is permitted by Section 7.10, (b) no Event of Default has occurred and is continuing or would result therefrom, (c) all transactions related thereto are consummated in accordance with Applicable Laws, (d) in the case of an acquisition of Equity Interests in a Person, after giving effect to such acquisition, 100% of the Equity Interests, both economic and voting power, in such Person, and any other Subsidiary resulting from such acquisition, shall be owned directly or indirectly by a Credit Party or such Subsidiary, (e) all actions required to be taken, if any, with respect to each Subsidiary or asset resulting from such acquisition under Section 7.9 shall be taken as and when required by Section 7.9, (f) on the date of the consummation of such acquisition, and after giving effect thereto and the payment of consideration thereunder and costs and expenses in connection therewith by any one or more of the Credit Parties and their Subsidiaries, the Payment Conditions are satisfied, (g) the Credit Parties shall have delivered to Agent as soon as available

but in no event later than ten (10) Business Days prior to the consummation of such acquisition (i) a reasonably detailed description of the proposed acquisition, together with the most recent draft acquisition agreement, related executed letters of intent and/or final definitive term sheets (if any) relating to such acquisition, (ii) historical financial statements of the Target to be acquired covering at least the 12 month period ending not earlier than 60 days prior to the date of the consummation of such acquisition, (iii) updated projections for the Credit Parties (after giving pro forma effect to such acquisition), (iv) if obtained by or on behalf of any Credit Party (or any Affiliate thereof), copies of any quality of earnings reports or other due diligence reports prepared by any third party firms in connection with such acquisition and (v) such other agreements, instruments or other documents relating to such acquisition as Agent shall reasonably request, (h) no Credit Party nor any of its Subsidiaries shall assume or remain liable in respect of any Indebtedness of the Target, except for Indebtedness permitted under Section 7.1(m), (i) the Person or assets being acquired shall not have had negative EBITDA (calculated in a manner in accordance with IFRS subject to adjustments reasonably acceptable to Agent) during the 12 consecutive month period most recently ended prior to the date of the proposed acquisition; and (j) such acquisition shall be consensual.

"Permitted Assignee" shall mean a Lender, an Affiliate of a Lender or an Approved Fund (other than a Credit Party or any Affiliate or Subsidiary of any Credit Party).

"Permitted Discretion" shall mean a determination made in good faith and in the exercise (from the perspective of a secured asset-based lender) of commercially reasonable business judgment.

"Permitted Holders" shall mean, collectively, (a) Grupo Villar Mir, S.A.U., (b) those members of the senior management of Holdings identified on Schedule 1.2(b), (c) Alan Kestenbaum and (d) the spouse, lineal descendants or trusts for their benefit of any Persons specified in clause (b) or clause (c) of this definition.

"Permitted Intercreditor Agreement" shall mean an intercreditor agreement, in form and substance reasonably satisfactory to Agent and Borrowing Agent, that contains terms and conditions customary for intercreditor agreements that are of the type that govern intercreditor relationships between holders of asset-based senior secured credit facilities, on the one hand, and holders of the same type of Indebtedness as the applicable Permitted Non-ABL Indebtedness, on the other.

"Permitted Intercompany Investments" shall mean:

(a) intercompany loans, advances or other Investments (i) between and among the Credit Parties and (ii) from a Subsidiary of a Credit Party that is not a Credit Party to a Credit Party;

(b) intercompany loans, advances or other Investments made by any Credit Party to Holdings (i) in an amount equal to scheduled interest allocated to the 2022 Notes (and any Permitted Refinancing thereof) issued by US Borrower or any other Credit Party and payments of fees, expenses and indemnification obligations in each case as and when due in respect of the 2022 Notes (and any Permitted Refinancing thereof) and (ii) with respect to any

taxable period, an amount necessary to permit Holdings to pay any consolidated, combined, unitary or similar Taxes that are due and payable by Holdings for such taxable period that are attributable to the income of the Credit Parties and its Subsidiaries (determined as if the Credit Parties and its Subsidiaries were a stand-alone corporation and taxpayer);

(c) intercompany loans, advances or other Investments made by any Credit Party to Holdings or any Subsidiary of Holdings that is not a Credit Party in each case so long as, on the date on which each such intercompany loan, advance or other Investment is made, the Payment Conditions are satisfied;

(d) intercompany loans, advances or other Investments in an amount not to exceed the amounts required to be paid by any Credit Party or any Subsidiary of any Credit Party to Holdings or any Subsidiary of Holdings that is not a Credit Party or a Subsidiary of a Credit Party pursuant to transactions permitted by Section 7.8(iv); and

(e) intercompany loans, advances or other Investments from US Borrower to Holdings on the Closing Date in an amount equal to the Advances made on the Closing Date for use by Holdings in accordance with Section 2.21(a) on or about the Closing Date.

"Permitted Investments" shall mean Investments in:

(a) direct obligations of the United States of America or any agency or instrumentality thereof or obligations backed by the full faith and credit of the United States of America maturing in twelve (12) months or less from the date of acquisition;

(b) direct obligations of any state of the United States of America or any political subdivision of any such state or any public instrumentality thereof, in each case maturing in twelve (12) months or less from the date of acquisition;

(c) investments in commercial paper maturing in twelve (12) months or less rated not lower than A-1, by Standard & Poor's or P-1 by Moody's Investors Service, Inc. on the date of acquisition;

(d) demand deposits, time deposits or certificates of deposit maturing within twelve (12) months from the date of acquisition in commercial banks organized under the laws of the United States of America or any state thereof or the District of Columbia that (i) are at least "adequately capitalized" (as defined in the regulations of its primary Federal banking regulator) and (ii) have Tier 1 capital (as defined in such regulations) of not less than $100,000,000;

(e) money market or mutual funds that have at least 95% of its assets continuously invested in those types of investments described in clauses (a)-(c) above;

(f) investments in repurchase obligations with a term of not more than 30 days for underlying securities of the type described in clause (a) above entered into with a financial institution satisfying the criteria described in clause (d) above;

(g) investments made under the Cash Management Agreements or under cash management agreements with any other Lenders; and

(h) in the case of Canadian Borrower or any Non-US Subsidiary, investments made in a country outside the United States that are (i) investments of the type and maturity described in clauses (a) through (g) above of foreign obligors and that have, as applicable, capitalization described in such clauses or ratings not lower than A-2, by Standard & Poor's, or P-2 by Moody's Investors Service, Inc. (or similar ratings from comparable foreign rating agencies) or (ii) other short term investments utilized by Holdings or its Non-US Subsidiaries in accordance with normal investment practices for cash management in investments analogous to the foregoing investments described in clauses (a) through (g) of this definition.

"Permitted Liens" shall mean:

(a) Liens for Taxes, assessments, or similar charges, incurred in the Ordinary Course of Business and which are not, at the time, required to be paid by Section 7.2; provided that if such Lien (i) is with respect to Taxes that are required by Applicable Law to be paid at the time and (ii) has attached to any Collateral having a value, in the aggregate, in excess of $1,750,000, such Lien, within thirty (30) days following such attachment, shall have been bonded off or such Collateral shall otherwise have been made exempt from such Lien;

(b) Pledges or deposits made in the Ordinary Course of Business to secure payment of workmen's compensation, or to participate in any fund in connection with workmen's compensation, unemployment insurance, old-age pensions or other social security programs;

(c) (i) statutory or common Law Liens of mechanics, materialmen, warehousemen, carriers, or other like or statutory non-consensual Liens, securing obligations incurred in the Ordinary Course of Business that are not yet due and payable (or that are due and payable but, within five (5) days of being overdue, are being contested in good faith by appropriate proceedings, so long as such reserves or other appropriate provisions, if any, as shall be required by IFRS shall have been made for any such contested amount) and Liens of landlords securing obligations to pay lease payments that are not yet due and payable or in default (or that are due and payable but, within five (5) days of being overdue, are being contested in good faith by appropriate proceedings, so long as such reserves or other appropriate provisions, if any, as shall be required by IFRS shall have been made for any such contested amount) and (ii) so-called banker's liens, rights of set-off or similar rights in favor of a depository institution imposed by statutory or common Law with respect to deposit accounts maintained with such depository institution in the Ordinary Course of Business and, with respect to deposit accounts of a Credit Party, securing only obligations with respect to the maintenance of such accounts;

(d) good-faith pledges or deposits made in the Ordinary Course of Business (i) to secure performance of bids, tenders, contracts (other than for the repayment of borrowed money) or leases, not in excess of the aggregate amount due thereunder, (ii) to secure statutory obligations, or surety, appeal, indemnity, performance or other similar bonds required in the Ordinary Course of Business, (iii) to secure liability to insurance carriers under insurance or self- insurance arrangements, (iv) in connection with the payment of the exercise price and withholding taxes in respect of the exercise by employees of stock options, and other similar

obligations or (v) in respect of letters of credit, bank guarantees or similar instruments issued for the account of any Credit Party or any of its Subsidiaries in the Ordinary Course of Business supporting obligations of the type set forth in clauses (i), (ii) and (iii) above;

(e) encumbrances consisting of zoning restrictions, easements or other restrictions on the use of Real Property;

(f) Liens in favor of Agent for the benefit of the Lenders and their Affiliates securing the Obligations;

(g) any Lien existing on the date of this Agreement and described on Schedule 1.2(c) and any renewals or extensions thereof, provided that the principal amount secured thereby is not hereafter increased, and no additional assets, other than proceeds thereof, become subject to such Lien (other than in connection with a Permitted Refinancing); provided, further, that any assets that are not Collateral that are subject to any such Lien may be used as cross- collateral for any financing provided by the same lender;

(h) Liens to secure Capital Lease Obligations or Synthetic Lease Obligations and other Purchase Money Security Interests permitted in Section 7.14; provided that (i) the aggregate amount of loans and deferred payments secured by such Liens and other Purchase Money Security Interests shall not exceed $8,500,000 in the aggregate (excluding for the purpose of this computation any loans or deferred payments secured by Liens described on Schedule 1.2(c)), and (ii) such Liens and Purchase Money Security Interests shall be limited to the assets acquired with such purchase money financing or leased pursuant to such Capital Lease Obligations or Synthetic Lease Obligations and any proceeds thereof, provided, however, that any assets that are not Collateral that are subject to such Liens may be used as cross-collateral for any financing or lease provided by the same lender or counterparty;

(i) The following, (i) if the validity or amount thereof is being contested in good faith by appropriate and lawful proceedings diligently conducted so long as levy and execution thereon have been stayed and continue to be stayed or (ii) if a final judgment is entered and such judgment is discharged within thirty (30) days of entry, and in either case they do not, in the aggregate, materially impair the ability of any Credit Party to perform its Obligations hereunder or under the other Loan Documents:

(a) claims, Liens or encumbrances upon, and defects of title to, real or personal property other than the Collateral, including any attachment of personal or real property or other legal process prior to adjudication of a dispute on the merits; and

(b) Liens resulting from final judgments or orders described in Section 10.6;

(j) licenses (with respect to Intellectual Property and other property), leases or subleases granted to third parties and not interfering in any material respect with the Ordinary Course of Business of any Credit Party or any of its Subsidiaries and licenses permitted under Section 7.7;

(k) any (i) interest or title of a lessor or sublessor under any lease not prohibited by this Agreement, (ii) Lien or restriction that the interest or title of such lessor or sublessor may be subject to, or (iii) subordination of the interest of the lessee or sublessee under such lease to any Lien or restriction referred to in the preceding clause (ii), so long as the holder of such Lien or restriction agrees to recognize the rights of such lessee or sublessee under such lease;

(l) Liens arising from filing Uniform Commercial Code or PPSA financing statements relating solely to leases or other similar precautionary filings not prohibited by this Agreement;

(m) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods;

(n) Liens securing obligations (other than obligations representing Indebtedness for borrowed money) under operating, reciprocal easement or similar agreements entered into in the Ordinary Course of Business of the Credit Parties and their Subsidiaries;

(o) any encumbrance or restriction (including put and call arrangements) with respect to Equity Interests of, or assets owned by, any Joint Venture as set forth in the joint venture (or similar) agreement of such Joint Venture;

(p) Liens assumed in connection with a Permitted Acquisition (or any other acquisition of property permitted under this Agreement) and Liens on assets of a Person that becomes a direct or indirect Subsidiary of any Credit Party after the date of this Agreement in a Permitted Acquisition and, in each case, any Permitted Refinancing thereof; provided, however, that such Liens exist at the time, as applicable, such Permitted Acquisition (or other acquisition of property) is closed or such Person becomes a Subsidiary and are not created in anticipation of such acquisition and, in any event, do not extend to any other property or assets of such Person (other than any proceeds thereof); provided, further, however, that any property or assets subject to any such Liens that are not Collateral may be used as cross-collateral for any financing provided by the same lender;

(q) Liens on assets of (i) Subsidiaries securing Indebtedness of any Subsidiary permitted pursuant to Section 7.1(b), (ii) Joint Ventures securing Indebtedness of any Joint Venture permitted pursuant to Section 7.1(l) and (iii) Non-US Subsidiaries that are not Guarantors securing obligations of any Non-US Subsidiary that is not a Guarantor;

(r) Liens on any cash deposits (including, without limitation, earnest money) in connection with any letter of intent or other agreement in connection with a transaction otherwise permitted by this Agreement;

(s) Liens in favor of Agent, any Issuing Bank, and any counterparty in respect of any Lender Provided Interest Rate Hedge, Lender Provided Foreign Currency Hedge or other Interest Rate Hedge or Foreign Currency Hedge approved by Agent on any cash collateral provided pursuant to this Agreement;

(t) Liens on insurance policies and the proceeds thereof securing the financing of the premiums with respect thereto;

(u) Liens arising out of Sales and Leaseback Transactions permitted by Section 7.15;

(v) Liens provided by any Person in favor of any Credit Party;

(w) Liens deemed to exist by reason of any encumbrance or restriction imposed under any contract for the sale by any Credit Party or any of its Subsidiaries of any assets (including any Equity Interests) to the extent such sale is permitted under this Agreement; provided, however, that such Liens extend only to the assets (or Equity Interests) being sold or held for sale;

(x) any judgment Lien not constituting an Event of Default under Section 10.6;

(y) Liens securing Indebtedness with respect to Foreign Currency Hedges and Interest Rate Hedges of any Subsidiary that is not a Credit Party, which Indebtedness, in the aggregate, does not exceed $3,500,000 at any time outstanding;

(z) Liens on (x) the Collateral (or on assets that, substantially concurrently with the creation of such Lien, become Collateral on which a Lien is granted to Agent pursuant to a Collateral Document) and/or (y) fee-owned real property and related appurtenant rights and fixtures and the proceeds thereof securing Permitted Non-ABL Indebtedness and obligations relating thereto not constituting Indebtedness; provided that any such Liens on the ABL Priority Collateral shall, pursuant to a Permitted Intercreditor Agreement, rank junior in priority to the Liens on the ABL Priority Collateral securing the Obligations;

(aa) Liens on deposit accounts granted or arising in the Ordinary Course of Business in favor of depositary banks maintaining such deposit accounts solely to secure customary account fees and charges payable in respect of such deposit accounts and overdrafts not in violation of this Agreement including Liens arising under articles 24 or 25 of the General Terms and Conditions (*Algemene Bankvoorwaarden*) of any member of the Dutch Bankers' Association (*Nederlandse Vereniging van Banken*) or any similar term applied by a financial institution in the Netherlands pursuant to general terms and conditions; and

(bb) other Liens securing Indebtedness in an aggregate amount not to exceed $1,750,000 at any time outstanding.

"Permitted Non-ABL Indebtedness" shall mean any Indebtedness of the any Credit Party permitted under Section 7.1(p).

"Permitted Non-ABL Indebtedness Documents" means any credit agreement, indenture or other agreement, instrument or other document evidencing or governing any Permitted Non- ABL Indebtedness or providing for any guarantee or other right in respect thereof.

"Permitted Refinancing" shall mean the issuance of any Indebtedness ("Permitted Refinancing Indebtedness") in exchange for, or the net proceeds of which are used to extend, refinance, renew, replace, defease or refund (collectively, to "Refinance"), the Indebtedness being Refinanced; provided that (a) the principal amount of such Permitted Refinancing Indebtedness does not exceed the principal amount of the Indebtedness so Refinanced (plus unpaid accrued interest and premium thereon and discounts, fees, commissions and expenses in connection therewith and plus an amount equal to any existing commitments unutilized thereunder), (b) the weighted average life to maturity of the portion of the Permitted Refinancing Indebtedness scheduled to be repaid prior to the Maturity Date is greater than or equal to that of the portion of the Indebtedness being Refinanced scheduled to be repaid prior to the Maturity Date, (c) unless otherwise permitted by this Agreement, no Permitted Refinancing Indebtedness (i) with respect to any Credit Party, shall have obligors that are Credit Parties or Subsidiaries of Credit Parties that are not obligors under the Indebtedness so refinanced, or greater guarantees by Credit Parties or Subsidiaries of Credit Parties or security comprising assets or property of a Credit Party, than the Indebtedness being Refinanced and (ii) with respect to any Subsidiary that is not a Credit Party, shall have an obligor that is a Credit Party that is not an obligor as of immediately prior to the Refinancing under, or greater security from a Credit Party than, the Indebtedness being Refinanced, (d) except in the case of Permitted Refinancing Indebtedness in respect of the 2022 Notes or any Permitted Non-ABL Indebtedness, if the Indebtedness being Refinanced is secured by any collateral (whether equally and ratably with, or junior to, Agent on behalf of the Lenders or otherwise), such Permitted Refinancing Indebtedness may be secured by such collateral (including in respect of working capital facilities of Non-US Subsidiaries otherwise permitted under this Agreement only, any collateral pursuant to after-acquired property clauses to the extent any such collateral secured the Indebtedness being Refinanced) on terms no less favorable, taken as whole, to Agent on behalf of the Lenders than those contained in the documentation governing the Indebtedness being Refinanced, (e) with respect to any Permitted Refinancing Indebtedness in respect of the 2022 Notes, in addition to the foregoing, such Indebtedness shall (i) be (1) unsecured, (2) secured by Liens on assets or property of any Person that is not a Credit Party or a Subsidiary of a Credit Party and/or (3) with the consent of Agent, secured by Liens on the Collateral that rank junior to the Liens on the Collateral in favor of Agent securing the Obligations, (ii) have a final maturity date more than ninety (90) days after October 11, 2024 and (iii) have representations, covenants and defaults that are no less favorable (when taken as a whole) to Holdings and its Subsidiaries than those set forth in the 2022 Indenture, and (f) where the Indebtedness so refinanced is Permitted Non-ABL Indebtedness, to the extent such Permitted Refinancing Indebtedness is secured by any Lien on assets constituting ABL Priority Collateral, such Liens shall, pursuant to the Permitted Intercreditor Agreement, rank junior in priority to the Liens on the ABL Priority Collateral securing the Obligations.

"Permitted Refinancing Indebtedness" shall have the meaning set forth in the definition of "Permitted Refinancing".

"Person" shall mean any individual, sole proprietorship, partnership, corporation, business trust, joint stock company, trust, unincorporated organization, association, limited liability company, unlimited liability company, limited liability partnership, institution, public benefit corporation, joint venture, entity or Governmental Body (whether federal, state, provincial, county, city, municipal or otherwise, including any instrumentality, division, agency, body or department thereof).

"Plan" shall mean any employee benefit plan within the meaning of Section 3(3) of ERISA (including a Pension Benefit Plan and a Multiemployer Plan, as defined herein) maintained by any Credit Party or any member of the Controlled Group or to which any Credit Party or any member of the Controlled Group is required to contribute.

"Pledge Agreement" shall mean that certain Pledge Agreement executed by US Borrower and certain of its Subsidiaries in favor of Agent dated as of the Closing Date, as the same may be amended, restated, supplemented or otherwise modified from time to time.

"PNC" shall have the meaning set forth in the preamble to this Agreement and shall extend to all of its successors and assigns.

"PPSA" shall mean the *Personal Property Security Act* (Ontario) including any regulations thereto or any other applicable Canadian federal or provincial statute pertaining to the granting, perfecting, priority or ranking of security interests, liens, hypothecs on personal property (including the *Civil Code of Québec*), as required, and any successor statutes, together with any regulations thereunder, in each case as in effect from time to time. References to sections of the PPSA shall be construed to also refer to any successor sections.

"Pro Forma Balance Sheet" shall have the meaning set forth in Section 5.6(c).

"Pro Forma Projections" shall have the meaning set forth in Section 5.6(d).

"Projections" shall have the meaning set forth in Section 5.12.

"Properly Contested" shall mean, in the case of any Indebtedness (other than the Obligations), Lien (other than a Lien on any Collateral) or Taxes, as applicable, of any Person that are not paid as and when due or payable by reason of such Person's bona fide dispute concerning its liability to pay the same or concerning the amount thereof: (a) such Indebtedness, Lien or Taxes, as applicable, are being properly contested in good faith by appropriate proceedings promptly instituted and diligently conducted; (b) such Person has established appropriate reserves as shall be required in conformity with IFRS; (c) the non-payment of such Indebtedness or Taxes will not have a Material Adverse Effect or will not result in the forfeiture of any assets of such Person; (d) no Lien is imposed upon any of such Person's assets with respect to such Indebtedness or Taxes unless enforcement of such Lien is stayed during the period prior to the final resolution or disposition of such dispute; and (e) if such Indebtedness or Lien, as applicable, results from, or is determined by the entry, rendition or issuance against a Person or any of its assets of a judgment, writ, order or decree, enforcement of such judgment, writ, order or decree is stayed pending a timely appeal or other judicial review.

"Proposed Payment" shall mean any proposed:

(a) intercompany loans, advances and Investments made pursuant to clause (b) of Permitted Intercompany Investments or other Investments made pursuant to clause (m) of the definition of Permitted Investments;

(b) Permitted Acquisitions;

(c) Restricted Payments made pursuant to Section 7.5(g); and

(d) any sale, transfer or other disposition of property or assets pursuant to Section 7.7(c)(i)(B).

"Protected CFC" shall mean a CFC having only "United States shareholders" that are (i) "domestic corporations" (within the meaning Code Section 7701(a)(30)) classified as "C" corporations for all purposes of the Code and (ii) eligible for and can actually take (without any loss or reduction of a material tax benefit) (x) the dividends received deduction under Section 245A of the Code with respect to any and all dividends actually received from such CFC and (y) a complete offset and reduction pursuant to Treasury Regulations Section 1.956-1(a)(2) against any and all inclusions under Sections 951(a)(1)(B) and 956 of the Code.

"Protective Advances" shall have the meaning set forth in Section 16.2(f).

"Published Rate" shall mean the rate of interest published each Business Day in the Wall Street Journal "Money Rates" listing under the caption "London Interbank Offered Rates" for a one (1) month period (or, if no such rate is published therein for any reason, then the Published Rate shall be the LIBOR Rate for a one (1) month period as published in another publication selected by Agent).

"Purchasing CLO" shall have the meaning set forth in Section 16.3(d).

"Purchasing Lender" shall have the meaning set forth in Section 16.3(c).

"Qualified ECP Credit Party" shall mean each Borrower or Guarantor that on the Eligibility Date is (a) a corporation, partnership, proprietorship, organization, trust, or other entity other than a "commodity pool" as defined in Section 1a(10) of the CEA and CFTC regulations thereunder that has total assets exceeding $10,000,000 or (b) an Eligible Contract Participant that can cause another Person to qualify as an Eligible Contract Participant on the Eligibility Date under Section 1a(18)(A)(v)(II) of the CEA by entering into or otherwise providing a "letter of credit or keepwell, support, or other agreement" for purposes of Section 1a(18)(A)(v)(II) of the CEA.

"Qualified Restricted Cash" shall mean, as of any date of determination, the aggregate amount of Cash denominated in Dollars of the US Credit Parties that is maintained in a Qualified Restricted Cash Account.

"Qualified Restricted Cash Account" shall mean a fully-blocked deposit account maintained with PNC in the United States of America in the name of a US Credit Party (but subject to Agent's exclusive control), which deposit account shall be subject to a control agreement in form and substance reasonably satisfactory to Agent.

"RCRA" shall mean the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 et seq., as same may be amended from time to time.

"Real Property" shall mean any owned or leased premises of any Credit Party or any of its Subsidiaries, including, without limitation, the owned or leased premises identified on Schedule 4.4(a).

"Receivables" shall mean and include, as to each Credit Party, all of such Credit Party's accounts (as defined in Article 9 of the Uniform Commercial Code or the PPSA, as applicable) and all of such Credit Party's "supporting obligations" (as defined in Article 9 of the Uniform Commercial Code) in respect thereof.

"Receivables Advance Rate" shall have the meaning set forth in Section 2.1(a)(i).

"Receiver" shall have the meaning set forth in Section 11.1(c).

"Recipient" shall mean (a) Agent, (b) any Lender, (c) Swing Loan Lender and (d) any Issuer, as applicable.

"Reference Currency" shall have the meaning set forth in the definition of "Equivalent Amount".

"Refinance" shall have the meaning set forth in the definition of "Permitted Refinancing".

"Refinancing" shall mean the repayment in full of all loans and all other obligations outstanding under the Existing Credit Agreement, together with accrued interest thereon, on the Closing Date.

"Register" shall have the meaning set forth in Section 16.3(e).

"Reimbursement Obligation" shall have the meaning set forth in Section 2.14(b).

"Rent Reserve" shall mean, as to each location at which a Credit Party has Inventory or books and records located and as to which a Lien Waiver Agreement has not been received by Agent, either (a) a reserve in an amount equal to 3 months' rent, storage charges, fees or other amounts under the lease or other applicable agreement relative to such location or (b) if greater and Agent so elects in its Permitted Discretion, the number of months' rent, storage charges, fees or other amounts for which the landlord, bailee, warehouseman or other property owner may have, under Applicable Law, a Lien on the Inventory of such Credit Party to secure the payment of such amounts under the lease or other applicable agreement relative to such location.

"Replacement Lender" shall have the meaning set forth in Section 3.12.

"Report" shall have the meaning set forth in Section 14.15(a).

"Reportable Compliance Event" shall mean that any Covered Entity becomes a Sanctioned Person, or is charged by indictment, criminal complaint or similar charging instrument, arraigned, or custodially detained in connection with any Anti-Terrorism Law or any predicate crime to any Anti-Terrorism Law, or has knowledge of facts or circumstances to the effect that it is reasonably likely that any aspect of its operations is in actual or probable violation of any Anti-Terrorism Law.

"Reportable ERISA Event" shall mean a reportable event described in Section 4043(c) of ERISA or the regulations promulgated thereunder.

"Required Lenders" shall mean Lenders (not including Swing Loan Lender (in its capacity as such Swing Loan Lender) or any Defaulting Lender) holding at least fifty and one- tenth percent (50.1%) of either (a) the aggregate of the Revolving Commitment Amounts of all Lenders (excluding any Defaulting Lender), or (b) after the termination of all commitments of Lenders hereunder, the sum of the outstanding Revolving Advances and Swing Loans, plus the Maximum Undrawn Amount of all outstanding Letters of Credit; provided, however, if there are fewer than three (3) Lenders, Required Lenders shall mean each Lender (excluding any Defaulting Lender) holding at least ten percent (10%) of either (a) the aggregate of the Revolving Commitment Amounts of all Lenders (excluding any Defaulting Lender), or (b) after the termination of all commitments of Lenders hereunder, the sum of the outstanding Revolving Advances and Swing Loans, plus the Maximum Undrawn Amount of all outstanding Letters of Credit. For purposes of determining Required Lenders, Lenders that are Affiliates or a fund that is administered or managed by any such Lender, Affiliate or related entity shall be counted as one (1) Lender.

"Reserve Percentage" shall mean as of any day the maximum effective percentage in effect on such day as prescribed by the Board of Governors of the Federal Reserve System (or any successor) for determining the reserve requirements (including supplemental, marginal and emergency reserve requirements) with respect to eurocurrency funding.

"Reserves" shall mean reserves against the Formula Amount as Agent may deem proper and necessary from time to time in its Permitted Discretion, including any Canadian Priority Payables Reserve, Freight and Duty Reserve, Rent Reserves and Specified Currency Swap Agreement Reserve. Any Reserve established or modified by Agent shall have a reasonable relationship to circumstances, conditions, events or contingencies which are the basis for such reserve, as reasonably determined, without duplication, by Agent in good faith as circumstances, conditions, events or contingencies that will or reasonably could be expected to (i) adversely affect the value of any Collateral, (ii) adversely affect the enforceability or priority of Agents Liens thereon or the amount Agent and Lenders would be likely to receive (after giving consideration to delays in payment and costs of enforcement), (iii) reflect priority claims and liabilities that will need to be satisfied in connection with the realization upon any Collateral or (iv) suggest that a collateral report or other financial information is incomplete, inaccurate or misleading in any material respect; provided that circumstances, conditions, events or contingencies known to Agent as of the Closing Date shall not be the basis for any such establishment or modification after the Closing Date. Notwithstanding anything to the contrary herein, so long as no Default has occurred and is continuing, such Reserves shall not be established or increased except upon not less than three days' prior notice to Borrowing Agent.

"Resolution Authority" shall mean any body which has authority to exercise any Write- down and Conversion Powers.

"Responsible Officer" shall mean the chief executive officer, the president, the chief financial officer, the treasurer or controller of Borrowing Agent or any other officer having substantially the same authority or responsibility.

"Restricted Payment" shall mean, with respect to any Person, (a) any dividend or other distribution of any nature (whether in cash, property, securities or otherwise) on account of or in respect of any class of such Person's Equity Interests or on account of the purchase, redemption, retirement or acquisition of such Person's Equity Interests (including, without limitation, any dividend or distribution by any Credit Party to Holdings or any Subsidiary of Holdings that is not a Credit Party or a Subsidiary of a Credit Party that is not a Credit Party for use by such Person to make a Restricted Payment permitted under the proviso to the following clause (b)), (b) any payment of principal of, or any purchase, repurchase, redemption, defeasance or other acquisition or retirement for value of, any unsecured Indebtedness prior to the scheduled maturity, scheduled repayment or scheduled sinking fund payment of such principal; provided, that the following shall not constitute Restricted Payments under this clause (b): (i) prepayment of the 2022 Notes or other unsecured Indebtedness pursuant to a Permitted Refinancing thereof, (ii) any payment, purchase, repurchase, redemption, defeasance or other acquisition or retirement mandated to be made on the date of payment (A) made by Holdings or any Subsidiary of Holdings that is not a Credit Party pursuant to the 2022 Notes (or any Permitted Refinancing thereof) or the 2022 Indenture or (B) made by any Person pursuant to any other agreement evidencing or governing unsecured Indebtedness (other than the 2022 Notes (or any Permitted Refinancing thereof) or the 2022 Indenture) permitted to be incurred hereunder, subject to any applicable subordination terms thereof with respect to payment of any Subordinated Indebtedness, or (c) any payment or repayment by any Credit Party to Holdings or any Subsidiary of Holdings that is not a Credit Party in respect of intercompany loans or advances owing by such Credit Party to Holdings or such Subsidiary of Holdings that is not a Credit Party.

"Revolving Advances" shall mean Advances other than Letters of Credit and the Swing Loans.

"Revolving Commitment" shall mean, as to any Lender, the obligation of such Lender (if applicable), to make Revolving Advances and participate in Swing Loans and Letters of Credit, in an aggregate principal and/or face amount not to exceed the Revolving Commitment Amount (if any) of such Lender.

"Revolving Commitment Amount" shall mean, as to any Revolving Lender, the Revolving Commitment amount (if any) set forth below such Lender's name on the signature page hereto (or, in the case of any Revolving Lender that became party to this Agreement after the Closing Date pursuant to Section 16.3(c) or (d), the Revolving Commitment Amount (if any) of such Revolving Lender as set forth in the applicable Commitment Transfer Supplement).

"Revolving Commitment Percentage" shall mean, as to any Revolving Lender, the Revolving Commitment Percentage (if any) set forth below such Revolving Lender's name on the signature page hereof (or, in the case of any Revolving Lender that became party to this Agreement after the Closing Date pursuant to Section 16.3(c) or (d), the Revolving Commitment Percentage (if any) of such Revolving Lender as set forth in the applicable Commitment Transfer Supplement).

"Revolving Credit Note" shall mean, collectively, the promissory notes referred to in Section 2.1(b).

"Revolving Interest Rate" shall mean (a) with respect to Revolving Advances that are Domestic Rate Loans and Swing Loans, an interest rate per annum equal to the sum of the Applicable Margin plus the Alternate Base Rate and (b) with respect to Revolving Advances that are LIBOR Rate Loans, an interest rate per annum equal to the sum of the Applicable Margin plus the LIBOR Rate.

"Revolving Lender" shall mean a Lender that has a Revolving Commitment.

"Sale and Leaseback Transaction" shall have the meaning set forth in Section 7.15.

"Sanctioned Country" shall mean a country subject to a sanctions program maintained under any Anti-Terrorism Law.

"Sanctioned Person" shall mean any individual person, group, regime, entity or thing listed or otherwise recognized as a specially designated, prohibited, sanctioned or debarred person, group, regime, entity or thing, or subject to any limitations or prohibitions (including but not limited to the blocking of property or rejection of transactions), under any Anti-Terrorism Law.

"SEC" shall mean the Securities and Exchange Commission or any successor thereto.

"Secured Parties" shall mean, collectively, Agent, Issuer, Swing Loan Lender and Lenders, together with the Specified Swap Provider and any Affiliates of Agent or any Lender to whom any Hedge Liabilities or Cash Management Liabilities are owed and with each other holder of any of the Obligations, and the respective successors and assigns of each of them.

"Securities Act" shall mean the Securities Act of 1933, as amended.

"Settlement" shall have the meaning set forth in Section 2.6(d).

"Settlement Date" shall have the meaning set forth in Section 2.6(d).

"Solvent" shall mean, with respect to any Person on any date of determination, taking into account any right of reimbursement, contribution or similar right available to such Person from other Persons, that (i) on such date, such Person is solvent, able to pay its debts as they mature, has capital sufficient to carry on its business and all businesses in which it is about to engage, (ii) on such date, the fair present saleable value of its assets, calculated on a going concern basis, is in excess of the amount of its liabilities taken as a whole, and (iii) subsequent to such date, the fair saleable value of its assets, calculated on a going concern basis, will be in excess of the amount of its liabilities taken as a whole.

"Specified Currency Swap Agreement" shall mean that certain ISDA 2002 Master Agreement dated as of May 11, 2017 by and among Goldman Sachs International (the "Specified Swap Provider") and Holdings, as the same may be amended, restated, supplemented or modified from time to time.

"Specified Currency Swap Agreement Reserve" shall mean, as of any date of determination, in the event the Specified Currency Swap Agreement has not been terminated on

or before December 31, 2019, commencing on January 1, 2020 and at any time thereafter until the Specified Currency Swap Agreement has been terminated, a reserve no greater than the amount by which (i) the mark-to-market exposure of Holdings or any of its Subsidiaries under the Specified Currency Swap Agreement (as determined by Agent in its Permitted Discretion) as of such date exceeds (ii) $17,500,000; provided that, for the avoidance of doubt, a Specified Currency Swap Agreement Reserve shall not be applied prior to December 31, 2019.

"Specified Swap Provider" shall have the meaning set forth in the definition of "Specified Currency Swap Agreement".

"Statements" shall have the meaning set forth in Section 5.6(a).

"Subject Documents" shall have the meaning set forth in Section 5.10(a).

"Subordinated Indebtedness" shall mean Indebtedness of any Credit Party that has been expressly subordinated in writing to the Loans and other Obligations of such Credit Party under this Agreement and the Other Documents in right and time of payment.

"Subsidiary" shall mean, with respect to any Person, any corporation, trust, partnership, limited liability company or other business entity (a) of which more than 50% of the outstanding voting securities or other interests normally entitled to vote for the election of one or more directors or trustees (regardless of any contingency which does or may suspend or dilute the voting rights) is at such time owned directly or indirectly by such Person or one or more of such Person's Subsidiaries, or (b) which is controlled or capable of being controlled by such Person or one or more of such Person's Subsidiaries.

"Subsidiary Equity Interests" shall have the meaning set forth in Section 5.2.

"Swap" shall mean any "swap" as defined in Section 1a(47) of the CEA and regulations thereunder other than (a) a swap entered into, on, or subject to the rules of, a board of trade designated as a contract market under Section 5 of the CEA, or (b) a commodity option entered into pursuant to CFTC Regulation 32.3(a).

"Swap Obligation" shall mean any obligation to pay or perform under any agreement, contract or transaction that constitutes a Swap which is also a Lender-Provided Interest Rate Hedge or a Lender-Provided Foreign Currency Hedge.

"Swing Loan Lender" shall mean PNC, in its capacity as lender of the Swing Loans.

"Swing Loan Note" shall mean the promissory note described in Section 2.4(a).

"Swing Loans" shall mean the Advances made pursuant to Section 2.4(a).

"Synthetic Lease" shall mean, as to any Person, (a) any lease (including leases that may be terminated by the lessee at any time) of any property (i) that is accounted for as an operating lease under IFRS and (ii) in respect of which the lessee retains or obtains ownership of the property so leased for U.S. or foreign federal income tax purposes, other than any such lease under which such Person is the lessor or (b) (i) a synthetic, off-balance sheet or tax retention

lease, or (ii) an agreement for the use or possession of property (including a sale-leaseback transaction), in each case under this clause (b), creating obligations that do not appear on the balance sheet of such Person but which, upon the application of any insolvency Law to such Person, would be characterized as the indebtedness of such Person (without regard to accounting treatment).

"Synthetic Lease Obligations" shall mean, as to any Person, an amount equal to the capitalized amount of the remaining lease payments under any Synthetic Lease that would appear on a balance sheet of such Person in accordance with IFRS if such obligations were accounted for as Capitalized Lease Obligations.

"Target" shall have the meaning set forth in the definition of "Permitted Acquisitions".

"Tax" or "Taxes" shall mean all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any Governmental Body, in each case in the nature of a tax, including any interest, additions to tax or penalties applicable thereto.

"Term" shall have the meaning set forth in Section 13.1.

"Termination Event" shall mean: (a) a Reportable ERISA Event with respect to any Plan; (b) the withdrawal of any Credit Party or any member of the Controlled Group from a Plan during a plan year in which such entity was a "substantial employer" as defined in Section 4001(a)(2) of ERISA or a cessation of operations that is treated as such a withdrawal under Section 4062(e) of ERISA; (c) the providing of notice of intent to terminate a Plan in a distress termination described in Section 4041(c) of ERISA; (d) the commencement of proceedings by the PBGC to terminate a Plan; (e) any event or condition (i) which might constitute grounds under Section 4042 of ERISA for the termination of, or the appointment of a trustee to administer, any Plan, or (ii) that may result in termination of a Multiemployer Plan pursuant to Section 4041A of ERISA; (f) the partial or complete withdrawal within the meaning of Section 4203 or 4205 of ERISA, of any Credit Party or any member of the Controlled Group from a Multiemployer Plan; (g) notice that a Multiemployer Plan is subject to Section 4245 of ERISA; (h) the imposition of any liability under Title IV of ERISA, other than for PBGC premiums due but not diligent, upon any Credit Party or any member of the Controlled Group; or (i) any excise tax, fine, penalty, punitive damage or other similar amount is imposed on any Credit Party with respect to or arising from a Plan.

"Toxic Substance" shall mean and include any material present on the Real Property, the prevention of any significant adverse effect on human health from which material is subject to regulation under the Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601 et seq., or analogous Environmental Law now in force or hereafter enacted relating to the prevention of any significant adverse effect on human health from toxic substances. "Toxic Substance" includes but is not limited to asbestos, polychlorinated biphenyls (PCBs) and lead-based paints.

"Transferee" and "Transferees" shall have the meaning set forth in Section 16.3(d).

"UK Companies Act" shall mean the United Kingdom Companies Act 2006, as amended from time to time.

"UK Person" shall mean any Person which is subject to the UK Companies Act.

"Undrawn Availability" at a particular date shall mean an amount equal to (a) the lesser of (i) the Formula Amount or (ii) the Maximum Revolving Advance Amount, minus (b) the Maximum Undrawn Amount of all outstanding Letters of Credit as of such date, minus (c) the outstanding amount of Revolving Advances and Swing Loans as of such date.

"Uniform Commercial Code" shall have the meaning set forth in Section 1.3.

"US Borrower" shall have the meaning set forth in the preamble to this Agreement and shall extend to all permitted successors and assigns of such Person.

"US Collateral Documents" shall mean collectively Article IV of this Agreement, any Guaranty, the Pledge Agreement and all other agreements, instruments or documents delivered by any US Credit Party pursuant to this Agreement or any of the Other Documents in order to grant to Agent a Lien on certain assets of the US Credit Parties.

"US Credit Party" shall mean each US Borrower and US Guarantor.

"US Guarantor" shall mean any Guarantor that is a US Person.

"US Person" shall mean a "United States person" within the meaning of Section 7701(a)(30) of the Code.

"US Subsidiary" shall mean any Subsidiary of US Borrower that is incorporated or organized under the laws of the United States of America, any state thereof or in the District of Columbia.

"USA PATRIOT Act" shall mean the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, Public Law 107-56, as the same has been, or shall hereafter be, renewed, extended, amended or replaced.

"Usage Amount" shall have the meaning set forth in Section 3.3(a).

"VAT" shall mean (a) any tax imposed in compliance with the system of value added tax (EC Directive of 28 November 2006/112) and (b) any other tax of a similar nature, whether imposed in a member state of the European Union in substitution for, or levied in addition to, such tax referred to in clause (a) above, or imposed elsewhere.

"Wholly Owned Subsidiary" shall mean, as to any Person, any Subsidiary of such Person one hundred percent (100%) of the Equity Interests of which (other than directors' qualifying Equity Interests and nominal Equity Interests issued to foreign nationals, in each case to the extent required under Applicable Law) are at the time owned by such Person or by such Person and one or more Wholly Owned Subsidiaries of such Person.

"Write-Down and Conversion Powers" shall mean (a) in relation to any Bail-In Legislation described in the EU Bail-In Legislation Schedule from time to time, the powers described as such in relation to that Bail-In Legislation in the EU Bail-In Legislation Schedule

and (b) in relation to any other applicable Bail-In Legislation (x) any powers under that Bail-In Legislation to cancel, transfer or dilute shares issued by a person that is a bank or investment firm or other financial institution or affiliate of a bank, investment firm or other financial institution, to cancel, reduce, modify or change the form of a liability of such a person or any contract or instrument under which that liability arises, to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers and (y) any similar or analogous powers under that Bail-In Legislation.

1.3 Uniform Commercial Code and PPSA Terms.

(a) All terms used herein and defined in the Uniform Commercial Code as adopted in the State of New York from time to time (the "Uniform Commercial Code") shall have the meaning given therein unless otherwise defined herein. Without limiting the foregoing, the terms "accounts", "chattel paper" (and "electronic chattel paper" and "tangible chattel paper"), "commercial tort claims", "deposit accounts", "documents", "equipment", "financial asset", "fixtures", "general intangibles", "goods", "instruments", "inventory", "investment property", "letter-of-credit rights", "payment intangibles", "proceeds", "promissory note" "securities", "software" and "supporting obligations" as and when used in the description of Collateral shall have the meanings given to such terms in Articles 8 or 9 of the Uniform Commercial Code. To the extent the definition of any category or type of collateral is expanded by any amendment, modification or revision to the Uniform Commercial Code, such expanded definition will apply automatically as of the date of such amendment, modification or revision.

(b) Any terms used in this Agreement that are defined in the PPSA (including, but not limited to, "accounts", "chattel paper", "instruments", " intangibles", "goods", "proceeds", "securities", "investment property", "documents of title", "inventory", "equipment" and "fixtures") shall, to the extent relating to Collateral consisting of assets of Canadian Credit Parties or otherwise located in Canada, be construed and defined as set forth in the PPSA unless otherwise defined herein and any terms used in this Agreement that are defined in the UCC and relating to Collateral consisting of assets of the Credit Parties that are not Canadian Credit Parties or otherwise not located in Canada shall be construed and defined as set forth in the UCC unless otherwise defined herein. In addition, any reference to "accounts" shall include all "claims" for the purposes of the *Civil Code of Québec* and any reference to "general intangibles" shall include "intangibles" as defined in the PPSA.

1.4 Certain Matters of Construction. The terms "herein", "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular section, paragraph or subdivision. All references herein to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this Agreement. Any pronoun used shall be deemed to cover all genders. Wherever appropriate in the context, terms used herein in the singular also include the plural and vice versa. All references to statutes and related regulations shall include any amendments of same and any successor statutes and regulations. Unless otherwise provided, all references to any instruments or agreements to which Agent is a party, including references to any of the Other Documents,

shall include any and all modifications, supplements or amendments thereto, any and all restatements or replacements thereof and any and all extensions or renewals thereof. Except as otherwise expressly provided for herein, all references herein to the time of day shall mean the time in New York, New York. Unless otherwise provided, all financial calculations with respect to Inventory of a Credit Party shall be performed on a first-in, first-out basis. Whenever the words "including" or "include" shall be used, such words shall be understood to mean "including, without limitation" or "include, without limitation". Any Lien referred to in this Agreement or any of the Other Documents as having been created in favor of Agent, any agreement entered into by Agent pursuant to this Agreement or any of the Other Documents, any payment made by or to or funds received by Agent pursuant to or as contemplated by this Agreement or any of the Other Documents, or any act taken or omitted to be taken by Agent shall, unless otherwise expressly provided, be created, entered into, made or received, or taken or omitted, for the benefit or account of Agent and the Secured Parties. Wherever the phrase "to the best of Credit Parties' knowledge" or words of similar import relating to the knowledge or the awareness of any Credit Party are used in this Agreement or Other Documents, such phrase shall mean and refer to (i) the actual knowledge of any Responsible Officer of any Credit Party and (ii) the knowledge that a Responsible Officer would have obtained if he/she had engaged in a good faith and diligent performance of his/her duties, including the making of such reasonably specific inquiries as may be necessary of the employees or agents of such Credit Party and a good faith attempt to ascertain the existence or accuracy of the matter to which such phrase relates. All covenants hereunder shall be given independent effect so that if a particular action or condition is not permitted by any of such covenants, the fact that it would be permitted by an exception to, or otherwise within the limitations of, another covenant shall not avoid the occurrence of a Default if such action is taken or condition exists. In addition, all representations and warranties hereunder shall be given independent effect so that if a particular representation or warranty proves to be incorrect or is breached, the fact that another representation or warranty concerning the same or similar subject matter is correct or is not breached will not affect the incorrectness or breach of such first representation or warranty hereunder. Any reference herein or in any Other Document to the satisfaction, repayment, or payment in full of the Obligations shall mean (a) the indefeasible payment or repayment in full in immediately available funds of (i) the principal amount of, and interest accrued and unpaid with respect to, all outstanding Advances, together with the payment of any premium applicable to the repayment of the Advances, (ii) all expenses to which Agent, any Lender or Issuer is entitled to reimbursement hereunder or under any Other Document that have accrued and are unpaid regardless of whether demand has been made therefor, (iii) all fees or charges that have accrued hereunder or under any Other Document (including the Letter of Credit fees) and are unpaid, (b) in the case of contingent reimbursement obligations with respect to Letters of Credit, providing cash collateralization in an amount equal to one hundred three percent (103%) of the Letters of Credit in accordance herewith, (c) in the case of Cash Management Liabilities, providing cash collateralization in an amount equal to the credit exposure (as reasonably determined by Agent) with respect thereto, (d) the receipt by Agent of cash collateral in order to secure any other contingent Obligations for which a claim or demand for payment has been made on or prior to such time or in respect of matters or circumstances known to Agent or a Lender at such time that are reasonably expected to result in any loss, cost, damage or expense (including attorneys' fees and legal expenses), such cash collateral to be in such amount as Agent reasonably determines is appropriate to secure such contingent Obligations, (e) the payment or repayment in full in immediately available funds of

all other outstanding Obligations (including the payment of any termination amount then applicable (or which would or could become applicable as a result of the repayment of the other Obligations) with respect to Hedge Liabilities) other than (i) unasserted contingent indemnification or expense reimbursement Obligations for which no claim has been asserted, (ii) any Cash Management Liabilities that, at such time, are allowed by the applicable Lender (or Affiliate) to remain outstanding without being required to be repaid, and (iii) any Hedge Liabilities that, at such time, are allowed by the applicable Lender (or Affiliate) or the Specified Swap Provider, as applicable, to remain outstanding without being required to be repaid, and (f) the termination of all of the Revolving Commitments.

1.5 LIBOR Notification. Section 3.8.2. of this Agreement provides a mechanism for determining an alternate rate of interest in the event that the London interbank offered rate is no longer available or in certain other circumstances. Agent does not warrant or accept any responsibility for and shall not have any liability with respect to, the administration, submission or any other matter related to the London interbank offered rate or other rates in the definition of "LIBOR Rate" or with respect to any alternative or successor rate thereto, or replacement rate therefor, except to the extent resulting from its gross negligence, bad faith or willful misconduct.

1.6 Québec (Interpretation Clause). For purposes of any Collateral located in the Province of Quebec or charged by any deed of hypothec (or any Other Document) and for all other purposes pursuant to which the interpretation or construction of an Other Document may be subject to the laws of the Province of Quebec or a court or tribunal exercising jurisdiction in the Province of Québec, (a) "personal property" shall be deemed to include "movable property", (b) "real property" shall be deemed to include "immovable property", (c) "tangible property" shall be deemed to include "corporeal property", (d) "intangible property" shall be deemed to include "incorporeal property", (e) "security interest", "mortgage" and "lien" shall be deemed to include a "hypothec", "prior claim" and a "resolutory clause", (f) all references to filing, registering or recording under the Uniform Commercial Code or the PPSA shall be deemed to include publication under the Civil Code of Québec, and any reference to a "financing statement" shall be deemed to include a reference to an application for publication under the Civil Code of Québec, (g) all references to "perfection" of or "perfected" Liens shall be deemed to include a reference to an "opposable" or "set up" Liens as against third parties, (h) any "right of offset", "right of setoff' or similar expression shall be deemed to include a "right of compensation", (i) "goods" shall be deemed to include "corporeal movable property" other than chattel paper, documents of title, instruments, money and securities, (j) an "agent" shall be deemed to include a "mandatary", (k) "construction liens" shall be deemed to include "legal hypothecs", (l) "joint and several" shall be deemed to include "solidary", (m) "gross negligence or willful misconduct" shall be deemed to be "intentional or gross fault", (n) "beneficial ownership" shall be deemed to include "ownership on behalf of another as mandatary", (o) "servitude" shall be deemed to include "easement", (p) "priority" shall be deemed to include "prior claim", (q) "survey" shall be deemed to include "certificate of location and plan", and (r) "fee simple title" shall be deemed to include "absolute ownership". The parties hereto confirm that it is their wish that this Agreement and any other document executed in connection with the transactions contemplated herein be drawn up in the English language only and that all other documents contemplated thereunder or relating thereto, including notices, may also be drawn up in the English language only. *Les parties aux présentes confirment que c'est leur volonté que cette convention et les autres documents de crédit soient rédigés en langue anglaise seulement et que tous les documents, y*

compris tous avis, envisagés par cette convention et les autres documents peuvent être rédigés en langue anglaise seulement.

1.7 Dutch Terms. In this Agreement and any Other Document, where it relates to a person incorporated or existing under the laws of the Netherlands or the context so requires, a reference to:

(a) **The Netherlands** means the European part of the Kingdom of the Netherlands and **Dutch** means in or of The Netherlands;

(b) **works council** means each works council (*ondernemingsraad*) or central or group works council (*centrale of groeps ondernemingsraad*) having jurisdiction over that person;

(c) a **necessary action to authorise** includes any action required to comply with the Works Councils Act of The Netherlands (*Wet op de ondernemingsraden*), followed by an unconditional and positive advice (*advies*) from the works council of that person;

(d) **financial assistance** includes any act contemplated by section 2:98c of the Dutch Civil Code;

(e) **constitutional documents** means the articles of association (*statuten*) and deed of incorporation (*akte van oprichting*) and an up-to-date extract of registration of the Trade Register of the Dutch Chamber of Commerce;

(f) a **security interest** or **security** includes any mortgage (*hypotheek*), pledge (*pandrecht*), retention of title arrangement (*eigendomsvoorbehoud*), right of retention (*recht van retentie*), right to reclaim goods (*recht van reclame*) and any right in rem (*beperkt recht*) created for the purpose of granting security (*goederenrechtelijke zekerheid*);

(g) a **winding-up**, **administration** or **dissolution** includes declared bankrupt (*failliet verklaard*) or dissolved (*ontbonden*);

(h) a **moratorium** includes *surseance van betaling* and a **moratorium is declared** includes *surseance verleend*;

(i) any procedure or step taken in connection with insolvency proceedings includes that person having filed a notice under Section 36 of the Tax Collection Act of The Netherlands (*Invorderingswet 1990*);

(j) a **liquidator** includes a *curator* or a *beoogd curator*;

(k) an **administrator** includes a *bewindvoerder* or a *beoogd bewindvoerder*; and

(l) an **attachment** includes a *beslag*.

II. ADVANCES, PAYMENTS.

2.1 Revolving Advances.

(a) Amount of Revolving Advances. Subject to the terms and conditions set forth in this Agreement, each Revolving Lender, severally and not jointly, will make Revolving Advances to Borrowers in Dollars in aggregate amounts outstanding at any time equal to such Revolving Lender's Revolving Commitment Percentage of an amount equal to (1) the lesser of (x) the Maximum Revolving Advance Amount and (y) the Formula Amount, less (2) the outstanding principal amount of Swing Loans, less (3) the aggregate Maximum Undrawn Amount of all outstanding Letters of Credit.

The "Formula Amount" shall mean an amount equal to:

(i) up to eighty-five percent (85%) (the "Receivables Advance Rate") of Eligible Receivables, plus

(ii) the lesser of (A) up to seventy five percent (75%) of the cost of the Eligible Inventory and Eligible Foreign In-Transit Inventory (the "Inventory Advance Rate"), and (B) up to eighty-five percent (85%) of the appraised net orderly liquidation value of Eligible Inventory (as evidenced by an Inventory appraisal satisfactory to Agent in its Permitted Discretion) (the "Inventory NOLV Advance Rate"; together with, the Inventory Advance Rate and the Receivables Advance Rate, collectively, the "Advance Rates"), minus

(iii) Reserves;

subject to the preceding provisions of this sentence and any other provisions hereof expressly permitting Agent to adjust the Formula Amount, the Formula Amount at any time shall be determined by reference to the most recent Borrowing Base Certificate delivered to Agent pursuant to Section 9.2(d) (or, prior to the first such delivery, delivered to Agent pursuant to Section 8.1(e)).

Notwithstanding anything contained herein to the contrary, in no event shall the value of the Formula Amount comprised of (i) Eligible Inventory exceed an amount equal to sixty-five percent (65%) of the Formula Amount, (ii) Eligible Inventory of a Canadian Credit Party exceed $20,000,000, (iii) Eligible In-Transit Inventory exceed $10,000,000, (iv) Eligible Inventory consisting of Consigned Inventory exceed $7,500,000, (v) Eligible Inventory consisting of stores and spare parts exceed $2,000,000, (vi) Eligible Inventory consisting of packaging materials exceed $500,000 or (vii) Eligible Receivables consisting of Receivables that are due or unpaid more than ninety (90) days but less than one hundred twenty (120) days after the original invoice date exceed $5,000,000.

(b) The Revolving Advances shall be evidenced by one or more secured promissory notes if requested by a Revolving Lender (collectively, the "Revolving Credit Note") substantially in the form attached hereto as Exhibit 2.1(a). Notwithstanding anything to the contrary contained in the foregoing or otherwise in this Agreement, the outstanding aggregate principal amount of Swing Loans and the Revolving Advances at any one time outstanding shall not exceed an amount equal to (1) the lesser of (x) the Maximum Revolving Advance Amount

and (y) the Formula Amount, less (2) the outstanding principal amount of Swing Loans, less (3) the aggregate Maximum Undrawn Amount of all outstanding Letters of Credit.

2.2 Procedures for Requesting Revolving Advances; Procedures for Selection of Applicable Interest Rates for All Advances.

(a) Borrowing Agent on behalf of any Borrower may notify Agent prior to 3:00 p.m. Eastern Standard Time on a Business Day of a Borrower's request to incur, on that day, a Revolving Advance hereunder. Should any amount required to be paid as interest hereunder, or as fees or other charges under this Agreement or any other agreement with Agent or Lenders, or with respect to any other Obligation under this Agreement, become due and not be paid by or on behalf of the Borrowers when due, the same shall be deemed a request for a Revolving Advance maintained as a Domestic Rate Loan as of the date such payment is due, in the amount required to pay in full such interest, fee, charge or Obligation, and such request shall be irrevocable.

(b) Notwithstanding the provisions of subsection (a) above, in the event any Borrower desires to obtain a LIBOR Rate Loan for any Advance (other than a Swing Loan), Borrowing Agent shall give Agent written notice by no later than 3:00 p.m. on the day which is three (3) Business Days prior to the date such LIBOR Rate Loan is to be borrowed, specifying (i) the date of the proposed borrowing (which shall be a Business Day), (ii) the type of borrowing and the amount of such Advance to be borrowed, which amount shall be in a minimum amount of $1,000,000 and in integral multiples of $500,000 thereafter, and (iii) the duration of the first Interest Period therefor. Interest Periods for LIBOR Rate Loans consisting of Revolving Advances shall be for one (1), two (2), three (3) or six (6) months; provided that, if an Interest Period would end on a day that is not a Business Day, it shall end on the next succeeding Business Day unless such day falls in the next succeeding calendar month in which case the Interest Period shall end on the next preceding Business Day. Any Interest Period that begins on the last Business Day of a calendar month (or a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period. Upon and after the occurrence of an Event of Default, and during the continuation thereof, at the option of Agent or at the direction of Required Lenders, no LIBOR Rate Loan shall be made available to any Borrower. After giving effect to each requested LIBOR Rate Loan consisting of Revolving Advances, including those which are converted from a Domestic Rate Loan under Section 2.2(e), there shall not be outstanding more than five (5) LIBOR Rate Loans consisting of Revolving Advances, in the aggregate.

(c) Each Interest Period of a LIBOR Rate Loan shall commence on the date such LIBOR Rate Loan is made and shall end on such date as Borrowing Agent may elect as set forth in subsection (b)(iii) above, provided that the exact length of each Interest Period shall be determined in accordance with the practice of the interbank market for offshore Dollar deposits and no Interest Period shall end after the last day of the Term.

(d) Borrowing Agent shall elect the initial Interest Period applicable to a LIBOR Rate Loan by its notice of borrowing given to Agent pursuant to Section 2.2(b) or with respect to LIBOR Rate Loans consisting of Revolving Advances by its notice of conversion

given to Agent pursuant to Section 2.2(e), as the case may be. Borrowing Agent shall elect the duration of each succeeding Interest Period by giving irrevocable written notice to Agent of such duration not later than 3:00 p.m. Eastern Standard Time on the day which is three (3) Business Days prior to the last day of the then current Interest Period applicable to such LIBOR Rate Loan. Provided that no Event of Default shall have occurred and be continuing, if Agent does not receive timely notice of the Interest Period elected by Borrowing Agent with respect to LIBOR Rate Loans consisting of Revolving Advances, Borrowing Agent shall be deemed to have elected to continue such LIBOR Rate Loan as a LIBOR Rate Loan with the same Interest Period.

(e) Provided that no Event of Default shall have occurred and be continuing, Borrowing Agent may, on the last Business Day of the then current Interest Period applicable to any outstanding LIBOR Rate Loan consisting of Revolving Advances, or on any Business Day with respect to Domestic Rate Loans consisting of Revolving Advances, convert any such loan into a loan of another type in the same aggregate principal amount; provided that any conversion of a LIBOR Rate Loan shall be effective only on the last Business Day of the then current Interest Period applicable to such LIBOR Rate Loan. If Borrowing Agent desires to convert a Revolving Advance, Borrowing Agent shall give Agent written notice by no later than 3:00 p.m. Eastern Standard Time (i) on the day which is three (3) Business Days prior to the date on which such conversion is to occur with respect to a conversion from a Domestic Rate Loan to a LIBOR Rate Loan, or (ii) on the day which is one (1) Business Day prior to the date on which such conversion is to occur (which date shall be the last Business Day of the Interest Period for the applicable LIBOR Rate Loan) with respect to a conversion from a LIBOR Rate Loan to a Domestic Rate Loan, specifying, in each case, the date of such conversion, the loans to be converted and if the conversion is to a LIBOR Rate Loan, the duration of the first Interest Period therefor.

(f) At its option and upon written notice given prior to 3:00 p.m. Eastern Standard Time at least three (3) Business Days prior to the date of such prepayment, any Borrower may, subject to Section 2.2(g) and Section 13.1, prepay the LIBOR Rate Loans in whole at any time or in part from time to time with accrued interest on the principal being prepaid to the date of such repayment; provided, that any such notice may state that such notice and such prepayment is conditioned upon the occurrence of one or more events specified therein, in which case such notice may be revoked or modified by such Borrower (by notice to Agent on or prior to the specified date of prepayment) if such condition is not satisfied. Such Borrower shall specify the date of prepayment of Advances which are LIBOR Rate Loans and the amount of such prepayment. In the event that any prepayment of a LIBOR Rate Loan is required or permitted on a date other than the last Business Day of the then current Interest Period with respect thereto, such Borrower shall indemnify Agent and Lenders therefor in accordance with Section 2.2(g).

(g) Without limiting the obligations of each Borrower under Section 13.1, each Borrower shall indemnify Agent and each Lender and hold Agent and each Lender harmless from and against all reasonable and invoiced liabilities, losses or expenses (including any foreign exchange losses in connection with an Advance or requested Advance and any loss or expense arising from the liquidation or reemployment of funds obtained by it to maintain such Advance, from fees payable to terminate the deposits from which such funds were obtained or

from the performance of any foreign exchange contract in connection with an Advance or requested Advance, but excluding loss of anticipated profits) which such Lender sustains or incurs as a consequence of any:

(i) payment, prepayment, conversion or renewal of any Advance to which a LIBOR Rate applies on a day other than the last day of the corresponding Interest Period (whether or not such payment or prepayment is mandatory, voluntary or automatic and whether or not such payment or prepayment is then due), or any voluntary prepayment without the required notice, or

(ii) attempt by a Borrower to revoke (expressly, by later inconsistent notices or otherwise) in whole or part any requests for a Revolving Advance or notices of prepayment, conversion, renewal or other Interest Period elections of any Advance to which a LIBOR Rate applies.

If Agent or any Lender sustains or incurs any such loss or expense, it shall from time to time notify the Borrowers of the amount determined in good faith by such Lender (which determination may include such assumptions, allocations of costs and expenses and averaging or attribution methods as such Lender shall deem reasonable) to be necessary to indemnify such Lender for such loss or expense. Such notice shall set forth in reasonable detail the basis for such determination. Such amount shall be due and payable by the Borrower to such Lender ten (10) Business Days after such notice is given.

(h) Notwithstanding any other provision hereof, if any Applicable Law, treaty, regulation or directive, or any change therein or in the interpretation or application thereof, including without limitation any Change in Law, shall make it unlawful for Lenders or any Lender (for purposes of this subsection (h), the term "Lender" shall include any Lender and the office or branch where any Lender or any Person controlling such Lender makes or maintains any LIBOR Rate Loans) to make or maintain its LIBOR Rate Loans, the obligation of Lenders (or such affected Lender) to make LIBOR Rate Loans hereunder shall forthwith be cancelled and Borrowers shall, if any affected LIBOR Rate Loans are then outstanding, promptly upon request from Agent, either pay all such affected LIBOR Rate Loans or convert such affected LIBOR Rate Loans into loans of another type. If any such payment or conversion of any LIBOR Rate Loan is made on a day that is not the last day of the Interest Period applicable to such LIBOR Rate Loan, Borrowers shall pay Agent, upon Agent's request, such amount or amounts set forth in clause (g) above. A certificate as to any additional amounts payable pursuant to the foregoing sentence submitted by Lenders to Borrowing Agent shall be conclusive absent manifest error.

(i) Anything to the contrary contained herein notwithstanding, neither Agent nor any Lender, nor any of their participants, is required actually to acquire LIBOR deposits to fund or otherwise match fund any Obligation as to which interest accrues based on the LIBOR Rate. The provisions set forth herein shall apply as if each Lender or its participants had match funded any Obligation as to which interest is accruing based on the LIBOR Rate by acquiring LIBOR deposits for each Interest Period in the amount of the LIBOR Rate Loans.

2.3 [Intentionally Omitted].

2.4 Swing Loans.

(a) Subject to the terms and conditions set forth in this Agreement, and in order to minimize the transfer of funds between Lenders and Agent for administrative convenience, Agent, Revolving Lenders and Swing Loan Lender agree that in order to facilitate the administration of this Agreement, Swing Loan Lender may, at its election and option made in its sole discretion cancelable at any time for any reason whatsoever, make swing loan advances ("Swing Loans") available to Borrowers as provided for in this Section 2.4 at any time or from time to time after the date hereof to, but not including, the expiration of the Term, in an aggregate principal amount up to but not in excess of the Maximum Swing Loan Advance Amount; provided that the outstanding aggregate principal amount of Swing Loans and the Revolving Advances at any one time outstanding shall not exceed an amount equal to the lesser of (i) the Maximum Revolving Advance Amount less the Maximum Undrawn Amount of all outstanding Letters of Credit or (ii) the Formula Amount. All Swing Loans shall be Domestic Rate Loans only. Borrowers may borrow (at the option and election of Swing Loan Lender), repay and reborrow (at the option and election of Swing Loan Lender) Swing Loans and Swing Loan Lender may make Swing Loans as provided in this Section 2.4 during the period between Settlement Dates. All Swing Loans shall be evidenced by a secured promissory note if requested by Swing Loan Lender (the "Swing Loan Note") substantially in the form attached hereto as Exhibit 2.4(a). Swing Loan Lender's agreement to make Swing Loans under this Agreement is cancelable at any time for any reason whatsoever and the making of Swing Loans by Swing Loan Lender from time to time shall not create any duty or obligation, or establish any course of conduct, pursuant to which Swing Loan Lender shall thereafter be obligated to make Swing Loans in the future.

(b) Upon either (i) any request by Borrowing Agent for a Revolving Advance of Domestic Rate Loans made pursuant to Section 2.2(a) or (ii) the occurrence of any deemed request by Borrowers for a Revolving Advance pursuant to the provisions of the last sentence of Section 2.2(a), Swing Loan Lender may elect, in its sole discretion, to have such request or deemed request treated as a request for a Swing Loan, and may advance same day funds to Borrowers as a Swing Loan; provided that notwithstanding anything to the contrary provided for herein, Swing Loan Lender may not make Swing Loan Advances if Swing Loan Lender has been notified by Agent or by Required Lenders that one or more of the applicable conditions set forth in Section 8.2 of this Agreement have not been satisfied or the Revolving Commitments have been terminated for any reason.

(c) Upon the making of a Swing Loan (whether before or after the occurrence of a Default or an Event of Default and regardless of whether a Settlement has been requested with respect to such Swing Loan), each Revolving Lender shall be deemed, without further action by any party hereto, to have unconditionally and irrevocably purchased from Swing Loan Lender, without recourse or warranty, an undivided interest and participation in such Swing Loan in proportion to its Revolving Commitment Percentage. Swing Loan Lender or Agent may, at any time, require the Revolving Lenders to fund such participations by means of a Settlement as provided for in Section 2.6(d) below. From and after the date, if any, on which any Revolving Lender is required to fund, and funds, its participation in any Swing Loans purchased hereunder, Agent shall promptly distribute to such Revolving Lender its Revolving Commitment Percentage of all payments of principal and interest and all proceeds of Collateral received by

Agent in respect of such Swing Loan; provided that no Revolving Lender shall be obligated in any event to make Revolving Advances in an amount in excess of its Revolving Commitment Amount minus its Participation Commitment (taking into account any reallocations under Section 2.22) of the Maximum Undrawn Amount of all outstanding Letters of Credit.

2.5 Disbursement of Advance Proceeds. All Advances shall be disbursed from whichever office or other place Agent may designate from time to time and, together with any and all other Obligations of Borrowers to Agent or Lenders, shall be charged to Borrowers' Account on Agent's books. The proceeds of each Revolving Advance or Swing Loan requested by Borrowing Agent on behalf of any Borrower or deemed to have been requested by any Borrower under Sections 2.2(a), 2.6(b) or 2.14 shall, (i) with respect to requested Revolving Advances, to the extent Revolving Lenders make such Revolving Advances in accordance with Section 2.2(a), 2.6(b) or 2.14, and with respect to Swing Loans made upon any request by Borrowing Agent for a Revolving Advance to the extent Swing Loan Lender makes such Swing Loan in accordance with Section 2.4(b), be made available to the applicable Borrower on the day so requested by way of credit to such Borrower's operating account at PNC, or such other bank as Borrowing Agent may designate following notification to Agent, so long as Agent has agreed to such other account, in immediately available federal funds or other immediately available funds or, (ii) with respect to Revolving Advances deemed to have been requested by any Borrower or Swing Loans made upon any deemed request for a Revolving Advance by any Borrower, be disbursed to Agent to be applied to the outstanding Obligations giving rise to such deemed request. During the Term, Borrowers may use the Revolving Advances and Swing Loans by borrowing, prepaying and reborrowing, all in accordance with the terms and conditions hereof.

2.6 Making and Settlement of Advances.

(a) Each borrowing of Revolving Advances shall be advanced according to the applicable Revolving Commitment Percentages of Revolving Lenders (subject to any contrary terms of Section 2.22). Each borrowing of Swing Loans shall be advanced by Swing Loan Lender alone.

(b) Promptly after receipt by Agent of a request or a deemed request for a Revolving Advance pursuant to Section 2.2(a), to the extent Agent elects not to provide a Swing Loan or the making of a Swing Loan would result in the aggregate amount of all outstanding Swing Loans exceeding the maximum amount permitted in Section 2.4(a), Agent shall notify Lenders holding the Revolving Commitments of its receipt of such request specifying the information provided by Borrowing Agent and the apportionment among Lenders of the requested Revolving Advance as determined by Agent in accordance with the terms hereof. Each applicable Lender shall remit the principal amount of each Revolving Advance to Agent such that Agent is able to, and Agent shall, to the extent the applicable Lenders have made funds available to it for such purpose and subject to Sections 8.2 and 8.3, fund such Revolving Advance to Borrowers in Dollars and immediately available funds at the Payment Office prior to the close of business, on the applicable borrowing date; provided that if any applicable Lender fails to remit such funds to Agent in a timely manner, Agent may elect in its sole discretion to fund with its own funds the Revolving Advance of such Lender on such borrowing date, and such Lender shall be subject to the repayment obligation in Section 2.6(c).

(c) Unless Agent shall have been notified by telephone, confirmed in writing, by any Revolving Lender that such Lender will not make the amount which would constitute its applicable Revolving Commitment Percentage of the requested Revolving Advance available to Agent, Agent may (but shall not be obligated to) assume that such Lender has made such amount available to Agent on such date in accordance with Section 2.6(b) and may, in reliance upon such assumption, make available to Borrowers a corresponding amount. Agent will promptly notify Borrowing Agent of its receipt of any such notice from a Lender. In such event, if a Lender has not in fact made its applicable Revolving Commitment Percentage of the requested Revolving Advance available to Agent, then the applicable Lender and Borrowers severally agree to pay to Agent on demand such corresponding amount with interest thereon, for each day from and including the date such amount is made available to Borrowers through but excluding the date of payment to Agent, at (i) in the case of a payment to be made by such Lender, the greater of (A) (x) the daily average Federal Funds Effective Rate (computed on the basis of a year of three hundred sixty (360) days) during such period as quoted by Agent, times (y) such amount or (B) a rate determined by Agent in accordance with banking industry rules on interbank compensation, and (ii) in the case of a payment to be made by Borrowers, the Revolving Interest Rate for Revolving Advances that are Domestic Rate Loans. If such Lender pays its share of the applicable Revolving Advance to Agent, then the amount so paid shall constitute such Lender's Revolving Advance. Any payment by Borrowers shall be without prejudice to any claim Borrowers may have against a Revolving Lender that shall have failed to make such payment to Agent. A certificate of Agent submitted to any Lender or Borrower with respect to any amounts owing under this paragraph (c) shall be conclusive, in the absence of manifest error.

(d) Agent, on behalf of Swing Loan Lender, shall demand settlement (a "Settlement") of all or any Swing Loans with Lenders holding the Revolving Commitments on at least a weekly basis, or on any more frequent date that Agent elects or that Swing Loan Lender at its option exercisable for any reason whatsoever may request, by notifying Lenders holding the Revolving Commitments of such requested Settlement by facsimile, telephonic or electronic transmission no later than 3:00 p.m. Eastern Standard Time on the date of such requested Settlement (the "Settlement Date"). Subject to any contrary provisions of Section 2.22, each Revolving Lender shall transfer the amount of such Lender's Revolving Commitment Percentage of the outstanding principal amount (plus interest accrued thereon to the extent requested by Agent) of the applicable Swing Loan with respect to which Settlement is requested by Agent, to such account of Agent as Agent may designate not later than 5:00 p.m. Eastern Standard Time on such Settlement Date if requested by Agent by 3:00 p.m. Eastern Standard Time, otherwise not later than 5:00 p.m. Eastern Standard Time on the next Business Day. Settlements may occur at any time notwithstanding that the conditions precedent to making Revolving Advances set forth in Section 8.2 have not been satisfied or the Revolving Commitments shall have otherwise been terminated at such time. All amounts so transferred to Agent shall be applied against the amount of outstanding Swing Loans and, when so applied shall constitute Revolving Advances of such Lenders accruing interest as Domestic Rate Loans. If any such amount is not transferred to Agent by any Revolving Lender on such Settlement Date, Agent shall be entitled to recover such amount on demand from such Lender together with interest thereon as specified in Section 2.6(c).

(e) If any Lender or Participant (a "Benefited Lender") shall at any time receive any payment of all or part of its Advances, or interest thereon, or receive any Collateral

in respect thereof (whether voluntarily or involuntarily or by set-off) in a greater proportion than any such payment to and Collateral received by any other Lender, if any, in respect of such other Lender's Advances, or interest thereon, and such greater proportionate payment or receipt of Collateral is not expressly permitted hereunder, such Benefited Lender shall purchase for cash from the other Lenders a participation in such portion of each such other Lender's Advances, or shall provide such other Lender with the benefits of any such Collateral, or the proceeds thereof, as shall be necessary to cause such Benefited Lender to share the excess payment or benefits of such Collateral or proceeds ratably with each of the other Lenders; provided, however, that if all or any portion of such excess payment or benefits is thereafter recovered from such Benefited Lender, such purchase shall be rescinded, and the purchase price and benefits returned, to the extent of such recovery, but without interest. Each Borrower consents to the foregoing and agrees, to the extent it may effectively do so under Applicable Law, that each Lender so purchasing a portion of another Lender's Advances may exercise all rights of payment (including rights of set-off) with respect to such portion as fully as if such Lender were the direct holder of such portion, and the obligations owing to each such purchasing Lender in respect of such participation and such purchased portion of any other Lender's Advances shall be part of the Obligations secured by the Collateral, and the obligations owing to each such purchasing Lender in respect of such participation and such purchased portion of any other Lender's Advances shall be part of the Obligations secured by the Collateral.

2.7 Maximum Advances. The aggregate balance of Revolving Advances plus Swing Loans outstanding at any time shall not exceed an amount equal to (1) the lesser of (x) the Maximum Revolving Advance Amount and (y) the Formula Amount, less (2) the outstanding principal amount of Swing Loans, less (3) the aggregate Maximum Undrawn Amount of all outstanding Letters of Credit.

2.8 Manner and Repayment of Advances.

(a) The Revolving Advances and Swing Loans shall be due and payable in full on the last day of the Term subject to earlier prepayment as herein provided. Notwithstanding the foregoing, all Advances shall be subject to earlier repayment upon (x) acceleration upon the occurrence of an Event of Default under Article XI or (y) termination of this Agreement in accordance with the terms hereof. Each payment (including each prepayment) by any Borrower on account of the principal of and interest on the Advances shall be applied, first to the outstanding Swing Loans and next, pro rata according to the applicable Revolving Commitment Percentages of Lenders, to the outstanding Revolving Advances (subject to any contrary provisions of Section 2.22).

(b) Each Borrower recognizes that the amounts evidenced by checks, notes, drafts or any other items of payment relating to and/or proceeds of Collateral may not be collectible by Agent on the date received by Agent. Agent shall conditionally credit Borrowers' Account for each item of payment on the next Business Day after the Business Day on which such item of payment is received by Agent (and the Business Day on which each such item of payment is so credited shall be referred to, with respect to such item, as the "Application Date"). Agent is not, however, required to credit Borrowers' Account for the amount of any item of payment which is unsatisfactory to Agent and Agent may charge Borrowers' Account for the amount of any item of payment which is returned, for any reason whatsoever, to Agent unpaid.

Subject to the foregoing, Borrowers agree that for purposes of computing the interest charges under this Agreement, each item of payment received by Agent shall be deemed applied by Agent on account of the Obligations on its respective Application Date. Borrowers further agree that there is a monthly float charge payable to Agent for Agent's sole benefit, in an amount equal to (y) the face amount of all items of payment received during the prior month (including items of payment received by Agent as a wire transfer or electronic depository check) multiplied by
(z) the Revolving Interest Rate with respect to Domestic Rate Loans for one (1) Business Day.

(c) All payments of principal, interest and other amounts payable hereunder, or under any of the Other Documents shall be made to Agent at the Payment Office not later than 1:00 p.m. Eastern Standard Time on the due date therefor in Dollars in federal funds or other funds immediately available to Agent. Agent shall have the right to effectuate payment of any and all Obligations due and owing hereunder by charging Borrowers' Account, or by making Advances to Borrowers as provided in Section 2.2.

(d) Except as expressly provided herein, all payments (including prepayments) to be made by any Borrower on account of principal, interest, fees and other amounts payable hereunder shall be made without deduction, setoff or counterclaim and shall be made to Agent on behalf of Lenders to the Payment Office, in each case on or prior to 1:00 p.m. Eastern Standard Time in Dollars and in immediately available funds.

(e) The Advances and other Obligations shall be made and repaid in Dollars.

2.9 Repayment of Excess Advances. If at any time the aggregate balance of outstanding Revolving Advances, Swing Loans and/or Advances taken as a whole exceeds the maximum amount of such type of Advances and/or Advances taken as a whole (as applicable) permitted to be outstanding hereunder at such time, such excess Advances shall be promptly, but in any event within one (1) Business Day, due and payable without the necessity of any demand, at the Payment Office, whether or not a Default or an Event of Default has occurred.

2.10 Statement of Account. Agent shall maintain, in accordance with its customary procedures, a loan account ("Borrowers' Account") in the name of Borrowers in which shall be recorded the date and amount of each Advance made by Agent or Lenders and the date and amount of each payment in respect thereof; provided, however, the failure by Agent to record the date and amount of any Advance shall not adversely affect Agent or any Lender. Each month, Agent shall send to Borrowing Agent a statement showing the accounting for the Advances made, payments made or credited in respect thereof, and other transactions between Agent, Lenders and Borrowers during such month. The monthly statements shall be deemed correct and binding upon Borrowers in the absence of manifest error and shall constitute an account stated between Lenders and Borrowers unless Agent receives a written statement of Borrowers' specific exceptions thereto within thirty (30) days after such statement is received by Borrowing Agent. The records of Agent with respect to each Borrowers' Account shall be conclusive evidence absent manifest error of the amounts of Advances and other charges thereto and of payments applicable thereto.

2.11 Letters of Credit.

(a) Subject to the terms and conditions hereof, Issuer shall issue or cause the issuance of standby letters of credit denominated in Dollars ("Letters of Credit") for the account of any Credit Party or any Subsidiary except to the extent that the issuance thereof would then cause the sum of (i) the outstanding Revolving Advances, plus (ii) the outstanding Swing Loans, plus (iii) the Maximum Undrawn Amount of all outstanding Letters of Credit, plus (iv) the Maximum Undrawn Amount of the Letter of Credit to be issued to exceed the lesser of (x) the Maximum Revolving Advance Amount or (y) the Formula Amount. The Maximum Undrawn Amount of all outstanding Letters of Credit shall not exceed in the aggregate at any time the Letter of Credit Sublimit. All disbursements or payments related to Letters of Credit shall be deemed to be Domestic Rate Loans consisting of Revolving Advances and shall bear interest at the Revolving Interest Rate for Domestic Rate Loans. Letters of Credit that have not been drawn upon shall not bear interest (but fees shall accrue in respect of outstanding Letters of Credit as provided in Section 3.2). As of the Closing Date, the letters of credit set forth on Schedule 2.11, which were issued pursuant to the Existing Credit Agreement by Agent and are outstanding on the date hereof (collectively, the "Existing Letters of Credit"), are hereby deemed to be Letters of Credit issued and outstanding hereunder. Other than any Existing Letters of Credit, no Letter of Credit shall be issued for the benefit of any Subsidiary of Holdings that is not a Credit Party without the prior written consent of Agent.

(b) Notwithstanding any provision of this Agreement, Issuer shall not be under any obligation to issue any Letter of Credit if (i) any order, judgment or decree of any Governmental Body or arbitrator shall by its terms purport to enjoin or restrain Issuer from issuing any Letter of Credit, or any Law applicable to Issuer or any request or directive (whether or not having the force of law) from any Governmental Body with jurisdiction over Issuer shall prohibit, or request that Issuer refrain from, the issuance of letters of credit generally or the Letter of Credit in particular or shall impose upon Issuer with respect to the Letter of Credit any restriction, reserve or capital requirement (for which Issuer is not otherwise entitled to be compensated hereunder) not in effect on the date of this Agreement, or shall impose upon Issuer any unreimbursed loss, cost or expense which was not applicable on the date of this Agreement, and which Issuer in good faith deems material to it, or (ii) the issuance of the Letter of Credit would violate one or more policies of Issuer applicable to letters of credit generally.

2.12 Issuance of Letters of Credit.

(a) Borrowing Agent, on behalf of any Borrower, may request Issuer to issue or cause the issuance of a Letter of Credit by delivering to Issuer, with a copy to Agent at the Payment Office, prior to 1:00 p.m. Eastern Standard Time, at least five (5) Business Days prior to the proposed date of issuance or such shorter period as may be agreed to by the Issuer, such Issuer's form of Letter of Credit Application (the "Letter of Credit Application") completed to the satisfaction of Agent and Issuer; and, such other certificates, documents and other papers and information as Agent or Issuer may reasonably request. Issuer shall not issue any requested Letter of Credit if such Issuer has received notice from Agent that one or more of the applicable conditions set forth in Section 8.2 of this Agreement have not been satisfied or the commitments of Lenders to make Revolving Advances hereunder have been terminated for any reason.

(b) Each Letter of Credit shall, among other things, (i) provide for the payment of sight drafts, or other written demands for payment, and (ii) unless otherwise agreed to by Agent and Issuer, have an expiry date not later than twelve (12) months after such Letter of Credit's date of issuance and in no event later than the last day of the Term. Each Letter of Credit shall be subject either to the Uniform Customs and Practice for Documentary Credits as most recently published by the International Chamber of Commerce at the time a Letter of Credit is issued or the International Standby Practices (International Chamber of Commerce Publication Number 590), or any subsequent revision thereof at the time a Letter of Credit is issued, as determined by Issuer.

(c) Agent shall use its reasonable efforts to notify Lenders of the request by Borrowing Agent for a Letter of Credit hereunder.

2.13 Requirements for Issuance of Letters of Credit. Borrowing Agent shall authorize and direct any Issuer to name the applicable Borrower as the "Applicant" or "Account Party" of each Letter of Credit. If PNC is not the Issuer of any Letter of Credit, Borrowing Agent shall authorize and direct Issuer to deliver to Agent all instruments, documents, and other writings and property received by Issuer pursuant to the Letter of Credit and to accept and rely upon Agent's instructions and agreements with respect to all matters arising in connection with the Letter of Credit, and the application therefor.

2.14 Disbursements, Reimbursement.

(a) Immediately upon the issuance of each Letter of Credit, each Revolving Lender shall be deemed to, and hereby irrevocably and unconditionally agrees to, purchase from Issuer a participation in each Letter of Credit and each drawing thereunder in an amount equal to such Lender's Revolving Commitment Percentage of the Maximum Undrawn Amount of such Letter of Credit (as in effect from time to time) and the amount of such drawing, respectively.

(b) In the event of any request for a drawing under a Letter of Credit by the beneficiary or transferee thereof, Issuer will promptly notify Agent and Borrowing Agent. Provided that Borrowing Agent shall have received such notice, Borrowers shall reimburse (such obligation to reimburse Issuer shall sometimes be referred to as a "Reimbursement Obligation") Issuer prior to 12:00 Noon, on each date that an amount is paid by Issuer under any Letter of Credit (each such date, a "Drawing Date") in an amount equal to the amount so paid by Issuer. In the event Borrowers fail to reimburse Issuer for the full amount of any drawing under any Letter of Credit by 12:00 Noon, on the Drawing Date, Issuer will promptly notify Agent and each Revolving Lender thereof, and Borrowers shall be automatically deemed to have requested that a Revolving Advance maintained as a Domestic Rate Loan be made by Lenders to be disbursed on the Drawing Date under such Letter of Credit, and Lenders holding the Revolving Commitments shall be unconditionally obligated to fund such Revolving Advance (all whether or not the conditions specified in Section 8.2 are then satisfied or the commitments of Lenders to make Revolving Advances hereunder have been terminated for any reason) as provided for in Section 2.14(c) immediately below. Any notice given by Issuer pursuant to this Section 2.14(b) may be oral if promptly confirmed in writing; provided that the lack of such a confirmation shall not affect the conclusiveness or binding effect of such notice.

(c) Each Revolving Lender shall upon any notice pursuant to Section 2.14(b) make available to Issuer through Agent at the Payment Office an amount in immediately available funds equal to its Revolving Commitment Percentage (subject to any contrary provisions of Section 2.22) of the amount of the drawing, whereupon the participating Lenders shall (subject to Section 2.14(d)) each be deemed to have made a Revolving Advance maintained as a Domestic Rate Loan to Borrowers in that amount. If any Revolving Lender so notified fails to make available to Agent, for the benefit of Issuer, the amount of such Lender's Revolving Commitment Percentage of such amount by 2:00 p.m. Eastern Standard Time on the Drawing Date, then interest shall accrue on such Lender's obligation to make such payment, from the Drawing Date to the date on which such Lender makes such payment (i) at a rate per annum equal to the Federal Funds Effective Rate during the first three (3) days following the Drawing Date and (ii) at a rate per annum equal to the rate applicable to Revolving Advances maintained as a Domestic Rate Loan on and after the fourth day following the Drawing Date. Agent and Issuer will promptly give notice of the occurrence of the Drawing Date, but failure of Agent or Issuer to give any such notice on the Drawing Date or in sufficient time to enable any Revolving Lender to effect such payment on such date shall not relieve such Lender from its obligations under this Section 2.14(c); provided that such Lender shall not be obligated to pay interest as provided in Section 2.14(c)(i) and (ii) until and commencing from the date of receipt of notice from Agent or Issuer of a drawing.

(d) With respect to any unreimbursed drawing on a Letter of Credit that is not converted into a Revolving Advance maintained as a Domestic Rate Loan to Borrowers in whole or in part as contemplated by Section 2.14(b), because of Borrowers' failure to satisfy the conditions set forth in Section 8.2 (other than any notice requirements) or for any other reason, Borrowers shall be deemed to have incurred from Agent a borrowing (each a "Letter of Credit Borrowing") in the amount of such drawing. Such Letter of Credit Borrowing shall be due and payable on demand (together with interest) and shall bear interest at the rate per annum applicable to a Revolving Advance maintained as a Domestic Rate Loan. Each applicable Lender's payment to Agent pursuant to Section 2.14(c) shall be deemed to be a payment in respect of its participation in such Letter of Credit Borrowing and shall constitute a "Participation Advance" from such Lender in satisfaction of its Participation Commitment in respect of the applicable Letter of Credit under this Section 2.14.

(e) Each applicable Lender's Participation Commitment in respect of the Letters of Credit shall continue until the last to occur of any of the following events: (x) Issuer ceases to be obligated to issue or cause to be issued Letters of Credit hereunder; (y) no Letter of Credit issued or created hereunder remains outstanding and uncancelled; and (z) all Persons (other than Borrowers) have been fully reimbursed for all payments made under or relating to Letters of Credit.

2.15 Repayment of Participation Advances.

(a) Upon (and only upon) receipt by Agent for the account of Issuer of immediately available funds from Borrowers (i) in reimbursement of any payment made by Issuer or Agent under the Letter of Credit with respect to which any Lender has made a Participation Advance to Agent, or (ii) in payment of interest on such a payment made by Issuer or Agent under such a Letter of Credit, Agent will pay to each Revolving Lender, in the same

funds as those received by Agent, the amount of such Lender's Revolving Commitment Percentage of such funds, except Agent shall retain the amount of the Revolving Commitment Percentage of such funds of any Revolving Lender that did not make a Participation Advance in respect of such payment by Agent (and, to the extent that any of the other Revolving Lender(s) have funded any portion of such Defaulting Lender's Participation Advance in accordance with the provisions of Section 2.22, Agent will pay over to such Non-Defaulting Lenders a pro rata portion of the funds so withheld from such Defaulting Lender).

(b) If Issuer or Agent is required at any time to return to any Borrower, or to a trustee, receiver, receiver/manager, liquidator, custodian, or any official in any insolvency proceeding, any portion of the payments made by Borrowers to Issuer or Agent pursuant to Section 2.15(a) in reimbursement of a payment made under the Letter of Credit or interest or fee thereon, each applicable Lender shall, on demand of Agent, forthwith return to Issuer or Agent the amount of its Revolving Commitment Percentage of any amounts so returned by Issuer or Agent plus interest at the Federal Funds Effective Rate.

2.16 Documentation. Each Borrower agrees to be bound by the terms of the Letter of Credit Application and by Issuer's interpretations of any Letter of Credit issued on behalf of such Borrower and by Issuer's written regulations and customary practices relating to letters of credit, though Issuer's interpretations may be different from such Borrower's own. In the event of a conflict between the Letter of Credit Application and this Agreement, this Agreement shall govern. It is understood and agreed that, except in the case of gross negligence, bad faith or willful misconduct (as determined by a court of competent jurisdiction in a final non-appealable judgment), Issuer shall not be liable for any error, negligence and/or mistakes, whether of omission or commission, in following Borrowing Agent's or any Borrower's instructions or those contained in the Letters of Credit or any modifications, amendments or supplements thereto.

2.17 Determination to Honor Drawing Request. In determining whether to honor any request for drawing under any Letter of Credit by the beneficiary thereof, Issuer shall be responsible only to determine that the documents and certificates required to be delivered under such Letter of Credit have been delivered and that they comply on their face with the requirements of such Letter of Credit and that any other drawing condition appearing on the face of such Letter of Credit has been satisfied in the manner so set forth.

2.18 Nature of Participation and Reimbursement Obligations. The obligation of each Revolving Lender in accordance with this Agreement to make the Revolving Advances or Participation Advances as a result of a drawing under a Letter of Credit, and the obligations of the applicable Borrowers to reimburse Issuer upon a draw under a Letter of Credit, shall be absolute, unconditional and irrevocable, and shall be performed strictly in accordance with the terms of this Section 2.18 under all circumstances, including the following circumstances:

(a) any set-off, counterclaim, recoupment, defense or other right which such Lender or any Borrower, as the case may be, may have against Issuer, Agent, any Borrower or Lender, as the case may be, or any other Person for any reason whatsoever;

(b) the failure of any Borrower or any other Person to comply, in connection with a Letter of Credit Borrowing, with the conditions set forth in this Agreement for the making

of a Revolving Advance, it being acknowledged that such conditions are not required for the making of a Letter of Credit Borrowing and the obligation of Lenders to make Participation Advances under Section 2.14;

(c) any lack of validity or enforceability of any Letter of Credit;

(d) any claim of breach of warranty that might be made by any Borrower, Agent, Issuer or any Lender against the beneficiary of a Letter of Credit, or the existence of any claim, set-off, recoupment, counterclaim, cross-claim, defense or other right which any Borrower, Agent, Issuer or any Lender may have at any time against a beneficiary, any successor beneficiary or any transferee of any Letter of Credit or assignee of the proceeds thereof (or any Persons for whom any such transferee or assignee may be acting), Issuer, Agent or any Lender or any other Person, whether in connection with this Agreement, the transactions contemplated herein or any unrelated transaction (including any underlying transaction between any Borrower or any Subsidiaries of such Borrower and the beneficiary for which any Letter of Credit was procured);

(e) the lack of power or authority of any signer of (or any defect in or forgery of any signature or endorsement on) or the form of or lack of validity, sufficiency, accuracy, enforceability or genuineness of any draft, demand, instrument, certificate or other document presented under or in connection with any Letter of Credit, or any fraud or alleged fraud in connection with any Letter of Credit, or the transport of any property or provision of services relating to a Letter of Credit, in each case even if Issuer or any of Issuer's Affiliates has been notified thereof;

(f) payment by Issuer under any Letter of Credit against presentation of a demand, draft or certificate or other document which is forged or does not fully comply with the terms of such Letter of Credit (provided that the foregoing shall not excuse Issuer from any obligation under the terms of any applicable Letter of Credit to require the presentation of documents that on their face appear to satisfy any applicable requirements for drawing under such Letter of Credit prior to honoring or paying any such draw);

(g) the solvency of, or any acts or omissions by, any beneficiary of any Letter of Credit, or any other Person having a role in any transaction or obligation relating to a Letter of Credit, or the existence, nature, quality, quantity, condition, value or other characteristic of any property or services relating to a Letter of Credit;

(h) any failure by Issuer or any of Issuer's Affiliates to issue any Letter of Credit in the form requested by Borrowing Agent, unless Agent and Issuer have each received written notice from Borrowing Agent of such failure within three (3) Business Days after Issuer shall have furnished Agent and Borrowing Agent a copy of such Letter of Credit and such error is material and no drawing has been made thereon prior to receipt of such notice;

(i) the occurrence of any Material Adverse Effect;

(j) any breach of this Agreement or any Other Document by any party thereto;

(k) the occurrence or continuance of an insolvency proceeding with respect to any Borrower or any Guarantor;

(l) the fact that a Default or an Event of Default shall have occurred and be continuing;

(m) the fact that the Term shall have expired or this Agreement or the obligations of Lenders to make Advances have been terminated; and

(n) any other circumstance or happening whatsoever, whether or not similar to any of the foregoing.

2.19 Liability for Acts and Omissions.

(a) As between any Borrower and Issuer, Agent and Lenders, each Borrower assumes all risks of the acts and omissions of, or misuse of the Letters of Credit by, the respective beneficiaries of such Letters of Credit. In furtherance and not in limitation of the foregoing, Issuer shall not be responsible for: (i) the form, validity, sufficiency, accuracy, genuineness or legal effect of any document submitted by any party in connection with the application for an issuance of any such Letter of Credit, even if it should in fact prove to be in any or all respects invalid, insufficient, inaccurate, fraudulent or forged (even if Issuer or any of its Affiliates shall have been notified thereof); (ii) the validity or sufficiency of any instrument transferring or assigning or purporting to transfer or assign any such Letter of Credit or the rights or benefits thereunder or proceeds thereof, in whole or in part, which may prove to be invalid or ineffective for any reason; (iii) the failure of the beneficiary of any such Letter of Credit, or any other party to which such Letter of Credit may be transferred, to comply fully with any conditions required in order to draw upon such Letter of Credit or any other claim of any Borrower against any beneficiary of such Letter of Credit, or any such transferee, or any dispute between or among any Borrower and any beneficiary of any Letter of Credit or any such transferee; (iv) errors, omissions, interruptions or delays in transmission or delivery of any messages, by mail, cable, facsimile, telex or otherwise, whether or not they be in cipher; (v) errors in interpretation of technical terms; (vi) any loss or delay in the transmission or otherwise of any document required in order to make a drawing under any such Letter of Credit or of the proceeds thereof; (vii) the misapplication by the beneficiary of any such Letter of Credit of the proceeds of any drawing under such Letter of Credit; or (viii) any consequences arising from causes beyond the control of Issuer, including any Governmental Acts, and none of the above shall affect or impair, or prevent the vesting of, any of Issuer's rights or powers hereunder. Nothing in the preceding sentence shall relieve Issuer from liability for Issuer's gross negligence or willful misconduct (as determined by a court of competent jurisdiction in a final non- appealable judgment) in connection with actions or omissions described in such clauses (i) through (viii) of such sentence. In no event shall Issuer or Issuer's Affiliates be liable to any Borrower for any indirect, consequential, incidental, punitive, exemplary or special damages or expenses (including without limitation attorneys' fees), or for any damages resulting from any change in the value of any property relating to a Letter of Credit.

(b) Without limiting the generality of the foregoing, Issuer and each of its Affiliates: (i) may rely on any oral or other communication believed in good faith by Issuer or

such Affiliate to have been authorized or given by or on behalf of the applicant for a Letter of Credit; (ii) may honor any presentation if the documents presented appear on their face substantially to comply with the terms and conditions of the relevant Letter of Credit; (iii) may honor a previously dishonored presentation under a Letter of Credit, whether such dishonor was pursuant to a court order, to settle or compromise any claim of wrongful dishonor, or otherwise, and shall be entitled to reimbursement to the same extent as if such presentation had initially been honored, together with any interest paid by Issuer or its Affiliates; (iv) may honor any drawing that is payable upon presentation of a statement advising negotiation or payment, upon receipt of such statement (even if such statement indicates that a draft or other document is being delivered separately), and shall not be liable for any failure of any such draft or other document to arrive, or to conform in any way with the relevant Letter of Credit; (v) may pay any paying or negotiating bank claiming that it rightfully honored under the laws or practices of the place where such bank is located; and (vi) may settle or adjust any claim or demand made on Issuer or its Affiliate in any way related to any order issued at the applicant's request to an air carrier, a letter of guarantee or of indemnity issued to a steamship agent or carrier or any document or instrument of like import (each an "Order") and honor any drawing in connection with any Letter of Credit that is the subject of such Order, notwithstanding that any drafts or other documents presented in connection with such Letter of Credit fail to conform in any way with such Letter of Credit.

(c) In furtherance and extension and not in limitation of the specific provisions set forth above, any action taken or omitted by Issuer under or in connection with the Letters of Credit issued by it or any documents and certificates delivered thereunder, if taken or omitted in good faith and without gross negligence (as determined by a court of competent jurisdiction in a final non-appealable judgment), shall not put Issuer under any resulting liability to any Borrower, Agent or any Lender.

2.20 Voluntary and Mandatory Prepayments.

(a) Voluntary Prepayments. Borrowers may prepay the Revolving Loans at any time in whole or in part without premium or penalty. Borrowers may permanently reduce the Revolving Commitments (with a corresponding reduction in the Maximum Revolving Advance Amount) at any time; provided, that (i) Borrowing Agent shall provide at least three (3) Business Days prior written notice of such reduction, (ii) such reduction shall be in increments of $5,000,000, (iii) no Default or Event of Default exists or would result from such reduction, (iv) such reduction shall be permanent, and (v) in no event shall the aggregate Revolving Commitments be reduced below $50,000,000 unless terminated in full.

(b) Mandatory Prepayment. Within one (1) Business Day of the date of the issuance or incurrence by any Credit Party or any of its Subsidiaries of any Indebtedness (other than Indebtedness permitted under Section 7.1), or upon an issuance of Equity interests by any Credit Party or any of its Subsidiaries (other than any Excluded Equity Issuance), the applicable Borrower shall prepay the outstanding principal amount of the Obligations constituting Advances in accordance with clause (c) below in an amount equal to one hundred percent (100%) of the Net Cash Proceeds received by such Person in connection therewith. The provisions of this Section 2.20(b) shall not be deemed to be implied consent to any such issuance, incurrence or sale otherwise prohibited by the terms and conditions of this Agreement.

(c) Each prepayment pursuant to Section 2.20(b) shall be applied, first, to the Revolving Advances (without a corresponding permanent reduction in the Revolving Commitments), until paid in full, and second, to cash collateralize the Letters of Credit in an amount equal to one hundred three percent (103%) of the aggregate undrawn amount of all outstanding Letters of Credit (without a corresponding permanent reduction in the Revolving Commitments); provided, that if an Application Event has occurred and is continuing and funds are to be applied pursuant to Section 11.5 as directed by Required Lenders, such payments shall be applied in respect of the Obligations in accordance with Section 11.5.

2.21 Use of Proceeds.

(a) Borrowers shall apply the proceeds of Advances to (i) make Restricted Payments to Holdings to be used by Holdings to repay existing indebtedness of Holdings under the Existing Credit Agreement, (ii) pay certain amounts in respect of the purchase of certain accounts receivable on the Closing Date, (iv) pay fees and expenses relating to the foregoing, and (v) provide for the working capital needs and other general corporate purposes of Holdings and its Subsidiaries.

(b) Without limiting the generality of Section 2.21(a) above, neither Borrowers nor the Guarantors intends to use nor shall they use any portion of the proceeds of the Advances, directly or indirectly, for any purpose in violation of Applicable Law.

2.22 Defaulting Lender.

(a) Notwithstanding anything to the contrary contained herein, in the event any Lender is a Defaulting Lender, all rights and obligations hereunder of such Defaulting Lender and of the other parties hereto shall be modified to the extent of the express provisions of this Section 2.22 so long as such Lender is a Defaulting Lender.

(b) (i) Except as otherwise expressly provided for in this Section 2.22, Revolving Advances shall be made pro rata from Revolving Lenders which are not Defaulting Lenders based on their respective Revolving Commitment Percentages, and no Revolving Commitment Percentage of any Lender or any pro rata share of any Revolving Advances required to be advanced by any Lender shall be increased as a result of any Lender being a Defaulting Lender. Amounts received in respect of principal of any type of Revolving Advances shall be applied to reduce such type of Revolving Advances of each Lender (other than any Defaulting Lender) holding an applicable Revolving Commitment in accordance with their

applicable Revolving Commitment Percentages; provided that Agent shall not be obligated to transfer to a Defaulting Lender any payments received by Agent for Defaulting Lender's benefit, nor shall a Defaulting Lender be entitled to the sharing of any payments hereunder (including any principal, interest or fees). Amounts payable to a Defaulting Lender shall instead be paid to or retained by Agent. Agent may hold and, in its discretion, re-lend to a Borrower the amount of such payments received or retained by it for the account of such Defaulting Lender.

(ii) Fees pursuant to Section 3.3(a) shall cease to accrue in favor of such Defaulting Lender.

(iii) If any Swing Loans are outstanding or any Letters of Credit (or drawings under any Letter of Credit for which Issuer has not been reimbursed) are outstanding or exist at the time any such Revolving Lender becomes a Defaulting Lender, then:

(A) Defaulting Lender's Participation Commitment in the outstanding Swing Loans and of the Maximum Undrawn Amount of all outstanding Letters of Credit shall be reallocated among Non-Defaulting Revolving Lenders in proportion to the respective Revolving Commitment Percentages of such Non-Defaulting Lenders to the extent (but only to the extent) that (x) such reallocation does not cause the aggregate sum of outstanding Revolving Advances made by any such Non-Defaulting Revolving Lender plus such Lender's reallocated Participation Commitment in the outstanding Swing Loans plus such Lender's reallocated Participation Commitment in the aggregate Maximum Undrawn Amount of all outstanding Letters of Credit to exceed the Revolving Commitment Amount of any such Non-Defaulting Lender, and (y) no Default or Event of Default has occurred and is continuing at such time;

(B) if the reallocation described in clause (A) above cannot, or can only partially, be effected, Borrowers shall within one (1) Business Day following notice by Agent (x) first, prepay any outstanding Swing Loans that cannot be reallocated, and (y) second, cash collateralize for the benefit of Issuer, Borrowers' obligations corresponding to such Defaulting Lender's Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit (after giving effect to any partial reallocation pursuant to clause (A) above) in accordance with Section 3.2(b) for so long as such Obligations are outstanding;

(C) if Borrowers cash collateralize any portion of such Defaulting Lender's Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit pursuant to clause (B) above, Borrowers shall not be required to pay any fees to such Defaulting Lender pursuant to Section 3.2(a) with respect to such Defaulting Lender's Revolving Commitment Percentage of the Maximum Undrawn Amount of all Letters of Credit during the period such Defaulting Lender's Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit are cash collateralized;

(D) if Defaulting Lender's Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit is reallocated pursuant to clause (A) above, then the fees payable to Revolving Lenders pursuant to Section 3.2(a) shall be

adjusted and reallocated to Non-Defaulting Revolving Lenders in accordance with such reallocation; and

(E) if all or any portion of such Defaulting Lender's Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit is neither reallocated nor cash collateralized pursuant to clause (A) or (B) above, then, without prejudice to any rights or remedies of Issuer or any other Lender hereunder, all Letter of Credit Fees payable under Section 3.2(a) with respect to such Defaulting Lender's Revolving Commitment Percentage of the Maximum Undrawn Amount of all Letters of Credit shall be payable to the Issuer (and not to such Defaulting Lender) until (and then only to the extent that) such Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit is reallocated and/or cash collateralized; and

(iv) so long as any Revolving Lender is a Defaulting Lender, Swing Loan Lender shall not be required to fund any Swing Loans and Issuer shall not be required to issue, amend or increase any Letter of Credit, unless such Issuer is satisfied that the related exposure and Defaulting Lender's Participation Commitment in the Maximum Undrawn Amount of all Letters of Credit and all Swing Loans (after giving effect to any such issuance, amendment, increase or funding) will be fully allocated to Non-Defaulting Revolving Lenders and/or cash collateral for such Letters of Credit will be provided by Borrowers in accordance with clauses (A) and (B) above, and participating interests in any newly made Swing Loan or any newly issued or increased Letter of Credit shall be allocated among Non-Defaulting Lenders in a manner consistent with Section 2.22(b)(iii)(A) above (and such Defaulting Lender shall not participate therein).

(c) A Defaulting Lender shall not be entitled to give instructions to Agent or to approve, disapprove, consent to or vote on any matters relating to this Agreement and the Other Documents, and all amendments, waivers and other modifications of this Agreement and the Other Documents may be made without regard to a Defaulting Lender and, for purposes of the definition of "Required Lenders", a Defaulting Lender shall not be deemed to be a Lender, to have any outstanding Advances or a Revolving Commitment Percentage.

(d) Other than as expressly set forth in this Section 2.22, the rights and obligations of a Defaulting Lender (including the obligation to indemnify Agent) and the other parties hereto shall remain unchanged. Nothing in this Section 2.22 shall be deemed to release any Defaulting Lender from its obligations under this Agreement and the Other Documents, shall alter such obligations, shall operate as a waiver of any default by such Defaulting Lender hereunder, or shall prejudice any rights which any Borrower, Agent or any Lender may have against any Defaulting Lender as a result of any default by such Defaulting Lender hereunder.

(e) In the event that Agent, Borrowers, Swing Loan Lender and Issuer agree in writing that a Defaulting Lender has adequately remedied all matters that caused such Lender to be a Defaulting Lender, then Agent will so notify the parties hereto, and, if such cured Defaulting Lender is a Revolving Lender, then Participation Commitments of Revolving Lenders (including such cured Defaulting Lender) of the Swing Loans and Maximum Undrawn Amount of all outstanding Letters of Credit shall be reallocated to reflect the inclusion of such Lender's Revolving Commitment, and on such date such Lender shall purchase at par such of the

Revolving Advances of the other Lenders as Agent shall determine may be necessary in order for such Lender to hold such Revolving Advances in accordance with its Revolving Commitment Percentage.

(f) If Swing Loan Lender or Issuer has a good faith belief that any Revolving Lender has defaulted in fulfilling its obligations under one or more other agreements in which such Lender commits to extend credit, Swing Loan Lender shall not be required to fund any Swing Loans and Issuer shall not be required to issue, amend or increase any Letter of Credit, unless Swing Loan Lender or Issuer, as the case may be, shall have entered into arrangements with Borrowers or such Lender, satisfactory to Swing Loan Lender or Issuer, as the case may be, to defease any risk to it in respect of such Lender hereunder.

2.23 Payment of Obligations. Agent may charge to Borrowers' Account as a Revolving Advance or, at the discretion of Swing Loan Lender, as a Swing Loan (i) all payments with respect to any of the Obligations required hereunder (including without limitation principal payments, payments of interest, payments of Letter of Credit Fees and all other fees provided for hereunder and payments under Sections 16.5 and 16.9) as and when each such payment shall become due and payable (whether as regularly scheduled, upon or after acceleration, upon maturity or otherwise), (ii) without limiting the generality of the foregoing clause (i), (a) all amounts expended by Agent or any Lender pursuant to Section 4.2 or 4.3 and (b) all expenses which Agent incurs in connection with the forwarding of Advance proceeds and the establishment and maintenance of any Controlled Accounts as provided for in Section 4.8(h), and (iii) any sums expended by Agent or any Lender due to any Credit Party's failure to perform or comply with its obligations under this Agreement or any Other Document including any Credit Party's obligations under Sections 3.3, 3.4, 4.4, 4.7, 6.4, 6.6, 6.7 and 6.8, and all amounts so charged shall be added to the Obligations and shall be secured by the Collateral. To the extent Revolving Advances are not actually funded by the other Lenders in respect of any such amounts so charged, all such amounts so charged shall be deemed to be Revolving Advances made by and owing to Agent and Agent shall be entitled to all rights (including accrual of interest) and remedies of a Lender under this Agreement and the Other Documents with respect to such Revolving Advances.

III. INTEREST AND FEES.

3.1 Interest. Interest on Advances shall be payable in arrears on the first Business Day of each month with respect to Domestic Rate Loans and, with respect to LIBOR Rate Loans, at (a) the end of each Interest Period, and (b) for LIBOR Rate Loans with an Interest Period in excess of three months, at the end of each three-month period during such Interest Period, provided further that all accrued and unpaid interest shall be due and payable at the end of the Term. Interest charges shall be computed on the actual principal amount of Advances outstanding during the month at a rate per annum equal to (i) with respect to Revolving Advances, the applicable Revolving Interest Rate, and (ii) with respect to Swing Loans, the Revolving Interest Rate for Domestic Rate Loans (as applicable, the "Contract Rate"). Except as expressly provided otherwise in this Agreement, any Obligations other than the Advances that are not paid when due shall accrue interest at the Revolving Interest Rate for Domestic Rate Loans, subject to the provision of the final sentence of this Section 3.1 regarding the Default Rate. Whenever, subsequent to the date of this Agreement, the Alternate Base Rate is increased

or decreased, the applicable Contract Rate shall be similarly changed without notice or demand of any kind by an amount equal to the amount of such change in the Alternate Base Rate during the time such change or changes remain in effect. The LIBOR Rate shall be adjusted with respect to LIBOR Rate Loans without notice or demand of any kind on the effective date of any change in the Reserve Percentage as of such effective date. Upon and after the occurrence of an Event of Default, and during the continuation thereof, at the option of Agent or at the direction of Required Lenders (or, in the case of any Event of Default under Section 10.7, immediately and automatically upon the occurrence of any such Event of Default without the requirement of any affirmative action by any party), the Obligations (or, if elected by Agent or the Required Lenders, any portion of the Obligations) shall bear interest at the applicable Contract Rate plus two percent (2%) per annum (the "Default Rate") payable on demand.

3.2 Letter of Credit Fees.

(a) Borrowers shall pay (x) to Agent, for the ratable benefit of Revolving Lenders, fees for each Letter of Credit for the period from and excluding the date of issuance of same to and including the date of expiration or termination, equal to the daily amount available to be drawn of each outstanding Letter of Credit multiplied by the Applicable Margin for Revolving Advances consisting of LIBOR Rate Loans, such fees to be calculated on the basis of a 360-day year for the actual number of days elapsed and to be payable quarterly in arrears on the first day of each calendar quarter and on the last day of the Term, and (y) to Issuer, a fronting fee of one-eighth of one percent (0.125%) per annum times the daily amount available to be drawn of each outstanding Letter of Credit for the period from and excluding the date of issuance of same to and including the date of expiration or termination, to be payable quarterly in arrears on the first day of each calendar quarter and on the last day of the Term. (all of the foregoing fees, the "Letter of Credit Fees"). In addition, Borrowers shall pay to Agent, for the benefit of Issuer, any and all administrative, issuance, amendment, payment and negotiation charges with respect to Letters of Credit and all fees and expenses as agreed upon by Issuer and Borrowing Agent in connection with any Letter of Credit, including in connection with the opening, amendment or renewal of any such Letter of Credit and any acceptances created thereunder, all such charges, fees and expenses, if any, to be payable on demand. All such charges shall be deemed earned in full on the date when the same are due and payable hereunder and shall not be subject to rebate or pro-ration upon the termination of this Agreement for any reason. Any such charge in effect at the time of a particular transaction shall be the charge for that transaction, notwithstanding any subsequent change in Issuer's prevailing charges for that type of transaction. Upon and after the occurrence of an Event of Default, and during the continuation thereof, at the option of Agent or at the direction of Required Lenders (or, in the case of any Event of Default under Section 10.7, immediately and automatically upon the occurrence of any such Event of Default without the requirement of any affirmative action by any party), the Letter of Credit Fees described in clause (x) of this Section 3.2(a) shall be increased by an additional two percent (2%) per annum.

(b) At any time following the occurrence of an Event of Default, at the option of Agent or at the direction of Required Lenders (or, in the case of any Event of Default under Section 10.7, immediately and automatically upon the occurrence of such Event of Default, without the requirement of any affirmative action by any party), or upon the expiration of the Term or any other termination of this Agreement (and also, if applicable, in connection with any

mandatory prepayment under Section 2.20), Borrowers will cause cash to be deposited and maintained in an account with Agent, as cash collateral, in an amount equal to one hundred three percent (103%) of the Maximum Undrawn Amount of all outstanding Letters of Credit, and each Borrower hereby irrevocably authorizes Agent, in its discretion, on such Borrower's behalf and in such Borrower's name, to open such an account and to make and maintain deposits therein, or in an account opened by such Borrower, in the amounts required to be made by such Borrower, out of the proceeds of Receivables or other Collateral or out of any other funds of such Borrower coming into any Lender's possession at any time. Agent may, in its discretion, invest such cash collateral (less applicable reserves) in such short-term money-market items as to which Agent and such Borrower mutually agree (or, in the absence of such agreement, as Agent may reasonably select) and the net return on such investments shall be credited to such account and constitute additional cash collateral, or Agent may (notwithstanding the foregoing) establish the account provided for under this Section 3.2(b) as a non-interest bearing account and in such case Agent shall have no obligation (and Borrowers hereby waive any claim) under Article 9 of the Uniform Commercial Code or under any other Applicable Law to pay interest on such cash collateral being held by Agent. No Borrower may withdraw amounts credited to any such account except upon the occurrence of all of the following: (x) payment and performance in full of all Obligations; (y) expiration of all Letters of Credit; and (z) termination of this Agreement. Borrowers hereby assign, pledge and grant to Agent, for its benefit and the ratable benefit of Issuer, Lenders and each other Secured Party, a continuing security interest in and to and Lien on any such cash collateral and any right, title and interest of Borrowers in any deposit account, securities account or investment account into which such cash collateral may be deposited from time to time to secure the Obligations, specifically including all Obligations with respect to any Letters of Credit. Borrowers agree that upon the coming due of any Reimbursement Obligations (or any other Obligations, including Obligations for Letter of Credit Fees) with respect to the Letters of Credit, Agent may use such cash collateral to pay and satisfy such Obligations.

3.3 Facility Fee. If, for any day in each month during the Term, the daily unpaid balance of the sum of Revolving Advances plus Swing Loans plus the Maximum Undrawn Amount of all outstanding Letters of Credit (the "Usage Amount") for each day of such month does not equal the Maximum Revolving Advance Amount, then Borrowers shall pay to Agent, for the ratable benefit of Lenders holding the Revolving Commitments based on their Revolving Commitment Percentages, a fee at a rate equal to one-quarter of one percent (0.25%) per annum on the amount by which the Maximum Revolving Advance Amount on such day exceeds such Usage Amount (the "Facility Fee"). Such Facility Fee shall be payable to Agent in arrears on the first Business Day of each month with respect to each day in the previous month.

3.4 Collateral Evaluation Fee and Fee Letter.

(a) Borrowers shall pay to Agent promptly at the conclusion of any collateral evaluation performed by or for the benefit of Agent (whether such examination is performed by Agent's employees or by a third party retained by Agent), including, without limitation, any field examination, collateral analysis or other business analysis, the need for which is to be determined by Agent and which evaluation is undertaken by Agent or for Agent's benefit, a collateral evaluation fee in an amount equal to $1,250 (or such other amount customarily charged by Agent to its customers, including amounts charged when such collateral evaluations are performed by a third party) per day for each person employed to perform such evaluation (based on an eight (8)

hour day, and subject to adjustment if additional hours are worked), plus a per examination field exam management fee in the amount of $2,500 for new facilities, and $1,500 for recurring examinations (or, in each case, such other amount customarily charged by Agent to its customers), plus all costs and disbursements incurred by Agent in the performance of such examination or analysis, and provided further that if third parties are retained to perform such collateral evaluations, either at the request of another Lender or for extenuating reasons determined by Agent in its sole discretion, then such fees charged by such third parties plus all costs and disbursements incurred by such third party, shall be the responsibility of Borrowers and shall not be subject to the foregoing limits; provided that, after the Closing Date, so long as no Event of Default shall have occurred during a calendar year, Borrowers shall not be obligated to reimburse Agent for more than one (1) field examination in such calendar year.

(b) Borrowers shall pay the amounts required to be paid in the Fee Letter in the manner and at the times required by the Fee Letter.

(c) All of the fees and out-of-pocket costs and expenses of any appraisals conducted that are payable by Borrowers pursuant to Section 4.7 shall be paid for when due, in full and without deduction, off-set or counterclaim by Borrowers.

3.5 Computation of Interest and Fees.

(a) Interest and fees hereunder shall be computed on the basis of a year of three hundred sixty (360) days and for the actual number of days elapsed. If any payment to be made hereunder becomes due and payable on a day other than a Business Day, the due date thereof shall be extended to the next succeeding Business Day and interest thereon shall be payable at the applicable Contract Rate during such extension.

(b) For purposes of the *Interest Act (Canada)*: (i) whenever any interest or fee under this Agreement is calculated on the basis of a period of time other than a calendar year, such rate used in such calculation, when expressed as an annual rate, is equivalent to (x) such rate, multiplied by (y) the actual number of days in the calendar year in which the period for which such interest or fee is calculated ends, and divided by (z) the number of days in such period of time; (ii) the principle of deemed reinvestment of interest shall not apply to any interest calculation under this Agreement; and (iii) the rates of interest stipulated in this Agreement are intended to be nominal rates and not effective rates or yields.

(c) Each Canadian Credit Party acknowledges and confirms that:

(i) clause (b) above satisfies the requirements of Section 4 of the Interest Act (Canada) to the extent it applies to the expression or statement of any interest payable under this Agreement or any Other Documents; and

(ii) such Canadian Credit Party is able to calculate the yearly rate or percentage of interest payable under this Agreement or any Other Documents based upon the methodology set out in clause (b) above.

3.6 Maximum Charges.

(a) In no event whatsoever shall interest and other charges charged hereunder exceed the highest rate permissible under Applicable Law. In the event interest and other charges as computed hereunder would otherwise exceed the highest rate permitted under Applicable Law: (i) the interest rates hereunder will be reduced to the maximum rate permitted under Applicable Law; (ii) such excess amount shall be first applied to any unpaid principal balance owed by Borrowers; and (iii) if the then remaining excess amount is greater than the previously unpaid principal balance, Lenders shall promptly refund such excess amount to Borrowers and the provisions hereof shall be deemed amended to provide for such permissible rate.

(b) If any provision of this Agreement or Other Documents would oblige any Canadian Credit Party to make any payment of interest or other amount payable to any Lender in an amount or calculated at a rate which would be prohibited by law or would result in a receipt by that Lender of "interest" at a "criminal rate" (as such terms are construed under the *Criminal Code (Canada)*), then, notwithstanding such provision, such amount or rate shall be deemed to have been adjusted with retroactive effect to the maximum amount or rate of interest, as the case may be, as would not be so prohibited by Applicable Law or so result in a receipt by that Lender of "interest" at a "criminal rate", such adjustment to be effected, to the extent necessary (but only to the extent necessary), as follows: first, by reducing the amount or rate of interest, and, thereafter, by reducing any fees, commissions, costs, expenses, premiums and other amounts required to be paid to the affected Lender which would constitute interest for purposes of section 347 of the *Criminal Code (Canada)*. Notwithstanding the foregoing, and after giving effect to all adjustments contemplated thereby, if a Lender shall have received an amount in excess of the maximum permitted by section 347 of the Criminal Code (Canada), the applicable Canadian Credit Party shall be entitled to obtain reimbursement from such Lender in an amount equal to such excess and, pending such reimbursement, such amount shall be deemed to be an amount payable by such Lender to such Canadian Credit Party.

(c) Any provision of this Agreement that would oblige a Canadian Credit Party to pay any fine, penalty or rate of interest on any arrears of principal or interest secured by a mortgage on real property or hypothec on immovables that has the effect of increasing the charge on arrears beyond the rate of interest payable on principal money not in arrears shall not apply to such Canadian Credit Party, which shall be required to pay interest on money in arrears at the same rate of interest payable on principal money not in arrears.

3.7 Increased Costs. In the event that any Applicable Law or any Change in Law or compliance by any Lender (for purposes of this Section 3.7, the term "Lender" shall include Agent, Swing Loan Lender, any Issuer or Lender and any corporation or bank controlling Agent, Swing Loan Lender, any Lender or Issuer and the office or branch where Agent, Swing Loan Lender, any Lender or Issuer (as so defined) makes or maintains any LIBOR Rate Loans) with any request or directive (whether or not having the force of law) from any central bank or other financial, monetary or other authority, shall:

(a) subject any Lender to any Taxes (other than (i) Indemnified Taxes and (ii) Excluded Taxes) on its loans, loan principal, letters of credit, commitments or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto;

(b) impose, modify or deem applicable any reserve, special deposit, assessment, special deposit, compulsory loan, insurance charge or similar requirement against assets held by, or deposits in or for the account of, advances or loans by, or other credit extended by, any office of Agent, Swing Loan Lender, Issuer or any Lender, including pursuant to Regulation D of the Board of Governors of the Federal Reserve System; or

(c) impose on Agent, Swing Loan Lender, any Lender or Issuer or the London interbank LIBOR market any other condition, loss or expense (other than Taxes) affecting this Agreement or any Other Document or any Advance made by any Lender, or any Letter of Credit or participation therein;

and the result of any of the foregoing is to increase the cost to Agent, Swing Loan Lender, any Lender or Issuer of making, converting to, continuing, renewing or maintaining its Advances hereunder by an amount that Agent, Swing Loan Lender, such Lender or Issuer deems to be material or to reduce the amount of any payment (whether of principal, interest or otherwise) in respect of any of the Advances by an amount that Agent, Swing Loan Lender or such Lender or Issuer deems to be material, then, in any case, Borrowers shall promptly pay Agent, Swing Loan Lender, such Lender or Issuer, upon its demand, such additional amount as will compensate Agent, Swing Loan Lender or such Lender or Issuer for such additional cost or such reduction, as the case may be, provided that the foregoing shall not apply to increased costs which are reflected in the LIBOR Rate, as the case may be. Agent, Swing Loan Lender, such Lender or Issuer shall certify the amount of such additional cost or reduced amount to Borrowing Agent, and such certification shall be conclusive absent manifest error.

3.8 Alternate Rate of Interest.

3.8.1. Interest Rate Inadequate or Unfair. In the event that Agent or any Lender shall have determined that:

(a) reasonable means do not exist for ascertaining the LIBOR Rate applicable pursuant to Section 2.2 for any Interest Period; or

(b) Dollar deposits in the relevant amount and for the relevant maturity are not available in the London interbank LIBOR market, with respect to an outstanding LIBOR Rate Loan, a proposed LIBOR Rate Loan, or a proposed conversion of a Domestic Rate Loan into a LIBOR Rate Loan; or

(c) the making, maintenance or funding of any LIBOR Rate Loan has been made impracticable or unlawful by compliance by Agent or such Lender in good faith with any Applicable Law or any interpretation or application thereof by any Governmental Body or with any request or directive of any such Governmental Body (whether or not having the force of law); or

(d) the LIBOR Rate will not adequately and fairly reflect the cost to such Lender of the establishment or maintenance of any LIBOR Rate Loan,

then Agent shall give Borrowing Agent prompt written or telephonic notice of such determination. If such notice is given prior to a LIBOR Termination Date (as defined below) or

prior to the date on which Section 3.8.2(a)(ii) applies, (i) any such requested LIBOR Rate Loan shall be made as a Domestic Rate Loan, unless Borrowing Agent shall notify Agent no later than 1:00 p.m. Eastern Standard Time two (2) Business Days prior to the date of such proposed borrowing, that its request for such borrowing shall be cancelled or made as an unaffected type of LIBOR Rate Loan, (ii) any Domestic Rate Loan or LIBOR Rate Loan which was to have been converted to an affected type of LIBOR Rate Loan shall be continued as or converted into a Domestic Rate Loan, or, if Borrowing Agent shall notify Agent, no later than 1:00 p.m. Eastern Standard Time two (2) Business Days prior to the proposed conversion, shall be maintained as an unaffected type of LIBOR Rate Loan, and (iii) any outstanding affected LIBOR Rate Loans shall be converted into a Domestic Rate Loan, or, if Borrowing Agent shall notify Agent, no later than 1:00 p.m. Eastern Standard Time two (2) Business Days prior to the last Business Day of the then current Interest Period applicable to such affected LIBOR Rate Loan, shall be converted into an unaffected type of LIBOR Rate Loan, on the last Business Day of the then current Interest Period for such affected LIBOR Rate Loans (or sooner, if any Lender cannot continue to lawfully maintain such affected LIBOR Rate Loan). Until such notice has been withdrawn, Lenders shall have no obligation to make an affected type of LIBOR Rate Loan or maintain outstanding affected LIBOR Rate Loans and no Borrower shall have the right to convert a Domestic Rate Loan or an unaffected type of LIBOR Rate Loan into an affected type of LIBOR Rate Loan.

3.8.2. Successor LIBOR Rate Index.

(a) If Agent determines (which determination shall be final and conclusive, absent manifest error) that either (i) (A) the circumstances set forth in Section 3.8.1(a) have arisen and are unlikely to be temporary, or (B) the circumstances set forth in Section 3.8.1(a) have not arisen but the applicable supervisor or administrator (if any) of the LIBOR Rate or a Governmental Body having jurisdiction over Agent has made a public statement identifying the specific date after which the LIBOR Rate shall no longer be used for determining interest rates for loans (either such date, a "LIBOR Termination Date"), or (ii) a rate other than the LIBOR Rate has become a widely recognized benchmark rate for newly originated loans in Dollars in the U.S. market, then Agent may (in consultation with Borrowing Agent) choose a replacement index for the LIBOR Rate and make adjustments to applicable margins and related amendments to this Agreement as referred to below such that, to the extent practicable, the all-in interest rate based on the replacement index immediately following such replacement will be substantially equivalent to the all-in LIBOR Rate-based interest rate in effect immediately prior to its replacement.

(b) Agent and Borrowing Agent shall enter into an amendment to this Agreement to reflect the replacement index, the adjusted margins and such other related amendments as may be appropriate, in the discretion of Agent, for the implementation and administration of the replacement index-based rate. Notwithstanding anything to the contrary in this Agreement or the Other Documents (including, without limitation, Section 16.2), such amendment shall become effective without any further action or consent of any other party to this Agreement at 5:00 p.m. Eastern Standard Time on the tenth (10th) Business Day after the date a draft of the amendment is provided to Lenders, unless Agent receives, on or before such tenth (10th) Business Day, a written notice from the Required Lenders stating that such Lenders object to such amendment.

(c) Selection of the replacement index, adjustments to the applicable margins, and amendments to this Agreement (i) will be determined with due consideration to the then- current market practices for determining and implementing a rate of interest for newly originated loans in the United States of America and loans converted from a LIBOR Rate-based rate to a replacement index-based rate and (ii) may also reflect adjustments to account for (x) the effects of the transition from the LIBOR Rate to the replacement index and (y) yield- or risk-based differences between the LIBOR Rate and the replacement index.

(d) Until an amendment reflecting a new replacement index in accordance with this Section 3.8.2 is effective, each advance, conversion and renewal of a LIBOR Rate Loan will continue to bear interest with reference to the LIBOR Rate; provided, however, that if Agent determines (which determination shall be final and conclusive, absent manifest error) that a LIBOR Termination Date has occurred, then following the LIBOR Termination Date, all LIBOR Rate Loans shall automatically be converted to Domestic Rate Loans until such time as an amendment reflecting a replacement index and related matters as described above is implemented.

(e) Notwithstanding anything to the contrary contained herein, if at any time the replacement index is less than zero (0), at such times, such index shall be deemed to be zero
(1) for purposes of this Agreement.

3.9 Capital Adequacy.

(a) In the event that Agent, Swing Loan Lender or any Lender shall have determined that any Applicable Law or guideline regarding capital adequacy, or any Change in Law or any change in the interpretation or administration thereof by any Governmental Body, central bank or comparable agency charged with the interpretation or administration thereof, or compliance by Agent, Swing Loan Lender, Issuer or any Lender (for purposes of this Section 3.9, the term "Lender" shall include Agent, Swing Loan Lender, Issuer or any Lender and any corporation or bank controlling Agent, Swing Loan Lender or any Lender and the office or branch where Agent, Swing Loan Lender or any Lender (as so defined) makes or maintains any LIBOR Rate Loans) with any request or directive regarding capital adequacy (whether or not having the force of law) of any such authority, central bank or comparable agency, has or would have the effect of reducing the rate of return on Agent, Swing Loan Lender or any Lender's capital as a consequence of its obligations hereunder (including the making of any Swing Loans) to a level below that which Agent, Swing Loan Lender or such Lender could have achieved but for such adoption, change or compliance (taking into consideration Agent's, Swing Loan Lender's and each Lender's policies with respect to capital adequacy) by an amount deemed by Agent, Swing Loan Lender or any Lender to be material, then, from time to time, Borrowers shall pay upon demand to Agent, Swing Loan Lender or such Lender such additional amount or amounts as will compensate Agent, Swing Loan Lender or such Lender for such reduction. In determining such amount or amounts, Agent, Swing Loan Lender or such Lender may use any reasonable averaging or attribution methods. The protection of this Section 3.9 shall be available to Agent, Swing Loan Lender and each Lender regardless of any possible contention of invalidity or inapplicability with respect to the Applicable Law, rule, regulation, guideline or condition.

(b) A certificate of Agent, Swing Loan Lender or such Lender setting forth such amount or amounts as shall be necessary to compensate Agent, Swing Loan Lender or such Lender with respect to Section 3.9(a) when delivered to Borrowing Agent shall be conclusive absent manifest error.

3.10 Taxes.

(a) Any and all payments by or on account of any Obligations hereunder or under any Other Document shall be made free and clear of and without reduction or withholding for any Taxes except to the extent required by Applicable Law; provided that if any Credit Party or Agent shall be required by Applicable Law to deduct any Taxes from such payments, then (i) if the Tax is an Indemnified Tax, the sum payable by the Credit Parties shall be increased as necessary so that after making all required deductions (including deductions applicable to additional sums payable under this Section), the applicable Recipient receives an amount equal to the sum it would have received had no such deductions been made, (ii) Credit Parties shall make such deductions, and (iii) Credit Parties shall timely pay the full amount deducted to the relevant Governmental Body in accordance with Applicable Law.

(b) Without duplication of the provisions of Section 3.10(a) above, Borrowers shall timely pay any Other Taxes to the relevant Governmental Body in accordance with Applicable Law.

(c) Credit Parties shall, jointly and severally, indemnify each Recipient within ten (10) days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section) paid by, paid on behalf of, or imposed on, such Recipient (or its Affiliates), and any reasonable out-of-pocket expenses arising therefrom or with respect thereto (including reasonable attorneys' and tax advisors' fees and expenses), whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Body. A certificate as to the amount of such payment or liability delivered to Borrowers by any Recipient, or by Agent on its own behalf or on behalf of a Recipient, shall be conclusive absent manifest error.

(d) As soon as practicable after any payment of Indemnified Taxes by any Credit Party to a Governmental Body, such Credit Party shall deliver to Agent the original or a certified copy of a receipt issued by such Governmental Body evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Agent.

(e) Any Lender (which, for purposes of this Section 3.10(e) and Section 3.10(f), includes Swing Loan Lender, any Lender, any Issuer or any Participant) that is entitled to an exemption from or reduction of withholding tax with respect to payments hereunder or under any Other Document shall deliver to Borrowing Agent on behalf of Borrowers (with a copy to Agent), at the time or times prescribed by Applicable Law or reasonably requested by Borrowing Agent or Agent, such properly completed and executed documentation prescribed by Applicable Law as will permit such payments to be made without withholding or at a reduced rate of withholding. Notwithstanding anything to the contrary in this Section 3.10(e), the completion, execution and submission of such documentation (other than such documentation set

forth in Section 3.10(f)(i), (ii), (iii), (iv) or (v) and in Section 3.10(g)) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender (or its Affiliates) to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender or any of its Affiliates or agents. In addition, any Lender, if requested by Borrowers or Agent, shall deliver such documentation prescribed by Applicable Law or reasonably requested by Borrowers or Agent as will enable Borrowers or Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements.

(f) Notwithstanding the submission of documentation claiming a reduced rate of or exemption from U.S. withholding tax, Agent shall be entitled to withhold United States federal income Taxes if in its reasonable judgment it is required to do so under the due diligence requirements imposed upon a withholding agent under § 1.1441-7(b) of the United States Income Tax Regulations or other Applicable Law. Without limiting the generality of the foregoing, in the event that any Borrower is a US Person, any Foreign Lender (or other Lender) shall deliver to Borrowing Agent and Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender (or other Lender) becomes a Lender under this Agreement (and from time to time thereafter upon the request of Borrowing Agent or Agent, but only if such Foreign Lender (or other Lender) is legally entitled to do so), whichever of the following is applicable:

(i) two (2) duly completed valid originals of IRS Form W-8BEN-E claiming eligibility for each of the applicable benefits of an income tax treaty to which the United States of America is a party,

(ii) two (2) duly completed valid originals of IRS Form W-8ECI,

(iii) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under section 881(c) of the Code, (x) a certificate to the effect that such Foreign Lender is not (A) a "bank" within the meaning of section 881(c)(3)(A) of the Code, (B) a "10 percent shareholder" of Borrowers within the meaning of section 881(c)(3)(B) of the Code, or (C) a "controlled foreign corporation" described in section 881(c)(3)(C) of the Code and (y) two (2) duly completed valid originals of IRS Form W-8BEN-E,

(iv) any other form prescribed by Applicable Law as a basis for claiming exemption from or a reduction in United States Federal withholding tax duly completed together with such supplementary documentation as may be prescribed by Applicable Law to permit Borrowers to determine the withholding or deduction required to be made,

(v) to the extent that any Lender (including, for purposes of this Section 3.10, Swing Loan Lender, any Lender, any Issuer, or any Participant) is a US Person, two (2) originals of an IRS Form W-9 or any other form prescribed by Applicable Law demonstrating that such Lender is not a Foreign Lender (and, in the case of Form W-9, demonstrating that no U.S. federal backup withholding is required), or

(vi) to the extent a Foreign Lender is not the beneficial owner, executed originals of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS

Form W-8BEN-E, a certificate meeting the requirements of Section 3.10(f)(ii) or IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable.

Each Lender agrees that if any form or certification it previously delivered pursuant to this Section 3.10 expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify Borrowers and Agent in writing of its legal inability to do so.

(g) If a payment made to a Lender, Swing Loan Lender, Participant, Issuer, or Agent under this Agreement or any Other Document would be subject to U.S. Federal withholding Tax imposed by FATCA if such Person fails to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender, Swing Loan Lender, Participant, Issuer, or Agent shall deliver to Agent (in the case of Swing Loan Lender, a Lender, Participant or Issuer) and Borrowing Agent (A) a certification signed by the chief financial officer, principal accounting officer, treasurer or controller of such Person, and (B) other documentation reasonably requested by Agent or any Borrower sufficient for Agent and Borrowers to comply with their obligations under FATCA and to determine that Swing Loan Lender, such Lender, Participant, Issuer, or Agent has complied with such applicable reporting requirements. Solely for purposes of this Section 3.10(g), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

(h) If Agent, Swing Loan Lender, a Lender, a Participant or Issuer determines, in its sole discretion exercised in good faith, that it has received a refund of any Indemnified Taxes as to which it has been indemnified by Borrowers or with respect to which Borrowers have paid additional amounts pursuant to this Section, it shall, subject to Section 11.3, pay to Borrowers an amount equal to such refund (but only to the extent of indemnity payments made, or additional amounts paid, by Borrowers under this Section with respect to the Indemnified Taxes giving rise to such refund), net of all reasonable out-of-pocket expenses of Agent, Swing Loan Lender, such Lender, Participant, or the Issuer, as the case may be, and without interest (other than any interest paid by the relevant Governmental Body with respect to such refund); provided that Borrowers, upon the request of Agent, Swing Loan Lender, such Lender, Participant, or Issuer, agrees to repay the amount paid over to Borrowers (plus any related penalties, interest or other charges imposed by the relevant Governmental Body) to Agent, Swing Loan Lender, such Lender, Participant or the Issuer in the event Agent, Swing Loan Lender, such Lender, Participant or the Issuer is required to repay such refund to such Governmental Body. This Section 3.10(h) shall not be construed to require Agent, Swing Loan Lender, any Lender, Participant, or Issuer to make available its tax returns (or any other information relating to its Taxes that it deems confidential in good faith) to Borrowers or any other Person or to make any payment under this Section 3.10(h) that would place such Person in a less favorable net after-Tax position than such Person would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid by the Credit Parties.

3.11 [Intentionally Omitted].

3.12 Replacement of Lenders. If any Lender (an "Affected Lender") (a) makes demand upon Borrowers for (or if Borrowers are otherwise required to pay) amounts pursuant to

Section 3.7, 3.9 or 3.10, (b) is unable to make or maintain LIBOR Rate Loans as a result of a condition described in Section 2.2(h), (c) is a Defaulting Lender, or (d) denies any consent requested by Agent pursuant to Section 16.2(b), Borrowers may, within ninety (90) days of receipt of such demand, notice (or the occurrence of such other event causing Borrowers to be required to pay such compensation or causing Section 2.2(h) to be applicable), or such Lender becoming a Defaulting Lender or denial of a request by Agent pursuant to Section 16.2(b), as the case may be, by notice in writing to Agent and such Affected Lender (i) request the Affected Lender to cooperate with Borrowers in obtaining a replacement Lender reasonably satisfactory to Agent and Borrowers (the "Replacement Lender"); (ii) request the non-Affected Lenders to acquire and assume all of the Affected Lender's Advances and its Revolving Commitment Percentage, as provided herein, but none of such non-Affected Lenders shall be under any obligation to do so; or (iii) propose one or more Replacement Lenders. If any Replacement Lender shall be obtained, and/or if any one or more of the non-Affected Lenders shall agree to acquire and assume all of the Affected Lender's Revolving Commitment Percentage of the outstanding principal amount of Advances and its Revolving Commitments, then such Affected Lender shall assign, in accordance with Section 16.3, all of its Advances and its Revolving Commitments and other rights and obligations under this Agreement and the Other Documents to such Replacement Lender or non-Affected Lenders, as the case may be, in exchange for payment of the outstanding principal amount of the Advances so assigned and all interest and fees accrued on the amount so assigned, *plus* all other Obligations then due and payable to the Affected Lender on the Advances so assigned.

3.13 Judgment Currency. If, for the purposes of obtaining judgment in any court in any jurisdiction with respect to this Agreement or any Other Document, it becomes necessary to convert into a particular currency (the "Judgment Currency") any amount due under this Agreement or under any Other Document in any currency other than the Judgment Currency (the "Currency Due"), then conversion shall be made at the rate of exchange prevailing on the Business Day before the day on which judgment is given. For this purpose "rate of exchange" means the rate at which Agent is able, on the relevant date, to purchase the Currency Due with the Judgment Currency in accordance with its normal practices. In the event that there is a change in the rate of exchange prevailing between the Business Day before the day on which the judgment is given and the date of receipt by Agent of the amount due, Credit Parties will, on the date of receipt by Agent, pay such additional amounts, if any, or be entitled to receive reimbursement of such amount, if any, as may be necessary to ensure that the amount received by Agent on such date is the amount in the Judgment Currency which when converted at the rate of exchange prevailing on the date of receipt by Agent is the amount then due under this Agreement or such Other Document in the Currency Due. If the amount of the Currency Due which Agent is so able to purchase is less than the amount of the Currency Due originally due to it, Credit Parties shall indemnify and save Agent and the Lenders harmless from and against all loss or damage arising as a result of such deficiency. This indemnity shall constitute an obligation separate and independent from the other obligations contained in this Agreement and the Other Documents, shall give rise to a separate and independent cause of action, shall apply irrespective of any indulgence granted by Agent from time to time and shall continue in full force and effect notwithstanding any judgment or order for a liquidated sum in respect of an amount due under this Agreement or any Other Document or under any judgment or order.

IV. COLLATERAL: GENERAL TERMS

4.1 Security Interest in the Collateral. To secure the prompt payment and performance to Agent, Issuer, Swing Loan Lender and each Lender (and each other holder of any Obligations) of the Obligations, each US Credit Party hereby assigns, pledges and grants to Agent for the ratable benefit of each Secured Party, a continuing security interest in and to and Lien on all of its Collateral, whether now owned or existing or hereafter created, acquired or arising and wherever located. Each US Credit Party shall provide Agent with written notice of all commercial tort claims with an individual amount in excess of $1,000,000 promptly upon the occurrence of any events giving rise to any such claim(s) (regardless of whether legal proceedings have yet been commenced), such notice to contain a brief description of the claim(s), the events out of which such claim(s) arose and the parties against which such claims may be asserted and, if applicable in any case where legal proceedings regarding such claim(s) have been commenced, the case title together with the applicable court and docket number. Upon delivery of each such notice, such US Credit Party shall be deemed to thereby grant to Agent a security interest and lien in and to such commercial tort claims described therein and all proceeds thereof. Each US Credit Party shall provide Agent with notice upon becoming the beneficiary under any letter of credit or otherwise obtaining any right, title or interest in any letter of credit rights, in each case involving an individual amount in excess of $1,000,000, and at Agent's request shall take such actions as Agent may reasonably request for the perfection of Agent's security interest therein subject to Section 4.2. Notwithstanding anything to the contrary in this Section 4.1, absent the occurrence and continuance of any Event of Default, the US Credit Parties shall only be required to provide the notices required by this Section 4.1 on a quarterly basis in connection with the delivery of a Compliance Certificate with respect to the applicable quarter or year.

4.2 Perfection of Security Interest. Each Credit Party shall take all action that may be necessary or desirable, or that Agent may request in its Permitted Discretion, so as at all times to maintain the validity, perfection, enforceability and priority of Agent's security interest in and Lien on the Collateral or to enable Agent to protect, exercise or enforce its rights hereunder, under any Other Document and in the Collateral, including, but not limited to, (i) immediately discharging all Liens other than Permitted Liens, (ii) using commercially reasonable efforts to obtain Lien Waiver Agreements, (iii) delivering to Agent endorsements of, instruments of assignment as Agent may specify with respect to, and stamping or marking in such manner as Agent may specify, any and all chattel paper, instruments, letters of credits and advices thereof and documents in each case evidencing or forming a part of the Collateral, (iv) using commercially reasonable efforts to enter into warehousing, customs brokers and freight agreements and other custodial arrangements, in each case relating to the Collateral, satisfactory to Agent, and (v) executing and delivering financing statements, control agreements, instruments of pledge, mortgages, notices and assignments, in each case in form and substance reasonably satisfactory to Agent, relating to the creation, validity, perfection, maintenance or continuation of Agent's security interest and Lien on the Collateral under the Uniform Commercial Code or other Applicable Law. By its signature hereto, each Credit Party hereby authorizes Agent to file against such Credit Party, one or more financing, continuation or amendment statements pursuant to the Uniform Commercial Code or the PPSA in form and substance satisfactory to Agent (which statements may have a description of collateral which is broader than that set forth herein, including without limitation a description of Collateral as "all assets" and/or "all personal

property" of any Credit Party). All charges, expenses and fees Agent may incur in doing any of the foregoing, and any local taxes relating thereto, shall be charged to Borrowers' Account as a Revolving Advance of a Domestic Rate Loan and added to the Obligations. Notwithstanding the foregoing, unless an Event of Default has occurred and is continuing, the Credit Parties shall not be obligated to (w) perfect a security interest in (a) any Excluded Deposit Account, (b) motor vehicles and other assets subject to certificates of title with an aggregate fair market value not to exceed $1,000,000 or (c) letter of credit rights (other than those that constitute supporting obligations as to other Collateral) with a value of less than $1,000,000, (x) obtain a Lien Waiver Agreement, estoppel or enter into a warehouse agreement, freight agreement or other custodial agreement, with respect to Collateral in the possession or control of a consignee, bailee, warehouseman, agent or processor that does not have an aggregate value in excess of $1,000,000 at any time (provided that if any Collateral with an aggregate value in excess of $1,000,000 is at any time in the possession or control of any warehouse, bailee, agent or processor, Borrowers shall, upon the request of Agent, use commercially reasonable efforts to obtain such Person's written acknowledgement in form and substance reasonably satisfactory to Agent) or (y) deliver to Agent possession of any items of Collateral with an individual value of less than $1,000,000.

4.3 Preservation of Collateral. Following the occurrence of an Event of Default and in addition to the rights and remedies set forth in Section 11.1 or any Other Document, Agent: (a) may at any time take such steps as Agent deems necessary to protect Agent's interest in and to preserve the Collateral, including the hiring of security guards or the placing of other security protection measures as Agent may deem appropriate; (b) may employ and maintain at any of any Credit Party's premises a custodian who shall have full authority to do all acts necessary to protect Agent's interests in the Collateral; (c) may lease warehouse facilities to which Agent may move all or part of the Collateral; (d) may use any Credit Party's owned or leased lifts, hoists, trucks and other facilities or equipment for handling or removing the Collateral; and (e) shall have, and is hereby granted, a right of ingress and egress to the places where the Collateral is located, and may proceed over and through any of Credit Parties' owned or leased property. Each Credit Party shall cooperate fully with all of Agent's efforts to preserve the Collateral and will take such actions to preserve the Collateral as Agent may direct. All of Agent's expenses of preserving the Collateral, including any expenses relating to the bonding of a custodian, shall be charged to Borrowers' Account as a Revolving Advance maintained as a Domestic Rate Loan and added to the Obligations.

4.4 Ownership and Location of Collateral.

Each Credit Party hereby represents and warrants to Agent and Lenders as follows:

(a) With respect to the Collateral, at the time the Collateral becomes subject to Agent's security interest: (i) each Credit Party shall be the sole owner of or have rights or an interest in, and be fully authorized and able to sell, transfer, pledge and/or grant a security interest in and perfect a Lien on each and every item of its respective Collateral to Agent, in each case prior and superior in right to any other Person (other than the rights of Persons pursuant to (x) Liens permitted pursuant to clause (z) of the definition of "Permitted Liens" and (y) Permitted Liens having priority by operation of Law); (ii) each document and agreement executed by each Credit Party or delivered to Agent or any Lender in connection with this Agreement shall be true

and correct in all material respects; (iii) all signatures and endorsements of each Credit Party that appear on such documents and agreements shall be genuine and each Credit Party shall have full capacity to execute same; and (iv) except for Equipment and Inventory in transit in the Ordinary Course of Business or items out for refurbishment or repair, each Credit Party's Equipment and Inventory shall be located as set forth on Schedule 4.4(a), or at such other locations as a Credit Party may from time to time notify Agent.

(b) Schedule 4.4(a) hereto sets forth, for each such Credit Party, (i) the location of its principal place of business, (ii) the location of its chief executive office or its domicile (within the meaning of the Civil Code of Quebec), (iii) any location where its books and records are maintained, (iv) the location of any of its Inventory or Equipment except for Equipment and Inventory in transit in the Ordinary Course of Business or items out for refurbishment or repair, (v) its type of organization, (vi) its jurisdiction of formation, (vii) its state organizational identification number (if any) or comparable identification number (if any), (viii) its U.S. federal tax identification number (if any) and (ix) the location, by state or province and street address, of all Real Property owned or leased by each such Credit Party, identifying which properties are owned and which are leased, together with the names and addresses of any landlords.

4.5 Defense of Agent's and Lenders' Interests. Until (a) payment and performance in full of all of the Obligations and (b) termination of this Agreement, Agent's interests in the Collateral shall continue in full force and effect. Each Credit Party shall defend Agent's interests in the Collateral against any and all Persons whatsoever. At any time following demand by Agent for payment of all Obligations after the occurrence and during the continuance of an Event of Default, Agent shall have the right to take possession of the indicia of the Collateral and the Collateral in whatever physical form contained, including: labels, stationery, documents, instruments and advertising materials. If Agent exercises this right to take possession of the Collateral, each Credit Party shall, upon demand, assemble it in a manner reasonably requested by Agent and make it available to Agent at a place reasonably convenient to Agent. In addition, with respect to all Collateral, Agent and Lenders shall be entitled to all of the rights and remedies set forth herein and further provided by the Uniform Commercial Code or other Applicable Law. If an Event of Default has occurred and is continuing, at Agent's request, each Credit Party shall, and Agent may, at its option, instruct all suppliers, carriers, forwarders, warehousers or others receiving or holding cash, checks, Inventory, documents or instruments in which Agent holds a security interest to deliver same to Agent and/or subject to Agent's order and if they shall come into any Credit Party's possession, they, and each of them, shall be held by such Credit Party in trust, to the extent legally possible, as Agent's trustee, and such Credit Party will immediately deliver them to Agent in their original form together with any necessary endorsement.

4.6 Inspection of Premises. At all reasonable times and from time to time, Agent shall have full access to and the right to audit, check, inspect and make abstracts and copies from each Credit Party's books, records, audits, correspondence and all other papers relating to the Collateral and the operation of each Credit Party's business, in each case during normal business hours. Agent and its agents may enter upon any premises of any Credit Party upon reasonable notice at any time during business hours, for the purpose of inspecting the Collateral and any and all records pertaining thereto and the operation of such Credit Party's business. Borrowers'

obligation to pay fees to Agent in respect of collateral evaluations provided for under this Section 4.6 shall be limited to the extent set forth in Section 3.4(a).

4.7 Appraisals. Agent may, in its Permitted Discretion, at any time after the Closing Date and from time to time, engage the services of an independent appraisal firm or firms of reputable standing, satisfactory to Agent, for the purpose of appraising Credit Parties' assets. Absent the occurrence and continuance of an Event of Default at such time, Agent shall consult with Borrowing Agent as to the identity of any such firm. Borrowers shall reimburse Agent for the costs, expenses and charges incurred by Agent in respect of any appraisal; provided, that so long as no Event of Default shall have occurred during a calendar year, Borrowers shall not be obligated to reimburse Agent for (a) more than two (2) appraisals of the Inventory in such calendar year or (b) any real estate appraisals.

4.8 Receivables; Deposit Accounts and Securities Accounts.

(a) Each of the Receivables shall be a bona fide and valid account representing a bona fide indebtedness incurred by the Customer therein named, for a fixed sum as set forth in the invoice relating thereto (provided immaterial or unintentional invoice errors shall not be deemed to be a breach hereof) with respect to an absolute sale or lease and delivery of goods upon stated terms of a Credit Party, or work, labor or services theretofore rendered by a Credit Party as of the date each Receivable is created. Same shall be due and owing in accordance with the applicable Credit Party's terms of sale with the Customer, without dispute, setoff or counterclaim except as may be stated on the accounts receivable schedules delivered by Credit Parties to Agent.

(b) Each Customer, to the best of each Credit Party's knowledge, as of the date each Receivable is created, is and will be solvent and able to pay all Receivables on which the Customer is obligated in full when due. With respect to such Customers of any Credit Party who are not solvent, such Credit Party has set up on its books and in its financial records bad debt reserves adequate to cover such Receivables.

(c) Each Credit Party's chief executive office is located as set forth on Schedule 4.4(a). Until written notice is given to Agent by Borrowing Agent of any other office at which any Credit Party keeps its records pertaining to Receivables, all such records shall be kept at such executive office.

(d) Credit Parties shall instruct their Customers to deliver all remittances upon Credit Parties' Receivables (whether paid by check or by wire transfer of funds) to such Collection Accounts (and any associated lockboxes) as contemplated by Section 4.8(h). Notwithstanding the foregoing, to the extent any Credit Party directly receives any remittances upon its Receivables (other than in the case of remittances upon Receivables deposited directly to Collection Accounts subject to), such Credit Party shall, as soon as possible and in any event no later than three (3) Business Days (or one (1) Business Day during any Cash Dominion Period) after the receipt thereof (i) in the case of remittances paid by check, deposit all such remittances in their original form (after supplying any necessary endorsements) and (ii) in the case of remittances paid by wire transfer of funds, transfer all such remittances, in each case, into such Collection Accounts.

(e) Agent shall have the right to receive, endorse, assign and/or deliver in the name of Agent or any Credit Party any and all checks, drafts and other instruments for the payment of money relating to the Credit Parties' Receivables, and each Credit Party hereby waives notice of presentment, protest and non-payment of any instrument so endorsed. Each Credit Party hereby constitutes Agent or Agent's designee as such Credit Party's attorney with power (i) at any time: (A) to endorse such Credit Party's name upon any notes, acceptances, checks, drafts, money orders or other evidences of payment or Collateral; (B) to send verifications of its Receivables to any Customer; (C) to sign such Credit Party's name on all financing statements or any other documents or instruments deemed necessary or appropriate by Agent to preserve, protect or perfect Agent's interest in the Collateral and to file same; and (D) to receive, open and dispose of all mail addressed to any Credit Party at any post office box/lockbox maintained by Agent for Credit Parties or at any other business premises of Agent; and (ii) at any time following the occurrence and during the continuance of an Event of Default: (A) to sign such Credit Party's name on any invoice or bill of lading relating to any of such Credit Party's Receivables, drafts against Customers, assignments and verifications of such Credit Party's Receivables, (B) to demand payment of any Credit Party's Receivables; (C) to enforce payment of any Credit Party's Receivables by legal proceedings or otherwise; (D) to exercise all of such Credit Party's rights and remedies with respect to the collection of the Receivables and any other Collateral; (E) to sue upon or otherwise collect, extend the time of payment of, settle, adjust, compromise, extend or renew any Credit Party's Receivables; (F) to settle, adjust or compromise any legal proceedings brought to collect any Credit Party's Receivables; (G) to prepare, file and sign such Credit Party's name on a proof of claim in bankruptcy or similar document against any Customer; (H) to prepare, file and sign such Credit Party's name on any notice of Lien, assignment or satisfaction of Lien or similar document in connection with such Credit Party's Receivables; (I) to accept the return of goods represented by any Credit Party's Receivables; (J) to change the address for delivery of mail addressed to any Credit Party to such address as Agent may designate; and (K) to do all other acts and things necessary to carry out this Agreement. All acts of said attorney or designee are hereby ratified and approved, and said attorney or designee shall not be liable for any acts of omission or commission nor for any error of judgment or mistake of fact or of law, unless done maliciously or with gross (not mere) negligence or willful misconduct (as determined by a court of competent jurisdiction in a final non-appealable judgment); this power being coupled with an interest is irrevocable while any of the Obligations remain unpaid.

(f) Neither Agent nor any Lender shall, under any circumstances or in any event whatsoever, have any liability for any error or omission or delay of any kind occurring in the settlement, collection or payment of any of the Receivables or any instrument received in payment thereof, or for any damage resulting therefrom.

(g) Within ninety (90) days following the Closing Date, Credit Parties shall (i) establish and maintain their primary depository and treasury management relationships and all Collection Accounts with PNC and (ii) deposit or cause to be deposited promptly, and in any event no later than the first Business Day after the date of receipt thereof, all of their collections and proceeds of Collateral into a Collection Account of a Credit Party (or into a lockbox from which collections received therein are deposited into a Collection Account of a Credit Party). Each Collection Account and each other deposit or securities account of a Credit Party (other than an Excluded Deposit Account) shall constitute a Controlled Account and shall be subject to

a deposit account control agreement with the applicable bank, financial or securities intermediary (each, a "Controlled Account Bank") in form and substance reasonably satisfactory to Agent and shall provide (unless Agent otherwise agrees), among other things, that at any time following the occurrence and during the continuance of an Event of Default, (A) the applicable Controlled Account Bank will comply with any instructions originated by Agent directing the disposition of the funds in such Controlled Account without further consent by the applicable Credit Party, (B) the applicable Controlled Account Bank waives, subordinates or agrees not to exercise any rights of setoff or recoupment or any other claim against the applicable Controlled Account other than for payment of its service fees and other charges directly related to the administration of such Controlled Account and for returned checks or other items of payment, and (C) with respect to each Collection Account, the applicable Controlled Account Bank will, upon written notice by Agent to the applicable Controlled Bank that an Event of Default has occurred and is continuing (an "Activation Instruction"), the applicable Controlled Bank will forward no less frequently than once per Business Day all amounts in the applicable Collection Account (net of any customary minimum balance as may be required to be maintained in such Collection Account by the depositary bank or as otherwise agreed by Borrowing Agent and Agent) to the appropriate account of Agent for application to the Obligations in accordance with this Agreement (any such period during which an Activation Instruction is in effect and has not been rescinded, a "Cash Dominion Period"). Agent agrees not to issue an Activation Instruction with respect to any Collection Account unless an Event of Default has occurred and is continuing. Agent agrees to use commercially reasonable efforts to promptly rescind an Activation Instruction once no Event of Default has occurred and is continuing.

(h) No Credit Party will, without Agent's consent, compromise or adjust any of its Receivables (or extend the time for payment thereof) or accept any material returns of merchandise or grant any additional discounts, allowances or credits thereon except for those compromises, adjustments, returns, discounts, credits and allowances in the Ordinary Course of Business of such Credit Party.

(i) All deposit accounts, securities accounts, commodities accounts and investment accounts of each Credit Party and its Subsidiaries as of the Closing Date are set forth on Schedule 4.8(i). No Credit Party shall open any new deposit account, securities account or investment account unless (i) Borrowers shall have given at least thirty (30) days' prior written notice to Agent and (ii) if such account is to be maintained with a bank, depository institution or securities intermediary that is not Agent, such bank, depository institution or securities intermediary, each applicable Credit Party and Agent shall first have entered into an account control agreement in form and substance reasonably satisfactory to Agent sufficient to give Agent "control" (for purposes of Articles 8 and 9 of the Uniform Commercial Code or the PPSA, as applicable) over such account. Notwithstanding anything herein to the contrary, this Section 4.8(i) shall not apply to Excluded Deposit Accounts.

4.9 Inventory. To the extent Inventory held for sale or lease has been produced by any Credit Party, it has been and will be produced by such Credit Party in accordance in all material respects with the Federal Fair Labor Standards Act of 1938, as amended, and all rules, regulations and orders thereunder, in each case to the extent applicable, except where the failure to do so would not have a Material Adverse Effect.

4.10 Maintenance of Equipment. The Equipment shall be maintained in good operating condition and repair (reasonable wear and tear excepted) and all necessary replacements of and repairs thereto shall be made so that the value and operating efficiency of the Equipment shall be maintained and preserved, except where the failure to do so would not have a Material Adverse Effect. No Credit Party shall use or operate the Equipment in violation of any law, statute, ordinance, code, rule or regulation except to the extent such violations would not have a Material Adverse Effect.

4.11 Exculpation of Liability. Nothing herein contained shall be construed to constitute Agent or any Lender as any Credit Party's agent for any purpose whatsoever, nor shall Agent or any Lender be responsible or liable for any shortage, discrepancy, damage, loss or destruction of any part of the Collateral wherever the same may be located and regardless of the cause thereof unless caused maliciously or with gross (not mere) negligence, bad faith or willful misconduct (as determined by a court of competent jurisdiction in a final non-appealable judgment). Neither Agent nor any Lender, whether by anything herein or in any assignment or otherwise, shall assume any of any Credit Party's obligations under any contract or agreement assigned to Agent or such Lender, and neither Agent nor any Lender shall be responsible in any way for the performance by any Credit Party of any of the terms and conditions thereof.

V. REPRESENTATIONS AND WARRANTIES.

Each Credit Party represents and warrants as follows as of the Closing Date and as of the time of each request for an Advance (as provided in Sections 16.7(b) and 8.2):

5.1 Organization and Qualification; Power and Authority; Compliance with Laws; Title to Properties; Event of Default. Each Credit Party and each Subsidiary of each Credit Party (i) is a public limited company, corporation, unlimited liability company, limited partnership, limited liability company or other entity duly organized, validly existing and in good standing (if applicable) under the laws of its jurisdiction of organization, (ii) has the lawful power to own or lease its properties and to engage in the business it presently conducts or proposes to conduct, (iii) is duly licensed or qualified and in good standing in each jurisdiction where the property owned or leased by it or the nature of the business transacted by it or both makes such licensing or qualification necessary, except in jurisdictions where the failure to be so licensed, qualified or in good standing would not reasonably be expected to cause a Material Adverse Effect, (iv) has full power to enter into, execute, deliver and carry out this Agreement and the Other Documents to which it is a party, to incur the Indebtedness contemplated by this Agreement and the Other Documents and to perform its Obligations under this Agreement and the Other Documents to which it is a party, and all such actions have been duly authorized by all necessary proceedings on its part, (v) is in compliance with all Applicable Laws (other than Environmental Laws which are specifically addressed in Section 5.18) in all jurisdictions in which any Credit Party or Subsidiary of any Credit Party is presently or will be doing business except where the failure to do so would not constitute a Material Adverse Effect and (vi) has good and marketable title to or valid leasehold interest in all properties, assets and other rights which it purports to own or lease or which are reflected as owned or leased on its books and records, free and clear of all Liens and encumbrances except Permitted Liens.

5.2 Subsidiaries and Owners; Investment Companies. Schedule 5.2(b) states the name of each of US Borrower's Subsidiaries, its jurisdiction of organization and the amount, percentage and type of Equity Interests in such Subsidiary (the "Subsidiary Equity Interests"). Each Credit Party and each Subsidiary of a Credit Party has good and marketable title to all of the Subsidiary Equity Interests it purports to own, free and clear in each case of any Lien, and all such Subsidiary Equity Interests have been validly issued and, in the case of the Equity Interests in US Subsidiaries, are fully paid and nonassessable. None of the Credit Parties or Subsidiaries of any Credit Party is an "investment company" registered or required to be registered under the Investment Company Act of 1940 or under the "control" of an "investment company" as such terms are defined in the Investment Company Act of 1940 and shall not become such an "investment company" or under such "control".

5.3 Validity and Binding Effect. This Agreement and each of the Other Documents (i) has been duly and validly executed and delivered by each Credit Party that is party thereto, and (ii) constitutes, or will constitute, legal, valid and binding obligations of each Credit Party which is or will be a party thereto, enforceable against each such Credit Party in accordance with its terms, except as may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or similar laws relating to or affecting creditors' rights generally or by equitable principles relating to enforceability (whether considered in a proceeding in equity or at law).

5.4 No Conflict; Material Agreements; Consents. Neither the execution and delivery of this Agreement or any Other Document by any Credit Party nor the consummation of the transactions herein or therein contemplated or compliance with the terms and provisions hereof or thereof by any of them will conflict with, constitute a default under or result in any breach of (i) the terms and conditions of the certificate of incorporation, bylaws, certificate of limited partnership, partnership agreement, certificate of formation, limited liability company agreement, articles of association, memorandum of association or other organizational documents of any Credit Party or (ii) any Law or any material agreement (other than the Indenture) or instrument or order, writ, judgment, injunction or decree to which any Credit Party or any Subsidiary of a Credit Party is a party or by which it is bound or to which it is subject, or result in the creation or enforcement of any Lien, charge or encumbrance whatsoever upon any property (now or hereafter acquired) of any Credit Party or any Subsidiary of a Credit Party (other than Liens granted under this Agreement and the Other Documents or Permitted Liens). There is no default under any such material agreement (referred to above) and none of the Credit Parties or any Subsidiary of a Credit Party is bound by any contractual obligation, or subject to any restriction in any organization document, or any requirement of Law which could reasonably be expected to result in a Material Adverse Effect. No consent, approval, exemption, order or authorization of, or a registration or filing with, any Governmental Body or any other Person is required by any Law or any agreement in connection with the execution, delivery and carrying out of this Agreement or the Other Documents, other than (i) registration of particulars of Collateral Documents executed by Holdings at Companies House in England and Wales under section 859A of the UK Companies Act and payment of associated fees, (ii) any filing, recording or enrolling or any tax or fee payable in relation to the Collateral Documents which is referred to in any opinion of counsel delivered in connection with this Agreement and which will in each case be made or paid promptly after the date of the relevant Other Document, (iii) those that have

been obtained or made and are in full force and effect and (iv) those the failure of which to obtain could not reasonably be expected to result in a Material Adverse Effect.

5.5 Litigation. There are no actions, suits, proceedings or investigations pending or, to the knowledge of US Borrower or any Credit Party, threatened against such Credit Party or any Subsidiary of such Credit Party at law or in equity before any Governmental Body which individually or in the aggregate reasonably could be expected to result in any Material Adverse Effect. None of the Credit Parties or any Subsidiaries of any Credit Party is in violation of any order, writ, injunction or any decree of any Governmental Body which reasonably could be expected to result in any Material Adverse Effect.

5.6 Financial Statements.

(a) Borrowers have delivered to Agent copies of audited consolidated year- end financial statements of Holdings for and as of the end of each of the three (3) fiscal years ended, respectively, December 31, 2016, December 31, 2017 and December 31, 2018. In addition, Borrowers have delivered to Agent copies of unaudited consolidated interim financial statements of Holdings for the fiscal year to date and as of the end of the fiscal quarter ended March 31, 2019 and as of the end of the fiscal months ended April 30, 2019, May 31, 2019, June 30, 2019, July 31, 2019 and August 31, 2019 (all such annual and interim statements being collectively referred to as the "Statements"). The Statements were compiled from the books and records maintained by the management of Holdings and its Subsidiaries, are complete and fairly represent, in all material respects, the financial condition of Holdings on a Consolidated Basis as of the respective dates thereof and the results of operations for the fiscal periods then ended and have been prepared in accordance with IFRS consistently applied, subject (in the case of the interim statements) to normal year-end audit adjustments and the absence of footnotes.

(b) None of Holdings, any Credit Party or any Subsidiary of a Credit Party has any material liabilities, contingent or otherwise, or forward or long-term commitments that are not disclosed in the Statements or in the notes thereto, and except as disclosed therein there are no unrealized or anticipated losses from any commitments of Holdings or any Subsidiary of Holdings which may cause a Material Adverse Effect. Since December 31, 2018, no Material Adverse Effect has occurred.

(c) [Intentionally Omitted].

(d) The four (4) fiscal quarter cash flow, income statement and balance sheet projections of Holdings on a Consolidated Basis, copies of which were delivered to Agent prior to the Closing Date (the "Pro Forma Projections") were prepared by Holdings and reviewed by a Responsible Officer, are based on underlying assumptions which provide a reasonable basis for the Pro Forma Projections contained therein and reflect Borrowers' judgment based on present circumstances of the most likely set of conditions and course of action for the projected period (it being understood that the actual results for such periods may differ from the Pro Forma Projections and that such differences may be material).

5.7 Margin Stock. None of the Credit Parties or any Subsidiaries of any Credit Party engages or intends to engage principally, or as one of its important activities, in the business of

extending credit for the purpose, immediately, incidentally or ultimately, of purchasing or carrying margin stock (within the meaning of Regulation U, T or X as promulgated by the Board of Governors of the Federal Reserve System). No part of the proceeds of any Advance has been or will be used, immediately, incidentally or ultimately, to purchase or carry any margin stock or to extend credit to others for the purpose of purchasing or carrying any margin stock or which is inconsistent with the provisions of the regulations of the Board of Governors of the Federal Reserve System.

5.8 Senior Debt Status. (a) The commitment of the Revolving Lenders to make Advances and the Advances made, in each case, under this Agreement constitute the "Secured Credit Facility" (as defined in the Indenture) and (b) the Obligations constitute "Senior Indebtedness", "Designated Senior Indebtedness" or any similar designation under and as defined in any agreement governing any Subordinated Indebtedness and the subordination provisions set forth in each such agreement are legally valid and enforceable against the parties thereto.

5.9 Labor Matters. There is (a) no unfair labor practice complaint pending against any Credit Party or any Subsidiary of any Credit Party, or to the best knowledge of US Borrower, threatened against any of them before an ombudsman, works council or other tribunal in any applicable jurisdiction, and no grievance or arbitration proceeding arising out of or under any collective bargaining agreement that is so pending against any Credit Party or any Subsidiary of any Credit Party, or to the best knowledge of US Borrower, threatened against any of them, (b) no material strike or material work stoppage in existence, or to the best knowledge of US Borrower, threatened involving any Credit Party or any Subsidiary of any Credit Party, and (c) to the best knowledge of US Borrower, no union representation question existing with respect to the employees of any Credit Party or any Subsidiary of any Credit Party and, to the best knowledge of US Borrower, no union organization activity that is taking place, except (with respect to any matter specified in clause (a), (b) or (c) above, either individually or in the aggregate) such as is not reasonably likely to cause a Material Adverse Effect.

5.10 [Intentionally Omitted].

5.11 Brokers, Etc. Any broker's or finder's fee or commission that is payable with respect to this Agreement or any of the transactions contemplated hereby shall be payable by the applicable Credit Party on or about the Closing Date. Each Borrower hereby indemnifies Lenders against, and agrees that it will hold Lenders harmless from, any claim, demand or liability for any broker's or finder's fees alleged to have been incurred in connection herewith or therewith and any expenses (including reasonable fees, expenses and disbursements of counsel) arising in connection with any such claim, demand or liability.

5.12 Full Disclosure. No written information that has been furnished by the Credit Parties or on behalf of Holdings and the Credit Parties to Agent or any Lender in connection with this Agreement or the transactions contemplated hereby, other than information of a general economic or industry specific nature (such written information being referred to herein collectively as the "Information"), including Information provided under any Anti-Terrorism Law or 'know your customer' requirements, contains, as of the date of delivery thereof and when taken as a whole, any material misstatement of fact or omits to state any material fact necessary to make the statements therein not misleading in any material respect, in the light of the

circumstances under which they are made; provided, however, that, with respect to the Pro Forma Projections and any other Information consisting of projections, forecasts, pro forma data, budgets, estimates and other forward-looking statements (herein collectively, the "Projections"), no representation or warranty is made other than that the Projections have been (or, in the case of Projections furnished after the date hereof, will be) prepared in good faith based on assumptions believed by Borrowers to be reasonable at the time of preparation thereof (it being understood that such Projections are as to future events and are not to be viewed as facts, such Projections are subject to significant uncertainties and contingencies, many of which are beyond Borrowers' control, no assurance can be given that any particular Projections will be realized, and actual results during the period or periods covered by any such Projections may differ significantly from the projected results and such differences may be material). There is no fact known to Borrowers that, individually or in the aggregate, could reasonably be expected to cause a Material Adverse Effect which has not been set forth in this Agreement or in the certificates, statements, agreements or other documents furnished in writing to Agent and the Lenders prior to or at the date hereof in connection with the transactions contemplated hereby.

5.13 Taxes. All U.S. federal, state, provincial, local, foreign and other Tax returns required to have been filed with respect to each Credit Party and each Subsidiary of each Credit Party have been filed, and payment or adequate provision has been made for the payment of all Taxes which have or may become due pursuant to said returns or to assessments received or with respect to any Other Taxes owing by any Credit Party, except (a) to the extent that such Taxes are being contested in good faith by appropriate proceedings diligently conducted and for which such reserves or other appropriate provisions, if any, as shall be required by IFRS shall have been made or (b) to the extent that the failure to do so would not reasonably be expected to result in a Material Adverse Effect.

5.14 Intellectual Property, Licenses, Etc. Each Credit Party and each Subsidiary of each Credit Party owns, possesses or has the right to use all the material Intellectual Property, License Agreements, franchises, permits and rights necessary to own and operate its properties and to carry on its business as presently conducted and planned to be conducted by such Credit Party or Subsidiary, without known possible, alleged or actual conflict with the rights of others, except where the failure to so own, possess or have such right to use, in the aggregate, could not reasonably be expected to cause a Material Adverse Effect.

5.15 Liens in the Collateral. The Collateral Documents, upon execution and delivery thereof by the parties thereto, will create in favor of Agent for the benefit of the Lenders, a valid and enforceable Lien in the Collateral covered thereby. When the Equity Interests of US Subsidiaries that are Collateral and constitute certificated securities (as defined in the Uniform Commercial Code or the PPSA, as applicable) are delivered to Agent, together with instruments of transfer duly endorsed in blank, the security interest created under the Collateral Documents will constitute a security interest (subject to Permitted Liens) in all right, title and interest of the Credit Parties in such Collateral in each case prior and superior in right to any other Person (other than the rights of Persons pursuant to (x) Liens permitted pursuant to clause (z) of the definition of "Permitted Liens" and (y) Permitted Liens having priority by operation of law) and (ii) when Uniform Commercial Code or PPSA financing statements in appropriate form are filed in the applicable filing offices promptly following the Closing Date and in any event within any applicable time periods required by Law, the security interests created under the Collateral

Documents will constitute a security interest (subject to Permitted Liens) in all right, title and interest of the Credit Parties in the remaining Collateral to the extent perfection can be obtained by filing Uniform Commercial Code or PPSA financing statements in each case prior and superior in right to any other Person (other than the rights of Persons pursuant to (x) Liens permitted pursuant to clause (z) of the definition of "Permitted Liens" and (y) Permitted Liens having priority by operation of law). All filing fees, related Taxes and other expenses in connection with the perfection of such Liens have been or will be paid by Borrowers.

5.16 Insurance. The properties of each Credit Party and each of its Subsidiaries are insured pursuant to policies and other bonds which are valid and in full force and effect and which provide coverages from financially sound insurers that comply with the provisions of Section 6.6.

5.17 Pension Compliance.

(a) Each Plan is in compliance in all material respects with the applicable provisions of ERISA, the Code and other Applicable Laws and has been operated in substantial compliance with such Laws and the terms of such Plan. Each such Plan that is intended to qualify under Section 401(a) of the Code has received from the IRS a favorable determination or opinion letter, which has not by its terms expired, that such Plan is so qualified, or such Plan is entitled to rely on an IRS advisory or opinion letter with respect to an IRS-approved master and prototype or volume submitter plan, or a timely application for such a determination or opinion letter is currently being processed by the IRS with respect thereto; and, to the best knowledge of Borrowers, nothing has occurred which would prevent, or cause the loss of, such qualification. US Borrower and each member of the Controlled Group have made all required contributions to each such Plan subject to Section 412 or 430 of the Code and each Multiemployer Plan subject to Section 412 and 431 of the Code, and no application for a funding waiver or an extension of any amortization period pursuant to Section 412 or 430 of the Code has been made with respect to any Pension Benefit Plan.

(b) No Termination Event has occurred or is reasonably expected to occur that could reasonably be expected to give rise to a payment liability of any Credit Party in excess of $2,500,000; (i) no Pension Benefit Plan subject to ERISA has any material unfunded pension liability (i.e., a material excess of benefit liabilities over the current value of that Pension Benefit Plan's assets, determined pursuant to the assumptions used for funding such Pension Benefit Plan for the applicable plan year in accordance with Section 430 of the Code); (ii) neither US Borrower nor any member of the Controlled Group has incurred, or reasonably expects to incur, any liability under Title IV of ERISA with respect to any such Pension Benefit Plan (other than premiums due and not delinquent under Section 4007 of ERISA); (iii) neither US Borrower nor any member of the Controlled Group has incurred, or reasonably expects to incur, any liability (and no event has occurred which, with the giving of notice under Section 4219 of ERISA, would result in such liability) under Section 4201 of ERISA, with respect to a Multiemployer Plan; and (iv) neither US Borrower nor any member of the Controlled Group has engaged in a transaction that could be subject to Section 4069 or 4212(c) of ERISA.

(c) [Intentionally Omitted].

(d) [Intentionally Omitted].

(e) As of the Closing Date, no Credit Party nor any Subsidiary of a Credit Party maintains, sponsors, administers, contributes to, participates in or has any liability in respect of any Canadian Defined Benefit Plan, nor has any such Person ever maintained, sponsored, administered, contributed or participated in any Canadian Defined Benefit Plan. No Canadian Pension Termination Event has occurred. Except as, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect, (i) the Canadian Pension Plans are duly registered under the *Income Tax Act* (Canada) and any other Applicable Laws which require registration, have been administered in accordance with the *Income Tax Act* (Canada) and such other Applicable Law and no event has occurred which could cause the loss of such registered status, (ii) all obligations of the Credit Parties and their Subsidiaries (including fiduciary, funding, investment and administration obligations) required to be performed in connection with the Canadian Pension Plans and the funding agreements relating thereto have been performed on a timely basis and (iii) all contributions or premiums required to be made or paid by the Credit Parties and their Subsidiaries to the Canadian Pension Plans have been made on a timely basis in accordance with the terms of such plans and all Applicable Laws. No Lien has arisen, choate or inchoate, in connection with any Canadian Pension Plan (save for contribution amounts not yet due).

5.18 Environmental Matters. Each Credit Party is in compliance with applicable Environmental Laws and, to the knowledge of such Credit Party, is not subject to liability under Environmental Laws, except for such non-compliance, matters and liabilities as could not in the aggregate reasonably be expected to result in a Material Adverse Effect.

5.19 Solvency. The Credit Parties, taken as a whole, are Solvent. The Credit Parties, taken as a whole, are Solvent on the Closing Date after giving effect to the initial Advances made, and the Use of Proceeds contemplated to be made, on the Closing Date.

5.20 Anti-Terrorism Laws. No Covered Entity is a Sanctioned Person.

5.21 [Intentionally Omitted].

5.22 Anti-Corruption Law. Borrowers and each Subsidiary of a Credit Party have conducted their businesses in compliance in all material respects with applicable anti-corruption laws and has instituted and maintained policies and procedures designed to promote and achieve compliance with such laws.

5.23 [Intentionally Omitted].

5.24 Business of Credit Parties. Upon and after the Closing Date, Credit Parties do not propose to engage in any business other than the mining, production, trading, distribution and sale of coal, metal alloys and other metallic products and other activities necessary to conduct the foregoing.

5.25 Ineligible Securities. Borrowers do not intend to use and shall not use any portion of the proceeds of the Advances, directly or indirectly, to purchase during the underwriting

period, or for thirty (30) days thereafter, Ineligible Securities being underwritten by a securities Affiliate of Agent or any Lender.

5.26 Commercial Tort Claims. As of the Closing Date, no Credit Party has any commercial tort claims with an individual value in excess of $1,000,000, except as set forth on Schedule 5.26 hereto.

5.27 Letter of Credit Rights. As of the Closing Date, no Credit Party has any letter of credit rights with an individual value in excess of $1,000,000 except as set forth on Schedule 5.27 hereto.

5.28 Certificate of Beneficial Ownership. The Certificate of Beneficial Ownership executed and delivered to Agent and Lenders for each Borrower on or prior to the date of this Agreement, as updated from time to time in accordance with this Agreement, is accurate, complete and correct as of the date hereof and as of the date any such update is delivered. Borrowers acknowledge and agree that the Certificate of Beneficial Ownership is one of the Other Documents.

VI. AFFIRMATIVE COVENANTS.

Each Credit Party shall:

6.1 Compliance with Laws. Comply, and cause each of its Subsidiaries to comply with all Applicable Laws with respect to the Collateral or any part thereof or to the operation of such Credit Party's or such Subsidiary's business the non-compliance with which, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

6.2 Maintenance of Existence. (a) Keep in full force and effect its existence (except as otherwise expressly permitted under Section 7.6); (b) cause its Subsidiaries to keep, in full force and effect its existence (except as otherwise expressly permitted under Section 7.6 or where the failure to do so, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect) and (c) make, and cause each of its Subsidiaries to make, all such reports and pay all such franchise and other taxes and license fees and do all such other acts and things as may be lawfully required to maintain its rights, licenses, leases, powers and franchises under Applicable Laws where the failure to do so, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

6.3 Books and Records. Keep, and cause each of its Subsidiaries to keep, proper books of record and account in which full, true and correct entries will be made of all dealings or transactions of or in relation to its business and affairs (including without limitation accruals for taxes, assessments, charges, levies and claims, allowances against doubtful Receivables and accruals for depreciation, obsolescence or amortization of assets), all in accordance with, or as required by, IFRS consistently applied in the opinion of such independent public accountant as shall then be regularly engaged by Borrowers.

6.4 Payment of Taxes. Pay, and cause each of its Subsidiaries to pay, when due, all Taxes levied or assessed upon such Credit Party or its Subsidiaries, as applicable, or any of the Collateral, except where the same are being Properly Contested or the failure to make such

payment could not reasonably be expected to result in a liability to any Credit Party or any of its Subsidiaries in excess of $1,000,000 individually or in the aggregate. If any Tax is or may be imposed on or as a result of any transaction between any Credit Party and Agent or any Lender that Agent or any Lender may be required to withhold or pay (and for which a Credit Party or any of its Subsidiaries is liable under Applicable Law), or if any Taxes for which a Credit Party or any of its Subsidiaries is liable under Applicable Law remain unpaid after the date fixed for their payment and, in Agent's reasonable opinion, such unpaid Taxes are reasonably likely to result in a valid Lien on the Collateral (other than a Permitted Liens), in each case, except for Taxes being Properly Contested, Agent may, without notice to the Credit Parties, make a Protective Advance as provided in Section 16.2(f) to pay the Taxes.

6.5 [Intentionally Omitted].

6.6 Insurance.

(a) (i) Keep, and cause each of its Subsidiaries to keep, all its insurable properties and properties in which such Credit Party or such Subsidiary has an interest insured against the hazards of fire, flood, sprinkler leakage, those hazards covered by extended coverage insurance and such other hazards, and for such amounts, as is customary in the case of companies engaged in businesses similar to such Credit Party's or such Subsidiary's, including business interruption insurance; (ii) maintain, and cause each of its Subsidiaries to maintain, a bond in such amounts as is customary in the case of companies engaged in businesses similar to such Credit Party or such Subsidiary insuring against larceny, embezzlement or other criminal misappropriation of insured's officers and employees who may either singly or jointly with others at any time have access to the assets or funds of such Credit Party or such Subsidiary either directly or through authority to draw upon such funds or to direct generally the disposition of such assets; (iii) maintain, and cause each of its Subsidiaries to maintain, public and product liability insurance against claims for personal injury, death or property damage suffered by others for such amounts, as is customary in the case of companies engaged in businesses similar to such Credit Party's or such Subsidiary's; (iv) maintain, and cause each of its Subsidiaries to maintain, all such worker's compensation or similar insurance as may be required under the laws of any state or jurisdiction in which such Credit Party or such Subsidiary is engaged in business; and (v) furnish Agent with (A) copies of all policies and evidence of the maintenance of such policies by the renewal thereof at least thirty (30) days before any expiration date, and (B) with respect to each policy covering business interruption insurance or any of the Collateral, appropriate endorsements (including loss payable endorsements) or assignments in form and substance reasonably satisfactory to Agent, naming Agent as an additional insured and Agent as lender loss payee as its interests may appear with respect to all insurance coverage referred to in clauses (i) and (iii) above, and providing (I) that all proceeds thereunder shall be payable to Agent, (II) no such insurance shall be affected by any act or neglect of the insured or owner of the property described in such policy, and (III) that such policy and loss payable clauses may not be cancelled, amended or terminated unless at least thirty (30) days prior written notice (or in the case of a payment default, ten (10) days prior written notice) is given to Agent. In the event of any loss thereunder, the carriers named therein hereby are directed by Agent and the applicable Credit Party or Subsidiary to make payment for such loss to Agent and not to such Credit Party (or such Subsidiary) and Agent jointly. If any insurance losses are paid by check, draft or other instrument payable to any Credit Party (or any Subsidiary) and Agent jointly, Agent may endorse

such Credit Party's (or such Subsidiary's) name thereon and do such other things as Agent may deem advisable to reduce the same to cash.

(b) To the extent the Obligations are secured by any interest in Real Property, each Credit Party shall, and shall cause each of its Subsidiaries to, take all actions required under the Flood Laws and/or reasonably requested by Agent to assist each Lender in its compliance with the Flood Laws applicable to the Collateral, including, but not limited to, providing Agent with the address, as applicable, of each structure on any real property that will be subject to a Mortgage in favor of Agent, for the benefit of the Secured Parties, and, to the extent required under Flood Laws, obtaining flood insurance for such property, structures and contents prior to such property, structures and contents becoming subject to a Mortgage in favor of Agent, and thereafter maintaining such flood insurance in full force and effect for so long as required by the Flood Laws.

(c) If an Event of Default has occurred and is continuing, Agent is hereby authorized to adjust and compromise claims under insurance coverage referred to in Sections 6.6(a)(i) and 6.6(b) above. Any surplus shall be paid by Agent to Borrowers or applied as may be otherwise required by Applicable Law. If any Credit Party, or any of its Subsidiaries, fails to obtain insurance as hereinabove provided, or to keep the same in force, Agent, if Agent so elects, may obtain such insurance (and will provide Borrowing Agent with prompt notice that it has obtained such insurance) and pay the premium therefor on behalf of such Credit Party or such Subsidiary, which payments shall be charged to Borrowers' Account and constitute part of the Obligations.

6.7 Payment of Indebtedness and Leasehold Obligations. Pay, discharge or otherwise satisfy, and cause each of its Subsidiaries to pay, discharge or otherwise satisfy, (a) at or before maturity (subject, where applicable, to specified grace periods) all its Indebtedness, except when the failure to do so, individually or in the aggregate, could not reasonably be expected to have a Material Adverse Effect or when the amount or validity thereof is currently being Properly Contested, subject at all times to any applicable subordination arrangement in favor of Lenders and (b) when due its rental obligations under all leases under which it is a tenant, except when the failure to do so, individually or in the aggregate, could not reasonably be expected to have a Material Adverse Effect or when the amount or validity thereof is currently being Properly Contested, and shall otherwise comply, in all material respects, with all other terms of such leases and keep them in full force and effect, in each case, except when the failure to do so, individually or in the aggregate, could not reasonably be expected to have a Material Adverse Effect.

6.8 Environmental Matters.

(a) Ensure, and take reasonable efforts to cause each of its Subsidiaries to ensure, that the Real Property and all operations and businesses conducted thereon are in compliance and remain in compliance with all Environmental Laws and manage, to the extent such entity is required by Environmental Law or any lease, any and all Hazardous Materials on any Real Property in compliance with Environmental Laws, except in each case to the extent any non-compliance, individually or in the aggregate, could not reasonably be expected to cause a Material Adverse Effect.

(b) Except as, individually or in the aggregate, could not reasonably be expected to cause a Material Adverse Effect, respond promptly, and take reasonable efforts to cause each of its Subsidiaries to respond promptly, to any Hazardous Discharge or Environmental Complaint and take all action required by Environmental Law in order to safeguard the health of any Person and to avoid subjecting the Collateral to any Lien (other than Permitted Liens). If any Credit Party or any of its Subsidiaries shall fail to comply with the terms of the foregoing sentence or the terms of Section 6.8(a) herein, Agent on behalf of Lenders may, but without the obligation to do so, for the sole purpose of protecting Agent's interest in the Collateral: (i) give such notices or (ii) enter onto (or authorize third parties to enter onto) any Real Property subject to a Mortgage and take such actions (provided such actions are required by Environmental Law, are conducted in compliance with all applicable Environmental Laws and do not interfere with any existing cleanup, institutional or engineering control) as Agent (or such third parties as directed by Agent) reasonably deem necessary or advisable, to remediate, remove, mitigate or otherwise manage any such Hazardous Discharge or Environmental Complaint, to the extent necessary to prevent such noncompliance, Hazardous Discharge or Environmental Complaint from causing a Material Adverse Effect. All reasonable out-of-pocket costs and expenses incurred by Agent and Lenders (or such third parties) in the exercise of any such rights, including any sums paid in connection with any judicial or administrative investigation or proceedings, fines and penalties, shall be paid upon demand by Borrowers, and until paid shall be added to and become a part of the Obligations secured by the Liens created by the terms of this Agreement or any other agreement between Agent, any Lender and any Credit Party.

(c) During the continuance of any Hazardous Discharge that results in a Default or Event of Default, the Credit Parties shall, promptly upon the reasonable written request of Required Lenders, provide Agent, at the Credit Parties' expense, with an environmental site assessment or environmental compliance audit report prepared by an environmental engineering firm acceptable in the reasonable opinion of Required Lenders, to assess with a reasonable degree of certainty the existence of a Hazardous Discharge and the potential costs in connection with any required abatement, remediation and removal of any Hazardous Materials found on, under, at or within the Real Property resulting from the Hazardous Discharge. Any report or investigation of such Hazardous Discharge proposed and acceptable to the responsible Governmental Body shall be reasonably acceptable to Agent. If such estimates, individually or in the aggregate exceed $1,000,000, Agent shall have the right to require the Credit Parties to post a bond, letter of credit or other security reasonably satisfactory to Agent to secure payment of these costs and expenses.

6.9 Standards of Financial Statements. Cause all financial statements referred to in Section 9.7 as to which IFRS is applicable to be complete and correct in all material respects (subject, in the case of interim financial statements, to normal year-end audit adjustments and the absence of footnotes) and to be prepared in reasonable detail and in accordance with IFRS applied consistently throughout the periods reflected therein (except as disclosed therein and agreed to by such reporting accountants or officer, as applicable).

6.10 [Intentionally Omitted].

6.11 Execution of Supplemental Instruments. Execute and deliver to Agent, from time to time, upon demand, such supplemental agreements, statements, assignments and transfers, instructions or documents relating to the Collateral, and such other instruments as Agent may reasonably request, in order that the full intent of this Agreement may be carried into effect. Without limiting the foregoing, Credit Parties shall take such actions as are necessary or as Agent or the Required Lenders may reasonably request from time to time to ensure that the Obligations are secured by all of the Equity Interests of each Borrower and substantially all of the Collateral of Borrowers and each Credit Party and guaranteed by each applicable Subsidiary of any Credit Party, in each case as required by Section 7.9.

6.12 [Intentionally Omitted].

6.13 Government Receivables. Take all steps reasonably necessary to protect Agent's interest in the Collateral under the Federal Assignment of Claims Act, the Uniform Commercial Code, the PPSA and all other applicable state or local statutes or ordinances and deliver to Agent appropriately endorsed, any instrument or chattel paper connected with any Receivable arising out of any contract between any Credit Party and the United States of America, any state or any department, agency or instrumentality of any of them.

6.14 [Intentionally Omitted].

6.15 Keepwell. If it is a Qualified ECP Credit Party, then jointly and severally, together with each other Qualified ECP Credit Party, hereby absolutely unconditionally and irrevocably (a) guarantees the prompt payment and performance of all Swap Obligations owing by each Non-Qualifying Party (it being understood and agreed that this guarantee is a guaranty of payment and not of collection) and (b) undertakes to provide such funds or other support as may be needed from time to time by any Non-Qualifying Party to honor all of such Non-Qualifying Party's obligations under this Agreement or any Other Document in respect of Swap Obligations; (provided, however, that each Qualified ECP Credit Party shall only be liable under this Section 6.15 for the maximum amount of such liability that can be hereby incurred without rendering its obligations under this Section 6.15, or otherwise under this Agreement or any Other Document, voidable under Applicable Law, including Applicable Law relating to fraudulent conveyance or fraudulent transfer, and not for any greater amount). The obligations of each Qualified ECP Credit Party under this Section 6.15 shall remain in full force and effect until payment in full of the Obligations and termination of this Agreement and the Other Documents. Each Qualified ECP Credit Party intends that this Section 6.15 constitute, and this Section 6.15 shall be deemed to constitute, a guarantee of the obligations of, and a "keepwell, support, or other agreement" for the benefit of each other Borrower and Guarantor for all purposes of Section 1a(18(A)(v)(II) of the CEA.

6.16 Certificate of Beneficial Ownership and Other Additional Information. Provide to Agent and Lenders: (i) upon request, confirmation of the accuracy of the information set forth in the most recent Certificate of Beneficial Ownership provided to Agent and Lenders; (ii) a new Certificate of Beneficial Ownership, in form and substance acceptable to Agent and each Lenders, when the individual(s) to be identified as a Beneficial Owner have changed; and (iii) such other information and documentation as may reasonably be requested by Agent or any Lender from time to time for purposes of compliance by Agent or such Lender with Applicable

Laws (including, without limitation, the USA Patriot Act and other "know your customer" and anti-money laundering rules and regulations), and any policy or procedure implemented by Agent or such Lender to comply therewith.

VII. NEGATIVE COVENANTS.

7.1 Indebtedness. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, at any time create, incur, assume or suffer to exist any Indebtedness, except:

(a) Indebtedness under this Agreement and the Other Documents;

(b) Indebtedness outstanding on the Closing Date as set forth on Schedule 7.1 and any Permitted Refinancings thereof;

(c) Indebtedness incurred with respect to Capital Lease Obligations, Synthetic Lease Obligations and other Purchase Money Security Interests as and to the extent permitted under Section 7.14 so long as the aggregate principal amount of all of the foregoing does not in the aggregate exceed the amount permitted pursuant to clause (h) of the definition of Permitted Liens;

(d) Indebtedness consisting of Permitted Intercompany Investments;

(e) any (i) Lender Provided Interest Rate Hedge, (ii) Lender Provided Foreign Currency Hedge or (ii) other Interest Rate Hedge or Foreign Currency Hedge approved by Agent; provided, however, the Credit Parties shall enter into an Interest Rate Hedge or Foreign Currency Hedge only for hedging (rather than speculative) purposes;

(f) Indebtedness consisting of Cash Management Liabilities in the Ordinary Course of Business;

(g) endorsements for collection, deposit or negotiation and warranties of products or services, in each case incurred in the Ordinary Course of Business;

(h) Indebtedness owing to employees in connection with a non-qualified benefit plan incurred in the Ordinary Course of Business;

(i) Indebtedness consisting of the financing of insurance premiums incurred in the Ordinary Course of Business;

(j) Indebtedness under performance bonds, surety bonds, release, appeal and similar bonds, statutory obligations or with respect to workers' compensation claims, in each case incurred in the Ordinary Course of Business, and reimbursement obligations in respect of any of the foregoing (including in respect of letters of credit issued in support of any of the foregoing), so long as, with respect to all Indebtedness described in this clause (j), such Indebtedness is not more than sixty (60) days past due;

(k) Indebtedness arising under the 2022 Notes, and guaranties in respect thereof (and any Permitted Refinancing thereof), in an aggregate principal amount not to exceed

$350,000,000 at any time outstanding plus, in the case of a Permitted Refinancing of the 2022 Notes, the sum of (x) any original issue discount in connection with such Permitted Refinancing and (y) the aggregate amount of any other related fees, underwriting discounts, premiums and other costs and expenses incurred in connection with any such Permitted Refinancing not to exceed, in the case of this clause (y), $10,000,000 in the aggregate;

(l) Indebtedness in an aggregate outstanding principal amount which, when taken together with any Permitted Refinancing in respect thereof and the principal amount of all other Indebtedness incurred pursuant to this clause (l) and then outstanding, will not exceed $30,000,000; provided that all such Indebtedness incurred pursuant to this clause (l) is (i) incurred by a Joint Venture; (ii) is not guaranteed, in whole or in part, by any Credit Party or any Subsidiary of a Credit Party (other than the Joint Venture); (iii) is without recourse to, and does not obligate, the Credit Parties or any Subsidiary of the Credit Parties (other than the Joint Venture) in any way; and (iv) does not subject any property or asset of the Credit Parties or any Subsidiary of the Credit Parties (other than the Joint Venture) to the satisfaction thereof, directly or indirectly, contingently or otherwise, except, with respect to the foregoing clause (iii) and clause (iv), in connection with and for (A) Liens on the Equity Interests of the Joint Venture or (B) the ability to be converted into or exchanged for Equity Interests of the Joint Venture;

(m) Indebtedness of any Person assumed or acquired in connection with a Permitted Acquisition (or any other acquisition of property constituting a business or a division or line of business or of a Subsidiary permitted under this Agreement) that existed on the date of such Permitted Acquisition (and Permitted Refinancings thereof) in an aggregate amount not to exceed $10,000,000 at any time outstanding; provided that such Indebtedness is not created in anticipation of such Permitted Acquisition (or other acquisition);

(n) Indebtedness incurred pursuant to an Investment permitted by Section 7.4, excluding Indebtedness described in clause (m) above;

(o) Indebtedness incurred in favor of Agent, any Issuing Bank, and any counterparty in respect of any Lender Provided Interest Rate Hedge, Lender Provided Foreign Currency Hedge or other Interest Rate Hedge or Foreign Currency Hedge approved by Agent pursuant to any cash collateral arrangement;

(p) (i) other term loan Indebtedness of any Credit Party in an aggregate amount not to exceed $125,000,000; provided, that (A) such Indebtedness is not guaranteed by any Subsidiary of a Credit Party that is not itself a Credit Party, (B) such Indebtedness is not secured by Liens on any assets of any Credit Party or any Subsidiary of any Credit Party other than (x) the Collateral (or assets that, substantially concurrently with the incurrence of such Indebtedness, become Collateral on which a Lien is granted to Agent pursuant to a Collateral Document) and/or (y) fee-owned real property and related appurtenant rights and fixtures and the proceeds thereof, (C) (x) if such Indebtedness is secured by any Liens on Collateral, the administrative agent, collateral agent and/or any similar representative acting on behalf of the holders of such Indebtedness shall have become party to a Permitted Intercreditor Agreement, providing that the Liens on the ABL Priority Collateral securing such Indebtedness shall rank junior in priority to the Liens on the ABL Priority Collateral securing the Obligations and (y) if such Indebtedness is secured by any Liens on any fee-owned real property or related appurtenant

rights and fixtures on which any Inventory of the Credit Parties is located, the administrative agent, collateral agent and/or any similar representative acting on behalf of the holders of such Indebtedness shall have become party to a Bailee Waiver, (D) the final scheduled maturity of any such Indebtedness shall not be earlier than the Maturity Date (and such scheduled maturity may include a springing mechanic consistent with clause (ii) of the definition of "Maturity Date"), and (E) the terms and conditions of such Indebtedness are otherwise reasonably satisfactory to Agent, and (ii) Permitted Refinancing Indebtedness in respect of indebtedness incurred pursuant to clause (i); and

(q) other unsecured Indebtedness in an aggregate amount not to exceed $6,000,000 at any time outstanding.

7.2 Liens; Lien Covenants. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, at any time create, incur, assume or suffer to exist any Lien on any of its property or assets, tangible or intangible, now owned or hereafter acquired, or agree or become liable to do so, except Permitted Liens.

7.3 [Intentionally Omitted].

7.4 Loans, Guaranties and Investments. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, make any loan or advance to, guaranty or pledge collateral to secure any Indebtedness or other obligation of; or purchase or acquire any Equity Interests, bonds, notes or securities of, or any other investment or interest in, a Person, or make any capital contribution to, any other Person; or acquire assets comprising all or substantially all the assets of (or all or substantially all the assets constituting a business unit, division, product line or line of business of) a Person (for the purposes of this Section 7.4, each and all of the foregoing being an "Investment"), except the following:

(a) deposits, prepayments and extensions of trade credit on usual and customary terms in the Ordinary Course of Business;

(b) advances to employees, officers and directors to meet expenses incurred by such employees in the Ordinary Course of Business and other advances in respect of customary indemnification obligations owed to employees, officers and directors;

(c) Permitted Investments;

(d) Investments in Cash;

(e) Investments of the Credit Parties and their Subsidiaries existing on the Closing Date and set forth on Schedule 7.4;

(f) Capital Expenditures to the extent permitted under this Agreement;

(g) additional Investments after the Closing Date in respect of which a binding agreement has been entered into as of the Closing Date to the extent described in Schedule 7.4 hereto and incremental Investments contemplated in connection therewith and any extension or renewal thereof; provided that any additional Investments made with respect thereto

shall be permitted only to the extent such Investments are described on Schedule 7.4 or made in accordance with the other provisions of this Section 7.4;

(h) Permitted Acquisitions;

(i) Investments in the form of agreements for Foreign Currency Hedges or Interest Rate Hedges entered into in the Ordinary Course of Business and not for speculative purposes;

(j) Investments consisting of promissory notes and other non-cash consideration received in connection with any Asset Sale permitted by Section 7.7;

(k) Investments in connection with the full or partial satisfaction, settlement or enforcement of Indebtedness or claims or other obligations due or owing to any Credit Party or any of its Subsidiaries or as security for any such Indebtedness or claim;

(l) (i) Permitted Intercompany Investments and (ii) Investments by Subsidiaries of Holdings that are not Credit Parties in the Credit Parties and in other Subsidiaries of Holdings that are not Credit Parties; and

(m) Investments in Joint Ventures so long as, on the date on which each such Investment is made, the Payment Conditions are satisfied;

(n) Investments owned by a Person at the time such Person is acquired pursuant to a Permitted Acquisition and not acquired by such Person in contemplation of such Permitted Acquisition;

(o) loans or advances made by any Credit Party or any Subsidiary of a Credit Party to such Credit Party's or such Subsidiary's employees on an arms-length basis in the Ordinary Course of Business, up to a maximum of $50,000 to any employee at any one time outstanding and up to a maximum of $250,000 in the aggregate as to all loans and advances under this clause (o) at any one time outstanding;

(p) loans or advances outstanding as of the Closing Date and made by any Credit Party or any Subsidiary of a Credit Party to Holdings and any Subsidiary of Holdings that is not a Credit Party pursuant to the agreements set forth on Schedule 7.8(a); and

(q) any transaction permitted by Section 7.5, 7.6 or 7.7, in each case to the extent also constituting an Investment.

By way of clarification and not limitation, this Section's use of the words "pledge collateral to secure" is intended to address only any such pledge given secure Indebtedness or other obligations of another Person and is not intended to impair the availability to the Credit Parties and their Subsidiaries of Liens otherwise permitted under Section 7.2.

7.5 Restricted Payments. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, make or pay, or agree to become or remain liable to make or pay, any Restricted Payment, except:

(a) dividends payable solely in shares of any class of Equity Interests (or of common stock) to the holders of such class of Equity Interests;

(b) Restricted Payments (i) between and among the Credit Parties and (ii) from a Subsidiary of a Credit Party that is not a Credit Party to a Credit Party;

(c) Restricted Payments to Holdings (i) in an amount equal to scheduled interest allocated to the 2022 Notes (and any Permitted Refinancing thereof) issued by US Borrower or any other Credit Party and payments of fees, expenses and indemnification obligations as and when due in respect of the 2022 Notes (and any Permitted Refinancing thereof) and (ii) with respect to any taxable period, an amount necessary to permit Holdings to pay any consolidated, combined, unitary or similar Taxes that are due and payable by Holdings for such taxable period that are attributable to the income of the Credit Parties and its Subsidiaries (determined as if the Credit Parties and its Subsidiaries were a stand-alone corporation and taxpayer);

(d) the repurchase, redemption, defeasance, retirement or acquisition for value of, or payment of principal of, and payment of accrued and unpaid interest on, any portion of the 2022 Notes in exchange for (including any such exchange pursuant to the exercise of a conversion right or privilege in connection with which cash is paid in lieu of the issuance of fractional shares), or in an amount not in excess of the net cash proceeds of a substantially concurrently issuance and sale of, any Permitted Refinancing Indebtedness of the 2022 Notes;

(e) US Borrower may redeem, defease or satisfy and discharge the 2022 Notes at any time together with Holdings, and deliver any notices in respect thereof pursuant to the Indenture together with Holdings, in each case to the extent that US Borrower makes no Restricted Payment, intercompany loan or advance to or Investment in Holdings, and no payment to the trustee, in respect of the 2022 Notes or the holders of the 2022 Notes in respect of such redemption, defeasance or satisfaction and discharge, in connection therewith (in each case, other than in an amount no greater than the amount of such Restricted Payments permitted by another clause of this Section 7.5 or such Investments permitted by Section 7.4);

(f) Restricted Payments made by the US Borrower to Holdings on the Closing Date in an amount equal to the Advances made on the Closing Date for use by Holdings in accordance with Section 2.21(a) on or about the Closing Date (minus the amount of any Investment made by US Borrower in Holdings pursuant to clause (d) of the definition of "Permitted Intercompany Investments"; and

(g) other Restricted Payments, so long as, on the date on which each such Restricted Payment is made, the Payment Conditions are satisfied.

The Credit Parties and their Subsidiaries shall not amend, or enter into a Permitted Refinancing of, the 2022 Notes or the 2022 Indenture or any agreement evidencing or governing its other unsecured Indebtedness outstanding on the Closing Date if the effect of such amendment is to change, to an earlier date, any date upon which a payment of principal is due thereon or amend any provision thereof if the effect of such amendment is to require any such principal to be redeemed, prepaid or defeased, or permit the maturity of such principal to be accelerated, on an

earlier date or by reason of the occurrence or existence of any event or condition not theretofore specified.

7.6 Liquidations, Mergers, Consolidations. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, dissolve, liquidate or wind-up its affairs, or become a party to any merger, amalgamation or consolidation (including pursuant to any LLC Division), except that:

(a) any Person may merge or consolidate with any Credit Party in connection with a Permitted Acquisition in which a Credit Party shall be the continuing or surviving Person and:

(i) immediately after giving effect to the consummation of such merger, amalgamation or consolidation the representations, warranties of the Credit Parties under Section 5 shall be true and correct in all material respects, as though made at and as of such time, unless expressly made as of a prior date (in which case such representations and warranties shall have been true and correct in all material respects as of such prior date); provided that any representation and warranty that is qualified as to materiality, "Material Adverse Effect" or similar language shall be true and correct (after giving effect to any qualification therein) in all respects as of such respective dates;

(ii) the holders of the applicable Credit Party's issued and outstanding Equity Interests (both economic and voting) immediately before the consummation of such merger, amalgamation or consolidation shall own not less than one-hundred percent (100%) of applicable Credit Party's issued and outstanding Equity Interests (both economic and voting) immediately after the consummation of such merger, amalgamation or consolidation;

(iii) the Credit Parties shall have delivered to Agent true and complete copies of all material documents relating to such merger, amalgamation or consolidation at least five (5) Business Days prior to the consummation thereof;

(iv) the Credit Parties shall have delivered to Agent a certificate signed by a Responsible Officer dated as of the date on which the such merger or consolidation is consummated confirming that the requirements of clauses (i), (ii) and (iii) above, are satisfied; and

(v) the Credit Parties shall, within sixty (60) days (or such longer period as agreed to by Agent in writing in its sole discretion) after the consummation of such merger, amalgamation or consolidation, execute and deliver to Agent such Collateral Documents, and cause to be made such filings and taken such other actions, as Agent may reasonably request to create and perfect a Lien in favor of Agent (or, if applicable, a security trustee) for the benefit of the Lenders in the applicable property acquired by the Credit Parties in such merger, amalgamation or consolidation; provided that (A) the acquired property so encumbered shall be limited to the kind and type of property pledged as Collateral by the Credit Parties on the Closing Date, and (B) if such property is Equity Interests of a Subsidiary, the provisions of Section 7.9 shall apply;

(b) any Person (other than a Borrower) may merge, amalgamate or consolidate with any Subsidiary of a Borrower in a transaction in which the surviving entity is a Subsidiary of a Borrower (and, if any party to such merger, amalgamation or consolidation is a Credit Party, is a Credit Party);

(c) any Subsidiary of a Borrower may merge, amalgamate or consolidate with any Person (other than a Borrower) in a transaction permitted under Section 7.7 in which, after giving effect to such transaction, the surviving entity is not a Subsidiary of a Borrower; and

(d) any Subsidiary of any Credit Party that is itself not a Credit Party may liquidate or dissolve if Borrowing Agent determines in good faith that such liquidation or dissolution is in the best interests of the Credit Parties and is not materially disadvantageous to the Lenders;

in each case, provided that (i) no Event of Default shall exist immediately prior to, and after giving effect to, any such dissolution, liquidation, winding-up, merger, amalgamation or consolidation and (ii) any such merger, amalgamation or consolidation involving a Person that is not a Wholly Owned Subsidiary of a Credit Party immediately prior thereto shall not be permitted unless it is also permitted under Section 7.4.

7.7 Dispositions of Assets or Subsidiaries. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to cause or permit an Asset Sale or otherwise transfer or dispose of, voluntarily or involuntarily, any of its properties or assets, tangible or intangible (including pursuant to an LLC Division or other sale, assignment, discount or other disposition of accounts, contract rights, chattel paper, equipment or general intangibles with or without recourse or of any Equity Interests of a Subsidiary of such Credit Party), except:

(a) transactions involving the sale of Inventory in the Ordinary Course of Business;

(b) any sale, transfer or lease of used, obsolete, worn out or surplus assets in the Ordinary Course of Business in an aggregate amount not to exceed $6,000,000 in any fiscal year;

(c) any sale, transfer or lease of assets by (i) a Credit Party to (A) a Credit Party or (B) Holdings or any Subsidiary of Holdings that is not a Credit Party so long as, on the date on which each such sale, transfer or lease of assets is made, the Payment Conditions are satisfied and (ii) a Subsidiary of a Credit Party that is not itself a Credit Party to a Credit Party;

(d) licenses of Intellectual Property of any Credit Party or any Subsidiary of a Credit Party in the Ordinary Course of Business (i) between or among Holdings, the Credit Parties and the Subsidiaries of Holdings and (i) to Joint Ventures;

(e) leases of owned Real Property and subleases of leased Real Property, in each case, in the Ordinary Course of Business and not interfering in any material respect with the operations of the Credit Parties and their Subsidiaries taken as a whole;

(f) the Credit Parties and their Subsidiaries may transfer or dispose of assets and property (other than Receivables and Inventory except to the extent transferred indirectly in an Asset Sale of the type described in clause (a) or (b) of the definition of "Asset Sale") not in excess of $11,750,000 in any fiscal year; provided that, as to all Asset Sales under this clause (f),
(1) the consideration received for such assets shall be in an amount at least equal to the fair market value thereof (as determined in good faith by the Borrowing Agent) and (2) no Event of Default shall have occurred or be continuing after giving effect thereto;

(g) in order to resolve disputes that occur in the Ordinary Course of Business, the sale, transfer, disposition, discount or compromise for less than the face value thereof, notes or Receivables;

(h) the sale or disposition of Equity Interests of any Subsidiary of a Credit Party that is not itself a Credit Party in order to qualify members of the board of directors (or equivalent body otherwise named) of such Subsidiary if required by Applicable Law;

(i) the sale or other disposition of Permitted Investments for fair value;

(j) the sale or other disposition of specific items of Equipment, so long as the purpose of such sale or disposition is to acquire replacement items of like-kind Equipment or other equipment used or useful in the conduct of the business of any Credit Party or any of its Subsidiaries;

(k) leases, assignments and licenses of personal property (other than Receivables and Inventory) in the Ordinary Course of Business;

(l) dispositions resulting from any casualty or other insured damage to, or any taking under power of eminent domain or by condemnation or similar proceeding of, any property or asset of any Credit Party or any of its Subsidiaries;

(m) dispositions of Investments in Joint Ventures to the extent required by, or made pursuant to, customary buy/sell arrangements between the Joint Venture parties set forth in Joint Venture arrangements and similar binding arrangements;

(n) the disposition or sale of any assets acquired in connection with any Permitted Acquisition in contemplation that such assets would be sold to a third party; provided, that, (i) such assets are sold for consideration not less than the value attributed to such assets in the calculation of the aggregate consideration for such Permitted Acquisition and (ii) such disposition or sale occurs within one (1) year of the consummation of such Permitted Acquisition;

(o) any merger, amalgamation, consolidation, winding up, liquidation or dissolution permitted pursuant to Section 7.6, or any transaction permitted pursuant to Section 7.4 or Section 7.15;

(p) (i) any sale of Permitted Investments in the Ordinary Course of Business or (ii) sales, assignments, discounts, transfers or dispositions of accounts or notes (including for less than the face value thereof) in the Ordinary Course of Business for purposes of compromise

or collections; provided that, in the case of clauses (i), the consideration received for such assets shall be in an amount at least equal to the fair market value thereof (as determined in good faith by the Borrowing Agent);

(q) any sale, transfer or other disposition of Receivables or Inventory in an aggregate amount not to exceed $500,000 in any fiscal year; and

(r) any sale, transfer or lease of assets, other than those specifically excepted pursuant to clauses (a) through (q) above, which is approved by Agent.

7.8 Affiliate Transactions. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, enter into or carry out any transaction with any Affiliate of any Credit Party (including purchasing property or services from or selling property or services to any Affiliate of any Credit Party or other Person) unless such transaction is not otherwise prohibited by this Agreement and is entered into in the Ordinary Course of Business upon arm's-length terms; provided that the foregoing restrictions shall not apply to (i) any transaction between or among the Credit Parties, (ii) any transaction between or among any of the Credit Parties' Subsidiaries that are not Credit Parties, (iii) Restricted Payments permitted by Section 7.5, (iv) transactions made in the Ordinary Course of Business and pursuant to the arrangements and in amounts not to exceed the amounts set forth on Schedule 7.8(b), and (v) transactions otherwise expressly permitted by this Agreement.

7.9 Subsidiaries, Partnerships and Joint Ventures.

(a) Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to create directly or indirectly any Subsidiaries other than as permitted under Section 7.4. Each US Subsidiary or Canadian Subsidiary that is a Material Subsidiary formed or acquired by a Credit Party after the Closing Date shall, no later than sixty (60) days (or such longer period as agreed to by Agent in writing in its sole discretion) after its formation or acquisition, join this Agreement as a Credit Party by delivering to Agent (i) a signed Credit Party Joinder modified as appropriate; (ii) documents in the forms described in Section 8.1 modified as appropriate; and (iii) Collateral Documents necessary to grant and perfect a Lien (subject to Permitted Liens) in favor of Agent, for the benefit of the Lenders in the applicable property of such Subsidiary (which, for the avoidance of doubt, shall be limited to the kind and type of property pledged as Collateral on the Closing Date) in each case prior and superior in right to any other Person (other than the rights of Persons pursuant to (x) Liens permitted pursuant to clause (z) of the definition of "Permitted Liens" and (y) Permitted Liens having priority by operation of Law). Each Credit Party creating or acquiring a Subsidiary shall grant and perfect a Lien (subject to Permitted Liens) to Agent, for the benefit of the Lenders in the Equity Interests of such Subsidiary (excluding any Equity Interests to the extent constituting Excluded Property) in each case prior and superior in right to any other Person (other than the rights of Persons pursuant to (x) Liens permitted pursuant to clause (z) of the definition of "Permitted Liens" and (y) Permitted Liens having priority by operation of Law).

(b) Each of the Credit Parties shall not become or agree to become a party to a Joint Venture, except as permitted under Section 7.4.

7.10 Continuation of or Change in Business. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, engage in any businesses other than the respective businesses thereof as of the Closing Date and any similar, ancillary or related businesses.

7.11 Fiscal Year. The Credit Parties shall not, and shall not permit any Subsidiary of any Credit Party to, change its fiscal year from the twelve-month period beginning January 1 and ending December 31.

7.12 [Intentionally Omitted].

7.13 Changes in Organizational Documents. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, amend its certificate of incorporation (including any provisions or resolutions relating to Equity Interests), by-laws, certificate of limited partnership, partnership agreement, certificate of formation, limited liability company agreement, articles of association, memorandum of association or other organizational documents in any respect materially adverse to the interest of the Lenders (it being understood that any legal name change shall be deemed to be materially adverse to the interest of the Lenders) without the prior written consent of the Required Lenders (which consent shall not be unreasonably withheld, conditioned or delayed). No Credit Party shall, or shall permit any Subsidiary, to change its jurisdiction of formation or its organizational form or its chief executive office or its domicile (within the meaning of the Civil Code of Québec) without thirty (30) days' prior written notice to Agent.

7.14 Capital Expenditures and Leases. The Credit Parties shall not permit aggregate payments on account of Capital Expenditures by the Credit Parties and their Subsidiaries on a consolidated basis to exceed $39,375,000 in any fiscal year; provided that, (i) unused permitted Capital Expenditure amounts for a fiscal year may be rolled-over only into the immediately following fiscal year and (ii) each fiscal year's permitted amount set forth in, as applicable clause
(a) or clause (b) shall be used first before any roll-over amount is used, such that a roll-over amount shall not be used to increase the roll-over amount in any future year.

7.15 Sale and Leaseback Transactions. Each of the Credit Parties shall not, and shall not permit any of its Subsidiaries to, enter into any arrangement, directly or indirectly, with any Person whereby it shall sell or transfer any property used or useful in its business, whether now owned or hereafter acquired, and thereafter rent or lease such property or other property which it intends to use for substantially the same purpose or purposes as the property being sold or transferred (a "Sale and Leaseback Transaction"), unless (a) the sale or transfer of the property thereunder is permitted under Section 7.7, (b) any Indebtedness with respect to Capital Lease Obligations or Synthetic Lease Obligations arising in connection therewith is permitted under Section 7.1 and (c) any Liens arising in connection therewith are permitted under Section 7.2.

7.16 Minimum Covenant Liquidity. The Credit Parties shall not permit Covenant Liquidity to be less than $32,500,000 at any time; provided, that (i) no less than $22,500,000 of such Covenant Liquidity shall consist of Qualified Restricted Cash and (ii) no less than $10,000,000 of such Covenant Liquidity shall consist of Undrawn Availability.

7.17 [Intentionally Omitted].

7.18 [Intentionally Omitted].

7.19 Limitation on Negative Pledges. Each of the Credit Parties shall not, and shall not permit any Subsidiary, to enter into or suffer to exist or become effective any agreement that prohibits or limits the ability of such Credit Party or any of its Subsidiaries to create, incur, assume or suffer to exist any Lien upon any of its property or revenues, whether now owned or hereafter acquired, to secure the Obligations, other than (a) this Agreement and the Other Documents, (b) with respect to a Subsidiary imposed pursuant to an agreement that has been entered into in connection with a disposition of assets permitted under this Agreement of all or substantially all of the equity interests or assets of such Subsidiary, (c) any agreements governing any Capital Lease Obligations, Synthetic Lease Obligations or other Purchase Money Security Interests otherwise permitted hereby (in which case, any prohibition or limitation shall only be effective against the assets financed thereby), (d) any agreements governing any Indebtedness permitted under this Agreement and existing on the Closing Date, as such agreements provide on the Closing Date, (e) customary provisions restricting assignment of any licensing agreement (in which a Credit Party or its Subsidiaries are the licensee) with respect to a contract entered into by a Credit Party or its Subsidiaries in the Ordinary Course of Business, (f) customary provisions restricting subletting, sublicensing or assignment of any Intellectual Property license or any lease governing any leasehold interests of a Credit Party and its Subsidiaries and (g) Permitted Non- ABL Indebtedness Documents in accordance with the Permitted Intercreditor Agreement.

VIII. CONDITIONS PRECEDENT.

8.1 Conditions to Initial Advances. The agreement of Lenders to make the initial Advances requested to be made on the Closing Date is subject to the satisfaction, or waiver by Lenders in writing, immediately prior to or concurrently with the making of such Advances, of the following conditions precedent:

(a) Note. Agent shall have received the Notes duly executed and delivered by an authorized officer of each Borrower;

(b) Agreement; Other Documents. Agent shall have received an executed copy of this Agreement and each of the executed Other Documents (except as contemplated by Section 8.3 hereof);

(c) Financial Condition Certificates. Agent shall have received an executed Financial Condition Certificate in the form of Exhibit 8.1(c);

(d) Closing Certificate. Agent shall have received a closing certificate signed by a Responsible Officer of Borrowing Agent dated as of the date hereof, stating that (i) all representations and warranties set forth in this Agreement and the Other Documents are true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof) on and as of such date as if made on and as of such date (except to the extent any such representation or warranty expressly relates only to any earlier date, in which case it shall be true and correct on such earlier date) and (ii) on such date no Default or Event of Default has occurred or is continuing;

(e) Borrowing Base Certificate. Agent shall have received a Borrowing Base Certificate as of August 31, 2019;

(f) Opening Liquidity. After giving effect to the initial Advances hereunder and the payment of all fees and expenses payable on the Closing Date, and after giving effect to the subtraction of all trade payables sixty (60) days or more past due, the Credit Parties shall have (i) Undrawn Availability of at least $10,000,000 and (ii) additional opening liquidity (in addition to the minimum Undrawn Availability set forth in clause (i)) of $10,000,000 comprised of additional Undrawn Availability and/or Liquidity (exclusive of Qualified Restricted Cash);

(g) Qualified Restricted Cash Account. Agent shall have received evidence that the Qualified Restricted Cash Account has been established with PNC with an amount not less than $22,500,000 on deposit therein as of the Closing Date after giving effect to the use of proceeds of the initial Advances.

(h) Filings, Registrations and Recordings. Each document (including any Uniform Commercial Code or PPSA financing statement or a filing under the Civil Code of Quebec) required by this Agreement, any related agreement or under law or reasonably requested by Agent to be filed, registered or recorded in order to create, in favor of Agent, a perfected security interest in or lien upon the Collateral shall have been or contemporaneously herewith or will be properly filed, registered or recorded in each jurisdiction in which the filing, registration or recordation thereof is so required or requested, and Agent shall have received or will receive an acknowledgment copy, or other evidence satisfactory to it, of each such filing, registration or recordation and satisfactory evidence of the payment of any necessary fee, tax or expense relating thereto;

(i) Secretary's Certificates, Authorizing Resolutions and Good Standings of Credit Party. Agent shall have received a certificate of the Secretary or Assistant Secretary (or other equivalent officer, partner or manager) of each Credit Party in form and substance satisfactory to Agent dated as of the Closing Date which shall certify (i) copies of resolutions in form and substance reasonably satisfactory to Agent, of the board of directors (or other equivalent governing body, member or partner) of such Credit Party authorizing (x) the execution, delivery and performance of this Agreement and each Other Document to which such Credit Party is a party (including authorization of the incurrence of indebtedness through the borrowing of Revolving Advances and execution of all security agreements, guarantee agreements and other related transaction documents as contemplated herein) and (y) the granting by such Credit Party of the security interests in and liens upon the applicable Collateral to secure the Obligations (and such certificate shall state that such resolutions have not been amended, modified, revoked or rescinded as of the date of such certificate), (ii) the incumbency and signature of the officers of such Credit Party authorized to execute this Agreement and the Other Documents, (iii) copies of the Organizational Documents of such Credit Party as in effect on such date, complete with all amendments thereto and (iv) to the extent applicable in the jurisdiction of organization of such Credit Party, the good standing (or equivalent status, if available) of such Credit Party in its jurisdiction of organization as evidenced by good standing certificate(s) (or the equivalent thereof, to the extent issued by any applicable jurisdiction) dated not more than thirty (30) days prior to the Closing Date, issued by the Secretary of State or other appropriate official of each such jurisdiction;

(j) Legal Opinion. Agent shall have received the executed legal opinion of each of Cravath, Swaine & Moore LLP, Brian D'Amico, General Counsel, Americas, of US Borrower, Linklaters LLP, Blake, Cassels & Graydon LLP, Lavery, De Billy, S.E.N.C.R.L. and Stewart McKelvey, in form and substance reasonably satisfactory to Agent which shall cover such matters incident to the transactions contemplated by this Agreement, the Notes, the Other Documents, and related agreements as Agent may reasonably require and each Credit Party hereby authorizes and directs such counsel to deliver such opinions to Agent;

(k) Collateral Examination. Agent shall have completed Collateral examinations and received appraisals, the results of which shall be satisfactory in form and substance to Agent, of the Receivables and Inventory of each Credit Party and all books and records in connection therewith;

(l) Fees. Agent shall have received all fees payable to Agent and Lenders on or prior to the Closing Date hereunder, including pursuant to Article III and the Fee Letter;

(m) Pro Forma Projections. Agent shall have received a copy of the Pro Forma Projections;

(n) Insurance. Agent shall have received in form and substance reasonably satisfactory to Agent, (i) evidence that insurance, including without limitation, casualty and liability insurance, required to be maintained under this Agreement is in full force and effect, (ii) insurance certificates issued by Credit Parties' insurance broker naming or confirming that Agent has been named (as appropriate) as an additional insured and lenders loss payee and (iii) loss payable endorsements issued by Credit Parties' insurer naming Agent as lenders loss payee, as applicable;

(o) Payment Instructions. Agent shall have received written instructions from Borrowing Agent directing the application of proceeds of the initial Advances made pursuant to this Agreement;

(p) Consents. Agent shall have received any and all Consents necessary to permit the effectuation of the transactions contemplated by this Agreement and the Other Documents;

(q) No Adverse Material Change. Since December 31, 2018, there shall not have occurred any event, condition or state of facts which could reasonably be expected to have a Material Adverse Effect;

(r) Certificate of Beneficial Owners; USA Patriot Act Diligence. Agent and each Lender shall have received, in form and substance reasonably acceptable to Agent and each Lender an executed Certificate of Beneficial Ownership and such other documentation and other information reasonably requested in connection with applicable "know your customer" and anti- money laundering rules and regulations, including the USA Patriot Act, in each case, to the extent reasonably requested in writing at least five (5) Business Days prior to the Closing Date;

(s) Existing Credit Agreement. The Existing Credit Agreement shall have been, or substantially concurrently with the initial Advances made on the Closing Date will be,

terminated and all obligations thereunder repaid in full and all Liens on all collateral securing such Indebtedness released; and

(t) Indenture New Guarantors. All matters relating to the addition of any guarantors to the Indenture shall be in form and substance satisfactory to Agent.

8.2 Conditions to Each Advance. The agreement of Lenders to make any Advance requested to be made on any date (including the initial Advance), is subject to the satisfaction of the following conditions precedent as of the date such Advance is made:

(a) Representations and Warranties. Each of the representations and warranties made by any Credit Party in or pursuant to this Agreement, the Other Documents and any related agreements (including any Borrowing Base Certificate or Compliance Certificate) to which it is a party, shall be true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof) on and as of such date as if made on and as of such date (except to the extent any such representation or warranty expressly relates only to any earlier date, in which case it shall be true and correct on such earlier date);

(b) No Default. No Event of Default or Default shall have occurred and be continuing on such date, or would exist on such date after giving effect to the Advances requested to be made on such date;

(c) Maximum Advances. In the case of any type of Advance requested to be made, after giving effect thereto, the aggregate amount of such type of Advance shall not exceed the maximum amount of such type of Advance permitted under this Agreement; and

(d) 2022 Notes. Such Advance is permitted to be incurred under the 2022 Notes (or any Permitted Refinancing thereof).

Each request for an Advance by any Borrower hereunder shall constitute a representation and warranty by each Borrower as of the date of such Advance that the conditions contained in this subsection shall have been satisfied.

Notwithstanding anything contained herein to the contrary, at the direction of Required Lenders, Revolving Lenders shall continue to make Revolving Advances notwithstanding whether the foregoing conditions precedent have been satisfied.

8.3 Conditions Subsequent to Effectiveness. As an accommodation to the Credit Parties, Agent and Lenders have agreed to execute this Agreement and to make the initial Advances on the Closing Date notwithstanding the failure by the Credit Parties to satisfy the conditions set forth below on or before the Closing Date. In consideration of such accommodation, the Credit Parties agree that, in addition to all other terms, conditions and provisions set forth in this Agreement and the Other Documents, including, without limitation, those conditions set forth in Section 8.1, the Credit Parties shall satisfy each of the conditions subsequent set forth on Schedule 8.3 on or before the date applicable thereto (or such later date as agreed to by Agent) (it being understood that the failure by the Credit Parties to perform or

cause to be performed any such condition subsequent on or before such date shall constitute an Event of Default).

IX. INFORMATION AS TO CREDIT PARTIES.

Each Credit Party shall, or (except with respect to Section 9.11) shall cause Borrowing Agent on its behalf to, until satisfaction in full of the Obligations and the termination of this Agreement:

9.1 Disclosure of Material Matters. Promptly upon any Responsible Officer learning thereof, report to Agent all matters materially affecting the value, enforceability or collectability of any portion of the Collateral with a value in excess of $1,000,000, including any Credit Party's reclamation or repossession of, or the return to any Credit Party of, a material amount of goods or claims or disputes asserted by any Customer or other obligor.

9.2 Schedules, Etc. Deliver to Agent on or before the twentieth (20th) day of each month (subject to a three (3) Business Days grace period with respect to the first three months after the Closing Date) as and for the prior month (a) accounts receivable agings inclusive of reconciliations to the general ledger, (b) accounts payable schedules inclusive of reconciliations to the general ledger, (c) Inventory reports, and (d) a Borrowing Base Certificate (which shall be calculated as of the last day of the prior month and which shall not be restrictive of Agent's rights under this Agreement) executed by a Responsible Officer of Borrowing Agent. In addition, each Credit Party will deliver to Agent at such intervals as Agent may reasonably require: (i) confirmatory assignment schedules; (ii) copies of Customer's invoices; (iii) evidence of shipment or delivery; and (iv) such further schedules, documents and/or information regarding the Collateral as Agent may reasonably require including trial balances and test verifications. Agent shall have the right to confirm and verify all Receivables by any manner and through any medium it considers advisable and do whatever it may deem reasonably necessary to protect its interests hereunder. The items to be provided under this Section 9.2 are to be in form satisfactory to Agent and delivered to Agent from time to time solely for Agent's convenience in maintaining records of the Collateral, and any Credit Party's failure to deliver any of such items to Agent shall not affect, terminate, modify or otherwise limit Agent's Lien with respect to the Collateral. Unless otherwise agreed to by Agent, the items to be provided under this Section 9.2 shall be delivered to Agent by the specific method of Approved Electronic Communication designated by Agent.

9.3 Environmental Reports.

(a) Furnish Agent, concurrently with the delivery of the financial statements referred to in Section 9.7, with a certificate signed by a Responsible Officer of Borrowing Agent either (i) stating, to the best of his knowledge, that except as, individually or in the aggregate, could not reasonably be expected to cause a Material Adverse Effect, each Credit Party and each of its Subsidiaries is in compliance with all applicable Environmental Laws or (ii) setting forth with specificity all areas of non-compliance that could, individually or in the aggregate, reasonably be expected to cause a Material Adverse Effect, and the proposed action such Credit Party or such Subsidiary will implement in order to remedy such non-compliance.

(b) [Intentionally Omitted].

(c) Borrowing Agent shall promptly forward to Agent copies of any request for information, notification of potential liability or demand letter relating to potential responsibility with respect to the material investigation or cleanup of Hazardous Materials at any site owned, operated or used by any Credit Party or any of its Subsidiaries to manage Hazardous Materials and shall continue to forward copies of material correspondence between any Credit Party or any of its Subsidiaries and the Governmental Body regarding such claims to Agent until the claim is settled. Borrowing Agent shall promptly forward to Agent copies of all documents and reports concerning a Hazardous Discharge or Environmental Complaint at the Real Property, operations or business that any Credit Party or any of its Subsidiaries is required to file under any Environmental Laws. Such information is to be provided solely to allow Agent to protect Agent's security interest in and Lien on the Collateral.

9.4 Litigation. Promptly notify Agent in writing after any Responsible Officer obtains actual knowledge of the occurrence of any claim, litigation, suit or administrative proceeding against any Credit Party or any of its Subsidiaries, whether or not the claim is covered by insurance, which, if adversely determined, could reasonably be expected to have a Material Adverse Effect.

9.5 Material Occurrences. Promptly notify Agent in writing after any Responsible Officer obtains actual knowledge of the occurrence of: (a) any Event of Default or Default; (b) any event, development or circumstance whereby any financial statements or other reports furnished to Agent fail in any material respect to present fairly, in accordance with IFRS consistently applied, the financial condition or operating results of any Credit Party or any of its Subsidiaries as of the date of such statements; (c) any accumulated retirement plan funding deficiency which, if such deficiency continued for two (2) plan years and was not corrected as provided in Section 4971 of the Code, could subject any Credit Party or any of its Subsidiaries to a tax imposed by Section 4971 of the Code; (d) each and every default by any Credit Party or any of its Subsidiaries which, individually or in the aggregate, could reasonably be expected to result in the acceleration of the maturity of any Indebtedness of a Credit Party or any of its Subsidiaries with a value in excess of $10,000,000, including the names of the holders of such Indebtedness, to the extent known, with respect to which there is such a default existing or with respect to which the maturity has been or could reasonably be expected to be accelerated; and (e) any other development in the business or affairs of any Credit Party or any of its Subsidiaries, which, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect; in each case, describing the nature thereof and the action Credit Parties propose to take with respect thereto.

9.6 [Intentionally Omitted].

9.7 Financial Statements.

(a) Furnish Agent, for distribution to the Lenders, within one hundred twenty (120) days after the end of each fiscal year of Holdings, financial statements of Holdings and its Subsidiaries consisting of a consolidated and consolidating balance sheet as of the end of such fiscal year and related consolidated and consolidating statements of income and cash flows for

the fiscal year then ended, all in reasonable detail and setting forth in comparative form the financial statements as of the end of and for the preceding fiscal year, prepared in accordance with IFRS applied on a basis consistent with prior practices and reported upon without qualification (other than any consistency qualification that may result from a change in the method used to prepare the financial statements as to which such accountants concur or any going concern or scope of the audit qualification with respect to, or that may result from, an upcoming maturity date or a potential inability to satisfy any future covenant on a future date or for a future period) by an independent certified public accounting firm of national standing selected by Holdings.

(b) Furnish Agent, for distribution to the Lenders, within sixty (60) days after the end of each fiscal quarter (or such later date as Agent shall agree to in its sole discretion), financial statements of (i) Holdings and its Subsidiaries, consisting of a condensed consolidated balance sheet as of the end of such fiscal quarter and related condensed consolidated statements of income and cash flows for the fiscal quarter then ended and the fiscal year through that date, and (ii) the Credit Parties and their Subsidiaries on a standalone basis, consisting of a consolidating balance sheet as of the end of such fiscal quarter and related consolidating statements of income and cash flows for the fiscal quarter then ended and the fiscal year through that date, all in reasonable detail and setting forth in comparative form the respective financial statements for the corresponding date and period in the previous fiscal year, prepared on a basis consistent with prior practices (subject to normal and recurring year-end audit adjustments). The reports shall be accompanied by a Compliance Certificate.

(c) Furnish Agent, for distribution to the Lenders, within thirty (30) days after the end of each fiscal month (or such later date as Agent shall agree to in its sole discretion), financial statements of the Credit Parties and their Subsidiaries on a standalone basis, consisting of a consolidating balance sheet as of the end of such fiscal month and related consolidating statements of income and cash flows for the fiscal quarter then ended and the fiscal year through that date, all in reasonable detail and setting forth in comparative form the respective financial statements for the corresponding date and period in the previous fiscal year, prepared on a basis consistent with prior practices (subject to normal and recurring year-end audit adjustments).

9.8 [Intentionally Omitted].

9.9 [Intentionally Omitted].

9.10 Other Reports. Furnish Agent as soon as available, but in any event within ten (10) days after the issuance or filing thereof, reports, including Forms 20-F and 6-K, registration statements and prospectuses and other shareholder communications, filed by Holdings with the SEC; provided that posting of such information on the publicly available website maintained by or on behalf of the SEC for access to documents filed in the EDGAR database ("EDGAR Website") shall constitute delivery for purposes of this Section 9.10.

9.11 Additional Information. Furnish Agent with such additional information as Agent shall reasonably request in order to enable Agent to determine whether the terms, covenants, provisions and conditions of this Agreement and the Notes have been complied with by Credit Parties including, without the necessity of any request by Agent or any Lender, (a) copies of all

environmental audits and reviews ordered by a Credit Party or any of its Subsidiaries, (b) at least thirty (30) days prior thereto, notice of any Credit Party's opening of any new office or place of business or any Credit Party's closing of any existing office or place of business, and (c) promptly upon any Responsible Officer of any Credit Party's learning thereof, notice of any material labor dispute to which any Credit Party or any of its Subsidiaries may become a party, any material strikes or material walkouts relating to any of its plants or other facilities, and the expiration of any material labor contract to which any Credit Party or any of its Subsidiaries is a party or by which any Credit Party or any of its Subsidiaries is bound.

9.12 Projected Operating Budget. Furnish Agent, no later than thirty (30) days after the beginning of each Credit Party's fiscal year commencing with fiscal year beginning on January 1, 2020, an annual projected operating budget and cash flow of each of (i) Holdings on a consolidated basis and (i) the Credit Parties and their Subsidiaries on a consolidated and consolidating basis for such fiscal year (including an income statement and a balance sheet), such projections are to be accompanied by a certificate signed by a Responsible Officer of each Borrower to the effect that such projections have been prepared on the basis of sound financial planning practice consistent with past budgets and financial statements and that such officer has no reason to question the reasonableness of any material assumptions on which such projections were prepared.

9.13 Variances from Operating Budget. Furnish Agent, concurrently with the delivery of the financial statements referred to in Section 9.7, a written report summarizing all material variances from budgets submitted by Borrowers pursuant to Section 9.12 and a discussion and analysis by management with respect to such variances.

9.14 Notice of Suits, Adverse Events. Furnish Agent with, promptly after a Responsible Officer of any Credit Party becomes aware thereof, written notice of (a) any lapse or other termination of any Consent issued to any Credit Party or any of its Subsidiaries by any Governmental Body or any other Person that is material to the operation of the business of US Borrower and its Subsidiaries, taken as a whole, (b) any refusal by any Governmental Body or any other Person to renew or extend any such Consent, (c) copies of any periodic or special reports filed by any Credit Party of any of its Subsidiaries with any Governmental Body or Person, if such reports indicate any material change in the business, operations, affairs or condition of any Credit Party or any of its Subsidiaries, or if copies thereof are requested by Lender and (d) copies of any material notices and other communications from any Governmental Body or Person which specifically relate to any Credit Party or any of its Subsidiaries.

9.15 ERISA Notices and Requests. Furnish Agent with prompt written notice in the event that any Responsible Officer obtains actual knowledge that (a) any Credit Party or any of its Subsidiaries knows that a Termination Event has occurred, together with a written statement describing such Termination Event and the action, if any, which such Credit Party or any member of the Controlled Group has taken, is taking, or proposes to take with respect thereto and, when known, any action taken or threatened by the Internal Revenue Service, Department of Labor or PBGC with respect thereto, (b) any Credit Party or any member of the Controlled Group knows that a nonexempt prohibited transaction (as defined in Sections 406 of ERISA and 4975 of the Code), which could reasonably be expected to result in a Material Adverse Effect, has occurred with respect to any Plan, together with a written statement describing such

transaction and the action which such Credit Party or any member of the Controlled Group has taken, is taking or proposes to take with respect thereto, (c) a funding waiver request has been filed with respect to any Pension Benefit Plan together with all written communications received by any Credit Party or any member of the Controlled Group from the Internal Revenue Service or other Governmental Authority with respect to such request, (d) any increase in the benefits of any existing Plan or the establishment of any new Plan or the commencement of contributions to any Plan to which any Credit Party or any member of the Controlled Group was not previously contributing shall occur, in any such case, which could reasonably be expected to result in a Material Adverse Effect, (e) any Credit Party or any member of the Controlled Group shall receive from the PBGC a notice of intention to terminate a Pension Benefit Plan or to have a trustee appointed to administer a Pension Benefit Plan, together with copies of each such notice, (f) any Credit Party or any of its Subsidiaries shall receive any written notice of plan disqualification from the Internal Revenue Service with respect to a Plan that is sponsored, maintained or contributed to by a Credit Party or any of its Subsidiaries and that is covered by Section 401(a) of the Code or a notice regarding the imposition of withdrawal liability under any Multiemployer Plan, together with copies of each such notice, (g) any Credit Party or any member of the Controlled Group shall fail to make a required installment or any other required payment under the Code or ERISA with respect to any Pension Benefit Plan or Multiemployer Plan on or before the due date for such installment or payment, which failure could reasonably be expected to have a Material Adverse Effect or (h) any Credit Party or any member of the Controlled Group knows that (i) a Multiemployer Plan has been terminated, (ii) the administrator or plan sponsor of a Multiemployer Plan intends to terminate a Multiemployer Plan, (iii) the PBGC has instituted or will institute proceedings under Section 4042 of ERISA to terminate a Multiemployer Plan or (iv) a Multiemployer Plan is subject to Section 432 of the Code or Section 305 of ERISA. Promptly after any Credit Party or any Subsidiary or any Affiliate knows of the occurrence of (i) any violation or asserted violation of any Applicable Law (including any applicable provincial pension standards legislation) in any material respect with respect to any Canadian Pension Plan or; (ii) any Canadian Pension Termination Event or any action of FSRA or another Governmental Body that could lead to a Canadian Pension Termination Event, or (iii) any Lien has arisen, choate or inchoate, in connection with any Canadian Pension Plan (save for contribution amounts not yet due); then, in each case, the applicable Credit Party will deliver to Agent a certificate of a senior officer of the applicable Credit Party setting forth details as to such occurrence and the action, if any, that such Credit Party, such Subsidiary or Affiliate is required or proposes to take, together with any notices (required, proposed or otherwise) given to or filed with or by such Canadian Credit Party, such Subsidiary, such Affiliate, FSRA, a Canadian Pension Plan participant (other than notices relating to an individual participant's benefits) or the Canadian Pension Plan administrator with respect thereto.

9.16 Additional Documents. Execute and deliver to Agent, upon request, such documents and agreements as Agent may, from time to time, reasonably request to carry out the purposes, terms or conditions of this Agreement.

9.17 Updates to Certain Schedules. Deliver to Agent promptly as shall be required to maintain the related representations and warranties as true and correct, updates to Schedules 5.2(b) (Equity Interests) and 4.4 (Locations of Equipment and Inventory); provided that absent the occurrence and continuance of any Event of Default, the Credit Parties shall only be required to provide such updates on a quarterly basis in connection with the delivery of a Compliance

Certificate with respect to the applicable quarter or year. Any such updated Schedules delivered by Borrowers to Agent in accordance with this Section 9.17 shall automatically and immediately be deemed to amend and restate the prior version of such Schedule previously delivered to Agent and attached to and made part of this Agreement.

X. EVENTS OF DEFAULT.

The occurrence of any one or more of the following events shall constitute an "Event of Default":

10.1 Nonpayment. Failure by any Credit Party to pay when due (a) any principal or interest on any Advance (including without limitation pursuant to Section 2.9), or (b) any other fee, charge, amount or liability provided for herein or in any Other Document and such failure in the case of this clause (b) continues for five (5) Business Days, in each case, under clause (a) and (b), whether at maturity, by reason of acceleration pursuant to the terms of this Agreement, by notice of intention to prepay or by required prepayment.

10.2 Breach of Representation. Any representation or warranty made or deemed made by Holdings or any Credit Party in this Agreement, any Other Document or any related agreement or in any certificate, document or financial or other statement furnished at any time in connection herewith or therewith shall prove to have been incorrect or misleading in any material respect (without duplication of any materiality qualifier) on the date when made or deemed to have been made.

10.3 Financial Information. Failure by any Credit Party to (i) furnish financial or borrowing base information when due as required by the terms hereof or when requested in accordance with the terms hereof, or (ii) permit the inspection of its books or records or access to its premises for audits and appraisals in accordance with the terms hereof.

10.4 Uninsured Loss; Judicial Actions. Any uninsured loss or any issuance of a notice of Lien (other than a Permitted Lien), levy, assessment, injunction or attachment against any property of a Credit Party (other than a Permitted Liens), in each case with a value in excess of $2,500,000, excluding any amount covered by third party insurance so long as the insurance company has not denied coverage, which is not stayed or lifted within thirty (30) days.

10.5 Noncompliance. Except as otherwise provided for in Sections 10.1 and 10.3, (i) failure or neglect of any Credit Party to, or cause its Subsidiaries to, perform, keep or observe any term, provision, condition or covenant, contained in Section 6.2, Article VII or Section 9.5(a), or (ii) failure or neglect of Holdings or any Credit Party to, or cause its Subsidiaries to, perform, keep or observe any term, provision, condition or covenant, herein contained, or contained in any Other Document, for which a cure is not commenced within thirty (30) days from the earlier of the date a Responsible Officer of such Credit Party obtains actual knowledge of such failure or neglect or notice thereof from Agent.

10.6 Judgments. Any (a) judgment or judgments, writ(s), order(s) or decree(s) for the payment of money are rendered against any Credit Party or any of its Subsidiaries for an aggregate amount in excess of $2,500,000, excluding any amount covered by third-party insurance so long as the insurance company has not denied coverage) and (b) (i) action shall be

legally taken by any judgment creditor to levy upon assets or properties of any Credit Party or any of its Subsidiaries to enforce any such judgment, (ii) such judgment shall remain undischarged for a period of thirty (30) consecutive days during which a stay of enforcement of such judgment, by reason of a pending appeal or otherwise, shall not be in effect, or (iii) any Liens arising by virtue of the rendition, entry or issuance of such judgment upon assets or properties of any Credit Party shall be senior to any Liens in favor of Agent on such assets or properties.

10.7 Bankruptcy. (i) An Insolvency Event shall have been instituted against Holdings or any Credit Party or Subsidiary of a Credit Party and such Insolvency Event shall remain undismissed or unstayed and in effect for a period of thirty (30) consecutive days or such court shall enter a decree or order granting any of the relief sought in such Insolvency Event, or (ii) Holdings or any Credit Party or Subsidiary of a Credit Party institutes, or takes any action in furtherance of, an Insolvency Event.

10.8 [Intentionally Omitted].

10.9 Lien Priority. Any Lien on the Collateral with a value in excess of $2,500,000, individually or in the aggregate, created hereunder or provided for hereby or under any Other Document for any reason ceases to be or is not a valid and perfected Lien prior and superior in right to any other Person (other than the rights of Persons pursuant to (x) Liens permitted pursuant to clause (z) of the definition of "Permitted Liens" and (y) Permitted Liens having priority by operation of Law) other than a result of acts or omissions of Agent or the payment in full of the Obligations.

10.10 [Intentionally Omitted].

10.11 Cross Default. Any failure to pay any amount due under, or the occurrence of any "event of default" under, the 2022 Indenture (and any equivalent event so named or otherwise named under any document evidencing or governing a refinancing thereof) or any other Indebtedness (other than the Obligations) of any Credit Party or any of its Subsidiaries with a then-outstanding principal balance (or, in the case of any Indebtedness not so denominated, with a then-outstanding total obligation amount owed by such Credit Party or Subsidiary) of $2,500,000 or more, or any other event or circumstance which would permit the holder of any such Indebtedness of any Credit Party or any of its Subsidiaries to accelerate such Indebtedness prior to the scheduled maturity or termination thereof, shall occur (regardless of whether the holder of such Indebtedness shall actually accelerates, terminates or otherwise exercise any rights or remedies with respect to such Indebtedness).

10.12 Breach of Other Documents. Any Credit Party or pledgor attempts to terminate (except in accordance with its terms), challenges in writing the validity of, or its liability hereunder or under, any Collateral Documents.

10.13 Change of Control. Any Change of Control shall occur;

10.14 Invalidity. Any material provision of this Agreement or any Other Document shall, for any reason, other than as a result of acts or omissions by Agent or the payment in full of the Obligations, cease to be valid and binding on Holdings or any Credit Party (other than a

release of Holdings or a Credit Party from its obligations under this Agreement or any Other Document pursuant to a transaction permitted by this Agreement), or Holdings or any Credit Party shall so claim in writing to Agent or any Lender or Holdings or any Credit Party challenges the validity of or its liability under this Agreement or any Other Document.

10.15 [Intentionally Omitted].

10.16 [Intentionally Omitted].

10.17 Pension Plans. An event or condition specified in Section 9.15 shall occur or exist (and, where applicable, a Credit Party shall fail to cure an event or condition specified in Section 9.15 for which notice of a plan of action has been provided within a reasonable amount of time), with respect to any Plan or Multiemployer Plan and, as a result of such event or condition, together with all other such events or conditions, any Credit Party or any member of the Controlled Group shall incur, or in the opinion of Agent be reasonably likely to incur, a liability to a Plan or Multiemployer Plan or the PBGC (or both) which, in the reasonable judgment of Agent, would have a Material Adverse Effect or results in the imposition of a Lien under Section 303 or 4068 of ERISA or Section 430(k) or 6321 of the Code in excess of $2,500,000 on any assets of any Credit Party; or the occurrence of any Termination Event, or any Credit Party's failure to promptly report a Termination Event in accordance with Section 9.15 hereof, in either case, which Termination Event would have a Material Adverse Effect or results in the imposition of a Lien under Sections 303 or 4068 of ERISA or Section 430(k) or 6321 of the Code in excess of $2,500,000 on any assets of any Credit Party.

10.18 Anti-Money Laundering/International Trade Law Compliance. Any representation or warranty contained in Section 16.18 is or becomes false or misleading at any time.

XI. LENDERS' RIGHTS AND REMEDIES AFTER DEFAULT.

11.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of: (i) an Event of Default pursuant to Section 10.7, all Obligations shall be immediately due and payable and this Agreement and the obligation of Lenders to make Advances shall be deemed terminated, and (ii) any of the other Events of Default and at any time thereafter, at direction of Agent or Required Lenders, all Obligations shall, by written notice to Borrowing Agent, be immediately due and payable and Agent or Required Lenders shall have the right to terminate the obligation of Lenders to make Advances. Upon the occurrence and during the continuance of any Event of Default, Agent shall have the right to exercise any and all rights and remedies provided for herein, under the Other Documents, under the Uniform Commercial Code, the PPSA and at law or equity generally, including the right to foreclose the security interests granted herein and to realize upon any Collateral by any available judicial procedure and/or to take possession of and sell any or all of the Collateral with or without judicial process. At any time following the occurrence and during the continuance of an Event of Default, Agent shall have the right to send notice of the assignment of, and Agent's security interest in and Lien on, the Receivables to any and all Customers or any third-party holding or otherwise concerned with any of the Collateral.

At any time after the occurrence and during the continuance of an Event of Default, Agent shall have the sole right to collect the Receivables, take possession of the Collateral, or both. Agent's actual out-of-pocket collection expenses may be charged to Borrowers' Account and added to the Obligations. Agent may enter any of any Credit Party's premises or other premises without legal process and without incurring liability to any Credit Party therefor, and Agent may thereupon, or at any time thereafter, in its discretion without notice or demand, take the Collateral and remove the same to such place as Agent may deem advisable and Agent may require Credit Parties to make the Collateral available to Agent at a convenient place. With or without having the Collateral at the time or place of sale, Agent may sell the Collateral, or any part thereof, at public or private sale, at any time or place, in one or more sales, at such price or prices, and upon such terms, either for cash, credit or future delivery, as Agent may elect. Except as to that part of the Collateral which is perishable or threatens to decline speedily in value or is of a type customarily sold on a recognized market, Agent shall give Credit Parties reasonable notification of such sale or sales, it being agreed that in all events written notice mailed to Borrowing Agent at least ten (10) days prior to such sale or sales is reasonable notification. At any public sale Agent or any Lender may bid (including credit bid) for and become the purchaser, and Agent, any Lender or any other purchaser at any such sale thereafter shall hold the Collateral sold absolutely free from any claim or right of whatsoever kind, including any equity of redemption and all such claims, rights and equities are hereby expressly waived and released by each Credit Party. In connection with the exercise of the foregoing remedies upon the occurrence and during the continuance of an Event of Default, including the sale of Inventory, Agent is granted a perpetual nonrevocable, royalty-free, nonexclusive license and Agent is granted permission to use all of each Credit Party's (a) Intellectual Property which is used or useful in connection with Inventory for the purpose of marketing, advertising for sale and selling or otherwise disposing of such Inventory and (b) Equipment for the purpose of completing the manufacture of unfinished goods. The cash proceeds realized from the sale of any Collateral shall be applied to the Obligations in the order set forth in Section 11.5. Noncash proceeds will only be applied to the Obligations as they are converted into cash. If any deficiency shall arise, Credit Parties shall remain liable to Agent and the other Secured Parties therefor.

(b) To the extent that Applicable Law imposes duties on Agent to exercise remedies in a commercially reasonable manner, each Credit Party acknowledges and agrees that it is not commercially unreasonable for Agent: (i) to fail to incur expenses reasonably deemed significant by Agent to prepare Collateral for disposition or otherwise to complete raw material or work in process into finished goods or other finished products for disposition; (ii) to fail to obtain third-party consents for access to Collateral to be disposed of, or to obtain or, if not required by other law, to fail to obtain governmental or third-party consents for the collection or disposition of Collateral to be collected or disposed of; (iii) to fail to exercise collection remedies against Customers or other Persons obligated on Collateral or to remove Liens on or any adverse claims against Collateral; (iv) to exercise collection remedies against Customers and other Persons obligated on Collateral directly or through the use of collection agencies and other collection specialists; (v) to advertise dispositions of Collateral through publications or media of general circulation, whether or not the Collateral is of a specialized nature; (vi) to contact other Persons, whether or not in the same business as any Credit Party, for expressions of interest in acquiring all or any portion of such Collateral; (vii) to hire one or more professional auctioneers to assist in the disposition of Collateral, whether or not the Collateral is of a specialized nature; (viii) to dispose of Collateral by utilizing internet sites that provide for the auction of assets of

the types included in the Collateral or that have the reasonable capacity of doing so, or that match buyers and sellers of assets; (ix) to dispose of assets in wholesale rather than retail markets; (x) to disclaim disposition warranties, such as title, possession or quiet enjoyment, (xi) to purchase insurance or credit enhancements to insure Agent against risks of loss, collection or disposition of Collateral or to provide to Agent a guaranteed return from the collection or disposition of Collateral; or (xii) to the extent deemed appropriate by Agent, to obtain the services of other brokers, investment bankers, consultants and other professionals to assist Agent in the collection or disposition of any of the Collateral. Each Credit Party acknowledges that the purpose of this Section 11.1(b) is to provide non-exhaustive indications of what actions or omissions by Agent would not be commercially unreasonable in Agent's exercise of remedies against the Collateral and that other actions or omissions by Agent shall not be deemed commercially unreasonable solely on account of not being indicated in this Section 11.1(b). Without limitation upon the foregoing, nothing contained in this Section 11.1(b) shall be construed to grant any rights to any Credit Party or to impose any duties on Agent that would not have been granted or imposed by this Agreement or by Applicable Law in the absence of this Section 11.1(b).

(c) Agent may seek the appointment of a receiver, receiver-manager or keeper (a "Receiver") under the laws of Canada or any province thereof to take possession of all or any portion of the Collateral of Credit Parties or to operate same and, to the maximum extent permitted by law, may seek the appointment of such a receiver without the requirement of prior notice or a hearing. Any such Receiver shall, so far as concerns responsibility for his/her acts, be deemed agent of the Credit Parties and not Agent and Lenders, and Agent and Lenders shall not be in any way responsible for any misconduct, negligence or non-feasance on the part of any such Receiver, his/her servants or employees. Subject to the provisions of the instrument appointing him/her, any such Receiver shall have power to take possession of Collateral of the Credit Parties, to preserve Collateral of the Credit Parties or its value, to carry on or concur in carrying on all or any part of the business of the Credit Parties and to sell, lease, license or otherwise dispose of or concur in selling, leasing, licensing or otherwise disposing of Collateral of the Credit Parties. To facilitate the foregoing powers, any such Receiver may, to the exclusion of all others, including the Credit Parties, enter upon, use and occupy all premises owned or occupied by the Credit Parties wherein Collateral of the Credit Parties may be situated, maintain Collateral of the Credit Parties upon such premises, borrow money on a secured or unsecured basis and use Collateral of the Credit Parties directly in carrying on the Credit Parties' business or as security for loans or advances to enable the Receiver to carry on the Credit Parties' business or otherwise, as such Receiver shall, in its discretion, determine. Except as may be otherwise directed by Agent, all money received from time to time by such Receiver in carrying out his/her appointment shall be received in trust for and paid over to Agent. Every such Receiver may, in the discretion of Agent, be vested with all or any of the rights and powers of Agent and Lenders. Agent may, either directly or through its nominees, exercise any or all powers and rights given to a Receiver by virtue of the foregoing provisions of this paragraph.

11.2 Agent's Discretion. Subject to the terms of Section 16.2, Agent shall have the right in its sole discretion to determine which rights, Liens, security interests or remedies Agent may at any time pursue, relinquish, subordinate, or modify, which procedures, timing and methodologies to employ, and what any other action to take with respect to any or all of the

Collateral and in what order, thereto and such determination will not in any way modify or affect any of Agent's or Lenders' rights hereunder as against Credit Parties or each other.

11.3 Setoff. Subject to Section 14.13, in addition to any other rights which Agent or any Lender may have under Applicable Law, upon the occurrence of an Event of Default hereunder, Agent and such Lender shall have a right, immediately and without notice of any kind, to apply any Credit Party's property held by Agent, any such Lender and/or any of their Affiliates to reduce the Obligations and to exercise any and all rights of setoff which may be available to Agent and such Lender with respect to any deposits held by Agent or such Lender.

11.4 Rights and Remedies Not Exclusive. The enumeration of the foregoing rights and remedies is not intended to be exhaustive and the exercise of any rights or remedy shall not preclude the exercise of any other right or remedies provided for herein or otherwise provided by law, all of which shall be cumulative and not alternative.

11.5 Allocation of Payments After an Application Event, Etc.. Notwithstanding any other provisions of this Agreement to the contrary, after the occurrence and during the continuance of an Application Event, all amounts collected or received by Agent on account of the Obligations (including without limitation any amounts on account of any of Cash Management Liabilities or Hedge Liabilities), or in respect of the Collateral may, at Agent's discretion, or shall at any time following the acceleration of the Obligations, be paid over or delivered as follows:

FIRST, to the payment of all Obligations consisting of reasonable out-of-pocket costs and expenses (including reasonable attorneys' fees) of Agent in connection with enforcing its rights and the rights of Lenders under this Agreement and the Other Documents, and any Intentional Overadvances and Protective Advances funded by Agent with respect to the Collateral under or pursuant to, and in accordance with, the terms of this Agreement;

SECOND, to payment of any Obligations consisting of fees owed to Agent;

THIRD, to the payment of all Obligations consisting of reasonable out-of-pocket costs and expenses (including reasonable attorneys' fees) of each Lender;

FOURTH, to the payment of all of the Obligations consisting of accrued interest on account of the Swing Loans;

FIFTH, to the payment of the outstanding principal amount of the Obligations consisting of Swing Loans;

SIXTH, to the payment of all Obligations arising under this Agreement and the Other Documents consisting of accrued fees and interest (other than interest in respect of Swing Loans paid pursuant to clause "FOURTH" above);

SEVENTH, ratably to the payment of the outstanding principal amount of the Obligations (other than principal in respect of Swing Loans paid pursuant to clause FIFTH above) arising under this Agreement, Cash Management Liabilities

and Hedge Liabilities, the payment or cash collateralization of any outstanding Letters of Credit in accordance with Section 3.2(b));

EIGHTH, to all other Obligations arising under this Agreement which shall have become due and payable (hereunder, under the Other Documents or otherwise) and not repaid pursuant to clauses "FIRST" through "SEVENTH" above;

NINTH, to all other Obligations which shall have become due and payable and not repaid pursuant to clauses "FIRST" through "EIGHTH"; and

TENTH, to the payment of the surplus, if any, to whomever may be lawfully entitled to receive such surplus.

In carrying out the foregoing, (i) amounts received shall be applied in the numerical order provided until exhausted prior to application to the next succeeding category; (ii) each Secured Party shall receive (so long as it is not a Defaulting Lender) an amount equal to its pro rata share (based on the proportion that the then-outstanding Advances, Cash Management Liabilities and Hedge Liabilities owing by any Credit Party and held by such Secured Party bears to the aggregate then outstanding Advances, Cash Management Liabilities and Hedge Liabilities owing by any Credit Party) of amounts available to be applied pursuant to clauses "SIXTH", "SEVENTH", "EIGHTH" and "NINTH" above; and (iii) notwithstanding anything to the contrary in this Section 11.5, no Swap Obligations of any Non-Qualifying Party shall be paid with amounts received from such Non-Qualifying Party under its Guaranty (including sums received as a result of the exercise of remedies with respect to such Guaranty) or from the proceeds of such Non-Qualifying Party's Collateral if such Swap Obligations would constitute Excluded Hedge Liabilities; provided, however, that to the extent possible appropriate adjustments shall be made with respect to payments and/or the proceeds of Collateral from other Borrowers and/or Guarantors that are Eligible Contract Participants with respect to such Swap Obligations to preserve the allocation to Obligations otherwise set forth above in this Section 11.5; and (iv) to the extent that any amounts available for distribution pursuant to clause "SEVENTH" above are attributable to the issued but undrawn amount of outstanding Letters of Credit, such amounts shall be held by Agent as cash collateral for the Letters of Credit pursuant to Section 3.2(b) and applied (A) first, to reimburse Issuer from time to time for any drawings under such Letters of Credit and (B) then, following the expiration of all Letters of Credit, to all other obligations of the types described in clauses "SEVENTH," "EIGHTH" and "TENTH" above in the manner provided in this Section 11.5.

11.6 Subordination of Liens. The Secured Parties irrevocably authorize Agent to subordinate any Lien on any Non-ABL Priority Collateral granted to or held by Agent under any Collateral Documents, or otherwise securing any Obligations, to the Liens on such Non-ABL Priority Collateral securing Permitted Non-ABL Indebtedness.

XII. WAIVERS AND JUDICIAL PROCEEDINGS.

12.1 Waiver of Notice. Each Credit Party hereby waives notice of non-payment of any of the Receivables, demand, presentment, protest and notice thereof with respect to any and all instruments, notice of acceptance hereof, notice of loans or advances made, credit extended,

Collateral received or delivered, notice of intent to accelerate, notice of acceleration, or any other action taken in reliance hereon, and all other demands and notices of any description, in each case except such as are expressly provided for herein.

12.2 Delay. No delay or omission on Agent's or any Lender's part in exercising any right, remedy or option shall operate as a waiver of such or any other right, remedy or option or of any Default or Event of Default.

12.3 Jury Waiver. EACH PARTY TO THIS AGREEMENT HEREBY EXPRESSLY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, COUNTERCLAIM, DEMAND, ACTION OR CAUSE OF ACTION (A) ARISING UNDER THIS AGREEMENT, ANY OTHER DOCUMENT OR ANY OTHER INSTRUMENT, DOCUMENT OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH, OR (B) IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO OR ANY OF THEM WITH RESPECT TO THIS AGREEMENT, ANY OTHER DOCUMENT OR ANY OTHER INSTRUMENT, DOCUMENT OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH, OR THE TRANSACTIONS RELATED HERETO OR THERETO IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT OR TORT OR OTHERWISE AND EACH PARTY HEREBY CONSENTS THAT ANY SUCH CLAIM, COUNTERCLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT ANY PARTY TO THIS AGREEMENT MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF THIS SECTION WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENTS OF THE PARTIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

XIII. EFFECTIVE DATE AND TERMINATION.

13.1 Term. Subject to the provisions of Sections 13.2 and 16.7, this Agreement, which shall inure to the benefit of and shall be binding upon the respective successors and permitted assigns of each Credit Party, Agent and each Lender, shall become effective on the date hereof and shall continue in full force and effect until the later of payment in full of the Obligations and the Maturity Date (the "Term"). Borrowers may terminate this Agreement at any time upon five
(5) days prior written notice to Agent upon payment in full of the Obligations.

13.2 Termination. The termination of the Agreement shall not affect Agent's or any Lender's rights, or any of the Obligations having their inception prior to the effective date of such termination or any Obligations which pursuant to the terms hereof continue to accrue after such date, and the provisions hereof shall continue to be fully operative until all transactions entered into, rights or interests created and Obligations have been fully paid in cash, disposed of, concluded or liquidated. The security interests, Liens and rights granted to Agent and Lenders hereunder and the financing statements filed hereunder shall continue in full force and effect, notwithstanding the termination of this Agreement or the fact that Borrowers' Account may from time to time be temporarily in a zero (0) or credit position, until all of the Obligations of each Borrower have been paid in full after the termination of this Agreement or each Credit Party has furnished Agent and Lenders with an indemnification satisfactory to Agent and Lenders with respect thereto. Accordingly, each Credit Party waives any rights which it may have under the

Uniform Commercial Code or the PPSA to demand the filing of termination statements with respect to the Collateral, and Agent shall not be required to send such termination statements to each Credit Party, or to file them with any filing office, unless and until this Agreement shall have been terminated in accordance with its terms and all Obligations have been paid in full. All representations, warranties, covenants, waivers and agreements contained herein shall survive termination hereof until all Obligations are paid in full.

XIV. REGARDING AGENT.

14.1 Appointment. Each Lender hereby designates PNC to act as Agent for such Lender under this Agreement and the Other Documents. Each Lender hereby irrevocably authorizes Agent to take such action on its behalf under the provisions of this Agreement and the Other Documents and to exercise such powers and to perform such duties hereunder and thereunder as are specifically delegated to or required of Agent by the terms hereof and thereof and such other powers as are reasonably incidental thereto and Agent shall hold all Collateral, payments of principal and interest, fees (except the fees set forth in the Fee Letter), charges and collections received pursuant to this Agreement, for the ratable benefit of Lenders. Agent may perform any of its duties hereunder by or through its agents or employees. As to any matters not expressly provided for by this Agreement (including collection of the Notes) Agent shall not be required to exercise any discretion or take any action, but shall be required to act or to refrain from acting (and shall be fully protected in so acting or refraining from acting) upon the instructions of Required Lenders, and such instructions shall be binding; provided, however, that Agent shall not be required to take any action which, in Agent's discretion, exposes Agent to liability or which is contrary to this Agreement or the Other Documents or Applicable Law unless Agent is furnished with an indemnification reasonably satisfactory to Agent with respect thereto.

14.2 Nature of Duties. Agent shall have no duties or responsibilities except those expressly set forth in this Agreement and the Other Documents. Neither Agent nor any of its officers, directors, employees or agents shall be (i) liable for any action taken or omitted by them as such hereunder or in connection herewith, unless caused by their gross (not mere) negligence or willful misconduct (as determined by a court of competent jurisdiction in a final non- appealable judgment) or (ii) responsible in any manner for any recitals, statements, representations or warranties made by any Credit Party or any officer thereof contained in this Agreement, or in any of the Other Documents or in any certificate, report, statement or other document referred to or provided for in, or received by Agent under or in connection with, this Agreement or any of the Other Documents or for the value, validity, effectiveness, genuineness, due execution, enforceability or sufficiency of this Agreement, or any of the Other Documents or for any failure of any Credit Party to perform its obligations hereunder. Agent shall not be under any obligation to any Lender to ascertain or to inquire as to the observance or performance of any of the agreements contained in, or conditions of, this Agreement or any of the Other Documents, or to inspect the properties, books or records of any Credit Party. The duties of Agent as respects the Advances to Borrowers shall be mechanical and administrative in nature; Agent shall not have by reason of this Agreement a fiduciary relationship in respect of any Lender; and nothing in this Agreement, express or implied, is intended to or shall be so construed as to impose upon Agent any obligations in respect of this Agreement or the transactions described herein except as expressly set forth herein.

14.3 Lack of Reliance on Agent. Independently and without reliance upon Agent or any other Lender, each Lender has made and shall continue to make (i) its own independent investigation of the financial condition and affairs of each Borrower and each Guarantor in connection with the making and the continuance of the Advances hereunder and the taking or not taking of any action in connection herewith and (ii) its own appraisal of the creditworthiness of each Borrower and each Guarantor. Agent shall have no duty or responsibility, either initially or on a continuing basis, to provide any Lender with any credit or other information with respect thereto, whether coming into its possession before making of the Advances or at any time or times thereafter except as shall be provided by any Credit Party pursuant to the terms hereof. Agent shall not be responsible to any Lender for any recitals, statements, information, representations or warranties herein or in any agreement, document, certificate or a statement delivered in connection with or for the execution, effectiveness, genuineness, validity, enforceability, collectability or sufficiency of this Agreement or any Other Document, or of the financial condition of any Credit Party, or be required to make any inquiry concerning either the performance or observance of any of the terms, provisions or conditions of this Agreement, the Notes, the Other Documents or the financial condition or prospects of any Credit Party, or the existence of any Event of Default or any Default.

14.4 Resignation of Agent; Successor Agent.

(a) Agent may resign on sixty (60) days' written notice to each Lender and on 60 days' notice to Borrowing Agent (provided that no notice shall be required to be given to Borrowing Agent if an Event of Default has occurred and is continuing) and upon such resignation, Required Lenders will promptly designate a successor Agent reasonably satisfactory to Borrowers (provided that no such approval by Borrowers shall be required after the occurrence and during the continuance of any Event of Default). Any such successor Agent shall succeed to the rights, powers and duties of Agent, and shall in particular succeed to all of Agent's right, title and interest in and to all of the Liens in the Collateral securing the Obligations created hereunder or any Other Document (including the Mortgages (if any) and Pledge Agreement and all account control agreements), and the term "Agent" shall mean such successor agent effective upon its appointment, and the former Agent's rights, powers and duties as Agent shall be terminated, without any other or further act or deed on the part of such former Agent. However, notwithstanding the foregoing, if at the time of the effectiveness of the new Agent's appointment, any further actions need to be taken in order to provide for the legally binding and valid transfer of any Liens in the Collateral from former Agent to new Agent and/or for the perfection of any Liens in the Collateral as held by new Agent or it is otherwise not then possible for new Agent to become the holder of a fully valid, enforceable and perfected Lien as to any of the Collateral, former Agent shall continue to hold such Liens solely as agent for perfection of such Liens on behalf of new Agent until such time as new Agent can obtain a fully valid, enforceable and perfected Lien on all Collateral, provided that Agent shall not be required to or have any liability or responsibility to take any further actions after such date as such agent for perfection to continue the perfection of any such Liens (other than to forego from taking any affirmative action to release any such Liens). After Agent's resignation as Agent, the provisions of this Article XIV, and any indemnification rights under this Agreement, including without limitation, rights arising under Section 16.5, shall inure to its benefit as to any actions taken or omitted to be taken by it while it was Agent under this Agreement (and in the event resigning Agent continues to hold any Liens pursuant to the provisions of the immediately preceding sentence, the

provisions of this Article XIV and any indemnification rights under this Agreement, including without limitation, rights arising under Section 16.5 hereof, shall inure to its benefit as to any actions taken or omitted to be taken by it in connection with such Liens).

(b) If PNC resigns as Agent under this Section 14.4, PNC shall also resign as an Issuer and the Swing Loan Lender. Upon the appointment of a successor Agent hereunder, such successor shall (i) succeed to all of the rights, powers, privileges and duties of PNC as the retiring or removed Issuer, PNC as the retiring Swing Loan Lender, PNC as the retiring Agent and PNC shall be discharged from all of its respective duties and obligations as Issuer, Swing Loan Lender and Agent under this Agreement and the Other Documents, (ii) issue letters of credit in substitution for the Letters of Credit issued by PNC, if any, outstanding at the time of such succession or make other arrangement satisfactory to PNC to effectively assume the obligations of PNC with respect to such Letters of Credit and (iii) advance a Swing Loan in the aggregate principal amount of all Swing Loans advanced by the Swing Loan Lender and not repaid, if any, outstanding at the time of such succession.

14.5 Certain Rights of Agent. If Agent shall request instructions from Lenders with respect to any act or action (including failure to act) in connection with this Agreement or any Other Document, Agent shall be entitled to refrain from such act or taking such action unless and until Agent shall have received instructions from Required Lenders; and Agent shall not incur liability to any Person by reason of so refraining. Without limiting the foregoing, Lenders shall not have any right of action whatsoever against Agent as a result of its acting or refraining from acting hereunder in accordance with the instructions of Required Lenders.

14.6 Reliance. Agent shall be entitled to rely, and shall be fully protected in relying, upon any note, writing, resolution, notice, statement, certificate, email, facsimile, telex, teletype or telecopier message, cablegram, order or other document or telephone message believed by it to be genuine and correct and to have been signed, sent or made by the proper person or entity, and, with respect to all legal matters pertaining to this Agreement and the Other Documents and its duties hereunder, upon advice of counsel selected by it. Agent may employ agents, sub- agents and attorneys-in-fact and shall not be liable for the default or misconduct of any such agents or attorneys-in-fact selected by Agent with reasonable care.

14.7 Notice of Default. Agent shall not be deemed to have knowledge or notice of the occurrence of any Default or Event of Default hereunder or under the Other Documents, unless Agent has received written notice of such Default or Event of Default from a Lender or any Credit Party. In the event that Agent receives such a notice, Agent shall give notice thereof to Lenders. Agent shall take such action with respect to such Default or Event of Default as shall be reasonably directed by Required Lenders; provided that, unless and until Agent shall have received such directions, Agent may (but shall not be obligated to) take such action, or refrain from taking such action, with respect to such Default or Event of Default as it shall deem advisable in the best interests of Lenders.

14.8 Indemnification. To the extent Agent is not reimbursed and indemnified by Credit Parties, each Lender will reimburse and indemnify Agent in proportion to its respective portion of the outstanding Advances and its respective Participation Commitments in the outstanding Letters of Credit and outstanding Swing Loans (or, if no Advances are outstanding,

pro rata according to the percentage that its Revolving Commitment Amount constitutes of the total aggregate Revolving Commitment Amounts), from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever which may be imposed on, incurred by or asserted against Agent in performing its duties hereunder, or in any way relating to or arising out of this Agreement or any Other Document; provided that Lenders shall not be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting from Agent's gross (not mere) negligence or willful misconduct.

14.9 Agent in Its Individual Capacity. With respect to the obligation of Agent to lend under this Agreement, the Advances made by it shall have the same rights and powers hereunder as any other Lender and as if it were not performing the duties as Agent specified herein; and the term "Lender" or any similar term shall, unless the context clearly otherwise indicates, include Agent in its individual capacity as a Lender. Agent may engage in business with any Credit Party as if it were not performing the duties specified herein, and may accept fees and other consideration from any Credit Party for services in connection with this Agreement or otherwise without having to account for the same to Lenders.

14.10 Delivery of Documents. To the extent Agent receives financial statements required under Sections 9.7, 9.12 and 9.13, Borrowing Base Certificates or any notice required to be delivered to Agent by this Agreement from any Credit Party pursuant to the terms of this Agreement which any Credit Party is not obligated to deliver to each Lender, Agent will promptly furnish such documents and information to Lenders.

14.11 Borrowers' Undertaking to Agent. Without prejudice to their respective obligations to Lenders under the other provisions of this Agreement, each Borrower hereby undertakes with Agent to pay to Agent from time to time on demand all amounts from time to time due and payable by it for the account of Agent or Lenders or any of them pursuant to this Agreement to the extent not already paid. Any payment made pursuant to any such demand shall pro tanto satisfy the relevant Borrower's obligations to make payments for the account of Lenders or the relevant one or more of them pursuant to this Agreement.

14.12 No Reliance on Agent's Customer Identification Program. To the extent the Advances or this Agreement is, or becomes, syndicated in cooperation with other Lenders, each Lender acknowledges and agrees that neither such Lender, nor any of its Affiliates, participants or assignees, may rely on Agent to carry out such Lender's, Affiliate's, participant's or assignee's customer identification program, or other obligations required or imposed under or pursuant to the USA PATRIOT Act or the regulations thereunder, including the regulations contained in 31 CFR 103.121 (as hereafter amended or replaced, the "CIP Regulations"), or any other Anti-Terrorism Law, including any programs involving any of the following items relating to or in connection with any of Borrowers, their Affiliates or their agents, the Other Documents or the transactions hereunder or contemplated hereby: (i) any identity verification procedures, (ii) any recordkeeping, (iii) comparisons with government lists, (iv) customer notices or (v) other procedures required under the CIP Regulations or such Anti-Terrorism Laws.

14.13 Other Agreements. Each Lender agrees that it shall not, without the express consent of Agent, and that it shall, to the extent it is lawfully entitled to do so, upon the request of Agent, set off against the Obligations, any amounts owing by such Lender to any Credit Party or any deposit accounts of any Credit Party now or hereafter maintained with such Lender. Anything in this Agreement to the contrary notwithstanding, each Lender further agrees that it shall not, unless specifically requested to do so by Agent, take any action to protect or enforce its rights arising out of this Agreement or the Other Documents, it being the intent of Lenders that any such action to protect or enforce rights under this Agreement and the Other Documents shall be taken in concert and at the direction or with the consent of Agent or Required Lenders.

14.14 Collateral Matters.

(a) Lenders hereby irrevocably authorize Agent to release any Lien on any Collateral (i) upon the termination of the Revolving Commitments and payment and satisfaction in full of all of the Obligations, (ii) constituting property being sold or disposed of if a release is required or desirable in connection therewith and if requested by Agent, Borrowers certify to Agent that the sale or disposition is permitted hereunder (and Agent may rely conclusively on any such certificate, without further inquiry), (iii) [intentionally omitted], (iv) constituting property leased or licensed to a Credit Party or its Subsidiaries under a lease or license that has expired or is terminated in a transaction permitted under this Agreement or (v) in connection with a credit bid or purchase authorized under this Section 14.14. The Credit Parties and Lenders hereby irrevocably authorize Agent, based upon the instruction of the Required Lenders, to (A) consent to the sale of, credit bid, or purchase (either directly or indirectly through one or more entities) all or any portion of the Collateral at any sale thereof conducted under the provisions of the Bankruptcy Code, including Section 363 of the Bankruptcy Code, (B) credit bid or purchase (either directly or indirectly through one or more entities) all or any portion of the Collateral at any sale or other disposition thereof conducted under the provisions of the Uniform Commercial Code or the PPSA, including pursuant to Section 9-610 or 9-620 of the Uniform Commercial Code, or (C) credit bid or purchase (either directly or indirectly through one or more entities) all or any portion of the Collateral at any other sale or foreclosure conducted or consented to by Agent in accordance with Applicable Law in any judicial action or proceeding or by the exercise of any legal or equitable remedy. In connection with any such credit bid or purchase, (i) the Obligations owed to Lenders shall be entitled to be, and shall be, credit bid on a ratable basis (with Obligations with respect to contingent or unliquidated claims being estimated for such purpose if the fixing or liquidation thereof would not impair or unduly delay the ability of Agent to credit bid or purchase at such sale or other disposition of the Collateral and, if such contingent or unliquidated claims cannot be estimated without impairing or unduly delaying the ability of Agent to credit bid at such sale or other disposition, then such claims shall be disregarded, not credit bid, and not entitled to any interest in the Collateral that is the subject of such credit bid or purchase) and Lenders whose Obligations are credit bid shall be entitled to receive interests (ratably based upon the proportion of their Obligations credit bid in relation to the aggregate amount of Obligations so credit bid) in the Collateral that is the subject of such credit bid or purchase (or in the Equity Interests of the any entities that are used to consummate such credit bid or purchase) and (ii) Agent, based upon the instruction of the Required Lenders, may accept non-cash consideration, including debt and equity securities issued by any entities used to consummate such credit bid or purchase and in connection therewith Agent may reduce the Obligations owed to Lenders (ratably based upon the proportion of their Obligations credit

bid in relation to the aggregate amount of Obligations so credit bid) based upon the value of such non-cash consideration. Except as provided above, Agent will not execute and deliver a release of any Lien on any Collateral without the prior written authorization of (y) if the release is of all or substantially all of the Collateral (other than pursuant to a disposition of such Collateral consented to by Required Lenders), all of Lenders or (z) otherwise, the Required Lenders. Upon request by Agent or Borrowers at any time, Lenders will confirm in writing Agent's authority to release any such Liens on particular types or items of Collateral pursuant to this Section 14.14; provided that (1) anything to the contrary contained in this Agreement or any of the Other Documents notwithstanding, Agent shall not be required to execute any document or take any action necessary to evidence such release on terms that, in Agent's opinion, could expose Agent to liability or create any obligation or entail any consequence other than the release of such Lien without recourse, representation or warranty and (2) such release shall not in any manner discharge, affect, or impair the Obligations or any Liens (other than those expressly released) upon (or obligations of Credit Parties in respect of) any and all interests retained by any Credit Party, including, the proceeds of any sale, all of which shall continue to constitute part of the Collateral.

(b) Agent shall have no obligation whatsoever to any Lender (i) to verify or assure that the Collateral exists or is owned by a Credit Party or any of its Subsidiaries or is cared for, protected, or insured or has been encumbered, (ii) to verify or assure that Agent's Liens have been properly or sufficiently or lawfully created, perfected, protected or enforced or are entitled to any particular priority, (iii) to verify or assure that any particular items of Collateral meet the eligibility criteria applicable in respect thereof, (iv) to impose, maintain, increase, reduce, implement, or eliminate any particular reserve hereunder or to determine whether the amount of any reserve is appropriate or not or (v) to exercise at all or in any particular manner or under any duty of care, disclosure or fidelity, or to continue exercising, any of the rights, authorities and powers granted or available to Agent pursuant to this Agreement or any Other Documents, it being understood and agreed that in respect of the Collateral, or any act, omission, or event related thereto, subject to the terms and conditions contained herein, Agent may act in any manner it may deem appropriate, in its sole discretion given Agent's own interest in the Collateral in its capacity as one of Lenders and that Agent shall have no other duty or liability whatsoever to any Lender as to any of the foregoing, except as otherwise expressly provided herein.

14.15 Field Examination Reports; Confidentiality; Disclaimers by Lenders; Other Reports and Information. By becoming a party to this Agreement, each Lender:

(a) is deemed to have requested that Agent furnish such Lender, promptly after it becomes available, a copy of each field examination report respecting any Credit Party or its Subsidiaries (each, a "Report") prepared by or at the request of Agent, and Agent shall so furnish each Lender with such Reports;

(b) expressly agrees and acknowledges that Agent does not (i) make any representation or warranty as to the accuracy of any Report, and (ii) shall not be liable for any information contained in any Report;

(c) expressly agrees and acknowledges that the Reports are not comprehensive audits or examinations, that Agent or any other party performing any field examination will inspect only specific information regarding the Credit Parties and their Subsidiaries and will rely significantly upon Credit Parties' and their Subsidiaries' books and records, as well as on representations of Credit Parties' personnel;

(d) agrees to keep all Reports and other material, non-public information regarding the Credit Parties and their Subsidiaries and their operations, assets and existing and contemplated business plans in a confidential manner in accordance with Section 16.15; and

(e) without limiting the generality of any other indemnification provision contained in this Agreement, agrees: (i) to hold Agent and any other Lender preparing a Report harmless from any action the indemnifying Lender may take or fail to take or any conclusion the indemnifying Lender may reach or draw from any Report in connection with any loans or other credit accommodations that the indemnifying Lender has made or may make to Credit Parties, or the indemnifying Lender's participation in, or the indemnifying Lender's purchase of, a loan or loans of Borrowers and (ii) to pay and protect, and indemnify, defend and hold Agent, and any such other Lender preparing a Report harmless from and against, the claims, actions, proceedings, damages, costs, expenses and other amounts (including, attorneys' fees and costs) incurred by Agent and any such other Lender preparing a Report as the direct or indirect result of any third parties who might obtain all or part of any Report through the indemnifying Lender.

In addition to the foregoing, (x) any Lender may from time to time request of Agent in writing that Agent provide to such Lender a copy of any report or document provided by any Credit Party or its Subsidiaries to Agent that has not been contemporaneously provided by such Credit Party or such Subsidiary to such Lender, and, upon receipt of such request, Agent promptly shall provide a copy of same to such Lender, (y) to the extent that Agent is entitled, under any provision of this Agreement or any Other Documents, to request additional reports or information from any Credit Party or its Subsidiaries, any Lender may, from time to time, reasonably request Agent to exercise such right as specified in such Lender's notice to Agent, whereupon Agent promptly shall request of Borrowers the additional reports or information reasonably specified by such Lender, and, upon receipt thereof from such Credit Party or such Subsidiary, Agent promptly shall provide a copy of same to such Lender and (z) any time that Agent renders to Borrowers a statement regarding the Loan Account, Agent shall send a copy of such statement to each Lender.

14.16 Several Obligations; No Liability. Notwithstanding that certain of the Other Documents now or hereafter may have been or will be executed only by or in favor of Agent in its capacity as such, and not by or in favor of Lenders, any and all obligations on the part of Agent (if any) to make any credit available hereunder shall constitute the several (and not joint) obligations of the respective Lenders on a ratable basis, according to their respective Revolving Commitments, to make an amount of such credit not to exceed, in principal amount, at any one time outstanding, the amount of their respective Revolving Commitments. Nothing contained herein shall confer upon any Lender any interest in, or subject any Lender to any liability for, or in respect of, the business, assets, profits, losses, or liabilities of any other Lender. Each Lender shall be solely responsible for notifying its participants of any matters relating to this Agreement

and the Other Documents to the extent any such notice may be required, and no Lender shall have any obligation, duty, or liability to any participant of any other Lender.

14.17 Bank Product Providers. Each Secured Party that provides Cash Management Products and Services, Lender-Provided Interest Rate Hedges or Lender-Provided Foreign Currency Hedges (each a "Bank Product Provider") in its capacity as such shall be deemed a third-party beneficiary hereof and of the provisions of the Other Documents solely for purposes of any reference in this Agreement or any Other Document to the parties for whom Agent is acting. Agent hereby agrees to act as agent for such Bank Product Provider and, by virtue of entering into an agreement or arrangement to provide Cash Management Products and Services, Lender-Provided Interest Rate Hedges or Lender-Provided Foreign Currency Hedges, the applicable Bank Product Provider shall be automatically deemed to have appointed Agent as its agent and to have accepted the benefits of this Agreement and the Other Documents. It is understood and agreed that the rights and benefits of each Bank Product Provider under this Agreement and the Other Documents consist exclusively of such Bank Product Provider's being a beneficiary of the Liens and security interests (and, if applicable, guarantees) granted to Agent and the right to share in payments and collections out of the Collateral as more fully set forth herein. In addition, each Bank Product Provider, by virtue of entering into an agreement or arrangement to provide Cash Management Products and Services, Lender-Provided Interest Rate Hedges or Lender-Provided Foreign Currency Hedges, shall be automatically deemed to have agreed that Agent shall have the right, but shall have no obligation, to establish, maintain, relax or release reserves in respect of the Cash Management Liabilities, Interest Rate Hedge Liabilities and Foreign Currency Hedge Liabilities and that if reserves are established there is no obligation on the part of Agent to determine or ensure whether the amount of any such reserve is appropriate or not. Notwithstanding anything to the contrary in this Agreement or any Other Document, no provider or holder of any Cash Management Products and Services, Lender- Provided Interest Rate Hedges or Lender-Provided Foreign Currency Hedges shall have any voting or approval rights hereunder (or be deemed a Lender) solely by virtue of its status as the provider or holder of such agreements or products or the Obligations owing thereunder, nor shall the consent of any such provider or holder be required (other than in their capacities as Lenders, to the extent applicable) for any matter hereunder or under any of the Other Documents, including as to any matter relating to the Collateral or the release of Collateral or Guarantors.

14.18 Parallel Debt owed to Agent.

(a) Notwithstanding any other provision of this Agreement, each Credit Party hereby irrevocably and unconditionally undertakes to pay to Agent as creditor in its own right and not as a representative of the Secured Parties amounts equal to any amounts owing from time to time by such Credit Party to any Secured Party as and when those amounts are due for payment under this Agreement, any Other Document, any Lender-Provided Interest Rate Hedge and any Lender-Provided Foreign Currency Hedge.

(b) Each Credit Party and Agent acknowledge that the obligations of that Credit Party under paragraph (a) above are several and are separate and independent from, and shall not in any way limit or affect, the corresponding obligations of that Credit Party to any Secured Party under this Agreement and any Other Document (its "Corresponding Debt") nor

shall the amounts for which such Credit Party is liable under paragraph (a) above (its "Parallel Debt") be limited or affected in any way by its Corresponding Debt; provided that:

(i) the Parallel Debt of each Credit Party shall be decreased to the extent that its Corresponding Debt has been irrevocably paid or (in the case of guarantee obligations) discharged; and

(ii) the Corresponding Debt of each Credit Party shall be decreased to the extent that its Parallel Debt has been irrevocably paid or (in the case of guarantee obligations) discharged.

(c) Agent acts in its own name and not as a trustee, and its claims in respect of the Parallel Debt shall not be held on trust. The security granted under any Other Documents to Agent to secure the Parallel Debt is granted to Agent in its capacity as creditor of the Parallel Debt and shall not be held on trust.

(d) All monies received or recovered by Agent pursuant to this Section 14.18, and all amounts received or recovered by Agent from or by the enforcement of any security granted to secure the Parallel Debt, shall be applied in accordance with this Agreement.

(e) Without limiting or affecting Agent's rights against any Credit Party (whether under this Section 14.18 or under any other provision of any Loan Document), each Grantor acknowledges that:

(i) nothing in this Section 14.18 shall impose any obligation on Agent to advance any sum to any Credit Party or otherwise under this Agreement and any Other Document, except in its capacity as Lender; and

(ii) for the purpose of any vote taken under this Agreement and any Other Document, Agent shall not be regarded as having any participation or commitment other than those which it has in its capacity as a Lender.

14.19 Quebec Security. For the purposes of the grant of security under the laws of the Province of Quebec which may now or in the future be required to be provided by any Credit Party, Agent is hereby irrevocably authorized and appointed by each of the Lenders hereto to act as hypothecary representative (within the meaning of Article 2692 of the Civil Code of Quebec) for all present and future Lenders (in such capacity, the "Hypothecary Representative") in order to hold any hypothec granted under the laws of the Province of Quebec and to exercise such rights and duties as are conferred upon the Hypothecary Representative under the relevant deed of hypothec and applicable Laws (with the power to delegate any such rights or duties). The execution prior to the date hereof by Agent in its capacity as the Hypothecary Representative of any deed of hypothec or other security documents made pursuant to the laws of the Province of Quebec, is hereby ratified and confirmed. Any Person who becomes a Lender or successor Agent shall be deemed to have consented to and ratified the foregoing appointment of Agent as the Hypothecary Representative on behalf of all Lenders, including such Person and any Affiliate of such Person designated above as a Lender. For greater certainty, Agent, acting as the Hypothecary Representative, shall have the same rights, powers, immunities, indemnities and exclusions from liability as are prescribed in favor of Agent in this Agreement, which shall apply

mutatis mutandis. In the event of the resignation of Agent (which shall include its resignation as the Hypothecary Representative) and appointment of a successor Agent, such successor Agent shall also act as the Hypothecary Representative, as contemplated above.

XV. BORROWING AGENCY.

15.1 Borrowing Agency Provisions; Joint and Several Liability.

(a) Each Borrower hereby irrevocably designates Borrowing Agent to be its attorney and agent and in such capacity, whether verbally, in writing or through electronic methods (including, without limitation, an Approved Electronic Communication) to (i) borrow, (ii) request advances, (iii) request the issuance of Letters of Credit, (iv) sign and endorse notes, (v) execute and deliver all instruments, documents, applications, security agreements, reimbursement agreements and letter of credit agreements for Letters of Credit and all other certificates, notice, writings and further assurances now or hereafter required hereunder, (vi) make elections regarding interest rates, (vii) give instructions regarding Letters of Credit and agree with Issuer upon any amendment, extension or renewal of any Letter of Credit and (viii) otherwise take action under and in connection with this Agreement and the Other Documents, all on behalf of and in the name of such Borrower or Borrowers, as applicable, and hereby authorizes Agent to pay over or credit all loan proceeds hereunder in accordance with the request of Borrowing Agent.

(b) The handling of this credit facility as a co-borrowing facility with a borrowing agent in the manner set forth in this Agreement is solely as an accommodation to Borrowers and at their request. Neither Agent nor any Lender shall incur liability to Borrowers as a result thereof. To induce Agent and Lenders to do so and in consideration thereof, each Borrower hereby indemnifies Agent and each Lender and holds Agent and each Lender harmless from and against any and all liabilities, expenses, losses, damages and claims of damage or injury asserted against Agent or any Lender by any Person arising from or incurred by reason of the handling of the financing arrangements of Borrowers as provided herein, reliance by Agent or any Lender on any request or instruction from Borrowing Agent or any other action taken by Agent or any Lender with respect to this Section 15.1 except due to willful misconduct or gross (not mere) negligence by the indemnified party (as determined by a court of competent jurisdiction in a final and non-appealable judgment).

(c) All Borrowers shall be jointly and severally liable for all amounts due to Agent and Lenders under this Agreement and the Other Documents, regardless of which Borrower actually receives the Advances or other financial accommodations hereunder or the amount of such Advances or financial accommodations received or the manner in which Agent and Lenders account for such Advances or financial accommodations on its books and records. The Obligations shall be primary obligations of all Borrowers. The Obligations arising as a result of the joint and several liability of a Borrower shall, to the fullest extent permitted by law, be unconditional irrespective of (i) the validity or enforceability, avoidance or subordination of the Obligations of the other Borrowers or of any promissory note or other document evidencing all or any part of the Obligations of the other Borrowers, (ii) the absence of any attempt to collect the Obligations from the other Borrowers or any other security therefor, or the absence of any other action to enforce the same, (iii) the waiver, consent, extension, forbearance or granting of

any indulgence by Agent or Lenders with respect to any provisions of any instrument evidencing the Obligations of the other Borrowers, or any part thereof, or any other agreement now or hereafter executed by the other Borrowers and delivered to Agent, for itself and on behalf of Lenders, except to the extent such waiver, consent, extension, forbearance or granting of any indulgence explicitly is effective with respect to such Borrower, (iv) the failure by Agent or Lenders to take any steps to perfect and maintain its security interest in, or to preserve its rights and maintain its security or collateral for the Obligations of the other Borrowers, (v) the election of Agent or Lenders in any proceeding instituted under the Bankruptcy Code, of the application of Section 1111(b)(2) of the Bankruptcy Code or with respect to any Insolvency Event, (vi) the disallowance of all or any portion of the claim(s) of Agent or Lenders for the repayment of the Obligations of the other Borrowers under Section 502 of the Bankruptcy Code or (vii) any other circumstances which might constitute a legal or equitable discharge or defense of the other Borrowers other than payment in full of the Obligations. With respect to the Obligations arising as a result of the joint and several liability of a Borrower, each Borrower waives, until payment in full of the Obligations and this Agreement, any right to enforce any right of subrogation or any remedy which Agent or Lenders now has or may hereafter have against Borrowers, any endorser or any guarantor of all or any part of the Obligations, and any benefit of, and any right to participate in, any security or collateral given to Agent and Lenders. Upon any Event of Default and for so long as the same is continuing, Agent and Lenders may proceed directly and at once, without notice, against any Borrower to collect and recover the full amount, or any portion of the Obligations, without first proceeding against the other Borrowers or any other Person, or against any security or collateral for the Obligations. Each Borrower consents and agrees that Agent and Lenders shall be under no obligation to marshal any assets in favor of Borrower(s) or against or in payment of any or all of the Obligations.

(d) Each Borrower expressly subordinates any and all rights of subrogation, reimbursement, indemnity, exoneration, contribution of any other claim which such Borrower may now or hereafter have against the other Borrowers or other Person directly or contingently liable for the Obligations hereunder, or against or with respect to the other Borrowers' property (including, without limitation, any property which is Collateral for the Obligations), arising from the existence or performance of this Agreement until payment in full of the Obligations.

(e) Each Borrower expressly subordinates all rights that it may have now or in the future under any statute, at common law, in equity or otherwise, to compel Agent or Lenders to marshal assets or to proceed against any Credit Party, other Person or security for the payment or performance of any Obligations before, or as a condition to, proceeding against such Borrower. It is agreed among each Borrower, Agent and Lenders that the provisions of this Section are of the essence of the transaction contemplated by this Agreement and the Other Documents and that, but for such provisions, Agent and Lenders would decline to make Loans and issue Letters of Credit.

(f) Agent and Lenders may, in their discretion, pursue such rights and remedies as they deem appropriate, including realization upon Collateral by judicial foreclosure or nonjudicial sale or enforcement, without affecting any rights and remedies under this Agreement and the Other Documents . If, in the exercise of any rights or remedies, Agent or any Lender shall forfeit any of its rights or remedies, including its right to enter a deficiency judgment against any Credit Party, whether because of any Applicable Laws pertaining to

"election of remedies" or otherwise, each Borrower consents to such action by Agent or such Lender and waives (to the extent permitted by Applicable Law) any claim based upon such action, even if the action may result in loss of any rights of subrogation that any Borrower might otherwise have had but for such action. Any election of remedies that results in denial or impairment of the right of Agent or any Lender to seek a deficiency judgment against any Borrower shall not impair any other Borrower's obligation to pay the full amount of the Obligations. Each Borrower waives all rights and defenses arising out of an election of remedies, such as nonjudicial foreclosure with respect to any security for the Obligations, even though that election of remedies destroys such Borrower's rights of subrogation against any other Person. If Agent bids at any foreclosure or trustee's sale or at any private sale, Agent may bid all or a portion (in Agent's discretion) of the Obligations and the amount of such bid need not be paid by Agent but shall be credited against the Obligations. Subject to Applicable Law, the amount of the successful bid at any such sale, whether Agent or any other Person is the successful bidder, shall be conclusively deemed to be commercially reasonable, and the difference between such bid amount and the remaining balance of the Obligations shall be conclusively deemed to be the amount of such Borrower's Obligations to Agent and Lenders, notwithstanding that any present or future law or court decision may have the effect of reducing the amount of any deficiency claim to which Agent or any Lender might otherwise be entitled but for such bidding at any such sale.

(g) Notwithstanding any other provision of this Section 15.1, the joint and several liability of each Borrower hereunder shall be limited to a maximum amount as would not, after giving effect to such maximum amount, render its obligations hereunder subject to avoidance under Section 548 of the Bankruptcy Code or under any applicable state Uniform Fraudulent Transfer Act, Uniform Fraudulent Conveyance Act or comparable law. In determining the limitations, if any, on the amount of any Borrower's obligations hereunder pursuant to the preceding sentence, it is the intention of the parties hereto that any rights of subrogation, indemnification or contribution which such Borrower may have under this Section 15.1, any other agreement or Applicable Law shall be taken into account. Subject to the restrictions, limitations and other terms of this Agreement, each Borrower hereby agrees that to the extent that a Borrower shall have paid more than its proportionate share of any payment made hereunder, such Borrower shall be entitled to seek and receive contribution from and against any other Borrower hereunder which has not paid its proportionate share of such payment.

15.2 Waiver of Subrogation. Each Borrower expressly waives any and all rights of subrogation, reimbursement, indemnity, exoneration, contribution of any other claim which such Borrower may now or hereafter have against the other Borrowers or any other Person directly or contingently liable for the Obligations hereunder, or against or with respect to any other Borrowers' property (including, without limitation, any property which is Collateral for the Obligations), arising from the existence or performance of this Agreement, until termination of this Agreement and repayment in full of the Obligations.

XVI. MISCELLANEOUS.

16.1 Governing Law. This Agreement and each Other Document (unless and except to the extent expressly provided otherwise in any such Other Document), and all matters relating

hereto or thereto or arising herefrom or therefrom (whether arising under contract law, tort law or otherwise) shall, in accordance with Section 5-1401 of the General Obligations Law of the State of New York, be governed by and construed in accordance with the laws of the State of New York. Any judicial proceeding brought by or against any Credit Party with respect to any of the Obligations, this Agreement, the Other Documents or any related agreement may be brought in the state courts of New York State located in the County and State of New York, United States, or the federal courts located in the Southern District of New York and, by execution and delivery of this Agreement, each Credit Party accepts for itself and in connection with its properties, generally and unconditionally, the non-exclusive jurisdiction of the aforesaid courts, and irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement. Each Credit Party hereby waives personal service of any and all process upon it and consents that all such service of process may be made by certified or registered mail (return receipt requested) directed to Borrowing Agent at its address set forth in Section 16.6 and service so made shall be deemed completed five (5) days after the same shall have been so deposited in the mails of the United States of America, or, at Agent's option, by service upon Borrowing Agent which each Credit Party irrevocably appoints as such Credit Party's Agent for the purpose of accepting service within the State of New York. Nothing herein shall affect the right to serve process in any manner permitted by law or shall limit the right of Agent or any Lender to bring proceedings against any Credit Party in the courts of any other jurisdiction. Each Credit Party waives any objection to jurisdiction and venue of any action instituted hereunder and shall not assert any defense based on lack of jurisdiction or venue or based upon forum non conveniens. Each Credit Party waives the right to remove any judicial proceeding brought against such Credit Party in any state court to any federal court. Any judicial proceeding by any Credit Party against Agent or any Lender involving, directly or indirectly, any matter or claim in any way arising out of, related to or connected with this Agreement, any Other Document or any related agreement or any Obligation, shall be brought only in a federal or state court located in the County of New York, State of New York.

16.2 Entire Understanding.

(a) This Agreement and the Other Documents contain the entire understanding between each Credit Party, Agent and each Lender and supersedes all prior agreements and understandings, if any, relating to the subject matter hereof. Any promises, representations, warranties or guarantees not herein or therein contained and hereinafter made shall have no force and effect unless in writing, signed by each Credit Party's, Agent's and each Lender's respective officers. Neither this Agreement nor any Other Document nor any portion or provisions hereof or thereof may be changed, modified, amended, waived, supplemented, discharged, cancelled or terminated orally or by any course of dealing, or in any manner other than by an agreement in writing, signed by the party to be charged. Notwithstanding the foregoing, Agent (with the consent of the Required Lenders) may modify this Agreement or any Other Document for the purposes of completing missing content or correcting erroneous content of an administrative nature, without the need for a written amendment; provided that Agent shall send a copy of any such modification to Borrowers and each Lender (which copy may be provided by electronic mail). Each Credit Party acknowledges that it has been advised by counsel in connection with the execution of this Agreement and the Other Documents and is not relying upon oral representations or statements inconsistent with the terms and provisions of this Agreement.

(b) Required Lenders or Agent with the consent in writing of Required Lenders, and Borrowers may, subject to the provisions of this Section 16.2(b), from time to time enter into written supplemental agreements to this Agreement or the Other Documents executed by the Credit Parties, for the purpose of adding or deleting any provisions or otherwise changing, amending, varying or waiving in any manner the rights of Lenders, Agent or Credit Parties hereunder or thereunder or the conditions, provisions or terms hereof or thereof or waiving any Event of Default hereunder, but only to the extent specified in such written agreements; provided, however, that no such supplemental agreement shall:

(i) increase or extend the Revolving Commitment, the Revolving Commitment Percentage or the Revolving Commitment Amount of any Revolving Lender without the consent of such Revolving Lender;

(ii) waive, extend or postpone the Maturity Date or any date fixed by this Agreement or any Other Document for any scheduled payment of principal or interest of any Advance (excluding the due date of any mandatory prepayment of an Advance), or any fee payable to any Lender, or reduce the principal amount of or the rate of interest borne by any Advances or reduce any fee payable to any Lender, without the consent of each Lender directly affected thereby (except that Required Lenders may elect to waive or rescind any imposition of the Default Rate under Section 3.1 or of default rates of Letter of Credit fees under Section 3.2 (unless imposed by Agent));

(iii) increase the Maximum Revolving Advance Amount without the consent of all Lenders;

(iv) alter the definition of the terms Required Lenders or alter, amend or modify this Section 16.2(b) or any provision of this Agreement providing for consent or other action by all Lenders, without the consent of all Lenders;

(v) alter, amend or modify the provisions of Section 2.20 or Section 11.5 without the consent of all Lenders;

(vi) except as permitted by Section 14.14, release all or substantially all of the Collateral without the consent of all Lenders;

(vii) other than in connection with a liquidation, dissolution or disposition of a Credit Party (other than a Borrower) expressly permitted by the terms hereof or otherwise consented to by Required Lenders or the payment in full of the Obligations, release Holdings or any Credit Party from its liability for the Obligations without the consent of all of Lenders; or

(viii) modify the definition of "Advance Rates" or otherwise modify the definition of "Formula Amount" if the effect thereof is to increase the amount available to be borrowed by Borrowers without the consent of all Lenders.

Notwithstanding the foregoing:

(A) no amendment, waiver, modification, elimination or consent shall amend, modify or waive any provision of this Agreement or the Other Documents pertaining to Issuer, or any other rights or duties of Issuer under this Agreement or the Other Documents, without the written consent of Issuer, Agent, Borrowers and the Required Lenders;

(B) no amendment, waiver, modification, elimination or consent shall amend, modify or waive any provision of this Agreement or the Other Documents pertaining to Swing Loan Lender, or any other rights or duties of Swing Loan Lender under this Agreement or the Other Documents, without the written consent of Swing Loan Lender, Agent, Borrowers and the Required Lenders;

(C) no amendment, waiver, modification, elimination or consent shall amend, modify or waive any provision of this Agreement or the Other Documents pertaining to Agent, or any other rights or duties of Agent under this Agreement or the Other Documents, without the written consent of Agent, Borrowers and the Required Lenders;

(D) anything in this Section 16.2(b) to the contrary notwithstanding, (i) any amendment, modification, elimination, waiver, consent, termination or release of, or with respect to, any provision of this Agreement or any Other Document that relates only to the relationship of the Lenders among themselves, and that does not affect the rights or obligations of Holdings or any Credit Party, shall not require consent by or the agreement of Holdings or any Credit Party and (ii) any amendment, waiver, modification, elimination or consent of, or with respect to, any provision of this Agreement or any Other Document may be entered into without the consent of, or over the objection of, any Defaulting Lender;

(E) the Fee Letter may only be amended with the consent of Agent and Borrowers (it being understood that no Lender's consent shall be required);

(F) in connection with any incurrence of any Permitted Non- ABL Indebtedness, this Agreement and the Other Documents may be amended pursuant to an agreement or agreements in writing entered into by the Borrowers and Agent, (1) to subject to the Liens of the Collateral Documents assets or categories of assets of the Credit Parties that previously did not constitute Collateral (and, in connection therewith, to modify the definition of the term "Excluded Property" and to make such other modifications to this Agreement and the Other Documents (and to enter into new Collateral Documents) as Agent determines to be necessary, appropriate or desirable in order to give effect to, or in connection with, the inclusion of new assets or categories of assets as

Collateral) and (2) to reflect subordination, pursuant to each Permitted Intercreditor Agreement, of Liens on any Non-ABL Priority Collateral securing the Obligations to the Liens on such Non-ABL Priority Collateral securing Permitted Non-ABL Indebtedness and other intercreditor matters set forth in each Permitted Intercreditor Agreement; and

(G) the Permitted Intercreditor Agreement and the Collateral Documents may be amended, supplemented or otherwise modified as provided in Section 16.22.

(c) Any such supplemental agreement shall apply equally to each Lender and shall be binding upon Borrowers, Lenders and Agent and all future holders of the Obligations. In the case of any waiver, Borrowers, Agent and Lenders shall be restored to their former positions and rights, and any Event of Default waived shall be deemed to be cured and not continuing, but no waiver of a specific Event of Default shall extend to any subsequent Event of Default (whether or not the subsequent Event of Default is the same as the Event of Default which was waived), or impair any right consequent thereon.

(d) In the event that Agent requests the consent of a Lender pursuant to this Section 16.2 and such consent is denied, then Agent may, at its option, require such Lender to assign its interest in the Advances to Agent or to another Lender or to any other Person designated by Agent in compliance with Sections 3.12 and 16.3 (the "Designated Lender"), for a price equal to (i) the then outstanding principal amount thereof plus (ii) accrued and unpaid interest and fees due such Lender, which interest and fees shall be paid when collected from Borrowers. In the event Agent elects to require any Lender to assign its interest to Agent or to the Designated Lender, Agent will so notify such Lender in writing within ten (10) days following such Lender's denial, and such Lender will assign its interest to Agent or the Designated Lender no later than five (5) days following receipt of such notice pursuant to a Commitment Transfer Supplement executed by such Lender, Agent or the Designated Lender, as appropriate, and Agent.

(e) Notwithstanding (i) the existence of a Default or an Event of Default, (ii) that any of the other applicable conditions precedent set forth in Section 8.2 have not been satisfied or the commitments of Lenders to make Revolving Advances hereunder have been terminated for any reason or (iii) any other contrary provision of this Agreement at any time an Out-of-Formula Loan exists or Borrowers make a request for an Advance that would result in an Out-of-Formula Loan, Agent may in its discretion and without the consent of any Lender, knowingly and intentionally, continue to make Revolving Advances (any such intentional Revolving Advance, an "Intentional Overadvance") to Borrowers unless such authorization is revoked by Required Lenders effective upon receipt by Agent of written notice of such revocation from Required Lenders; provided that Agent may not make any Intentional Overadvance if, after giving effect to such Intentional Overadvance, the aggregate outstanding Intentional Overadvances and Protective Advances would exceed ten percent (10%) of the Maximum Revolving Advance Amount (or such higher amount as Required Lenders may consent to) or would cause the Advances to exceed the Maximum Revolving Advance Amount. If Agent is willing in its sole and absolute discretion to make Intentional Overadvances, Lenders holding the Revolving Commitments shall be obligated to fund such Intentional Overadvances in

accordance with their respective Revolving Commitment Percentages, and such Intentional Overadvances shall be payable on demand and shall bear interest at the rate applicable for Revolving Advances consisting of Domestic Rate Loans; provided that, if Agent does make Intentional Overadvances, neither Agent nor Lenders shall be deemed thereby to have changed the limits of Section 2.1(a) nor shall any Lender be obligated to fund Revolving Advances in excess of its Revolving Commitment Amount. For purposes of this paragraph, the discretion granted to Agent hereunder to make Intentional Overadvances shall not be limited by the amount of the Out-of-Formula Loan. To the extent any Intentional Overadvances are not actually funded by the other Lenders as provided for in this Section 16.2(e), Agent may elect in its discretion to fund such Intentional Overadvances and any such Intentional Overadvances so funded by Agent shall be deemed to be Revolving Advances made by and owing to Agent, and Agent shall be entitled to all rights (including accrual of interest) and remedies of a Revolving Lender under this Agreement and the Other Documents with respect to such Revolving Advances. Subject to Section 11.5, payments and proceeds of Collateral to be applied to the Revolving Advances shall be applied first to the Intentional Overadvances and then to the other Revolving Advances.

(f) In addition to (and not in substitution of) the discretionary Revolving Advances permitted above in this Section 16.2, Agent is hereby authorized by Borrowers and Lenders, at any time in Agent's sole discretion, regardless of (i) the existence of a Default or an Event of Default, (ii) whether any of the other applicable conditions precedent set forth in Section 8.2 have not been satisfied or the commitments of Lenders to make Revolving Advances hereunder have been terminated for any reason, (iii) whether an Out-of-Formula exists or (iv) any other contrary provision of this Agreement, to make Revolving Advances (the "Protective Advances") to Borrowers on behalf of Lenders which Agent, in its Permitted Discretion, deems necessary or desirable (a) to preserve or protect the Collateral, or any portion thereof, (b) to enhance the likelihood of, or maximize the amount of, repayment of the Advances and other Obligations or (c) to pay any other amount chargeable to Borrowers pursuant to the terms of this Agreement; provided that the aggregate amount of all Protective Advances made hereunder, which when added to the outstanding amount of all Intentional Overadvances, shall not exceed ten percent (10%) of the Maximum Revolving Advance Amount (unless Required Lenders agree to a higher amount). Revolving Lenders shall be obligated to fund such Protective Advances and effect a settlement with Agent therefor upon demand of Agent in accordance with their respective Revolving Commitment Percentages. To the extent any Protective Advances are not actually funded by the other Revolving Lenders as provided for in this Section 16.2(f), any such Protective Advances funded by Agent shall be deemed to be Revolving Advances made by and owing to Agent, and Agent shall be entitled to all rights (including accrual of interest) and remedies of a Revolving Lender under this Agreement and the Other Documents with respect to such Revolving Advances.

16.3 Successors and Assigns; Participations; New Lenders.

(a) This Agreement shall be binding upon and inure to the benefit of Credit Parties, Agent, each Lender, all future holders of the Obligations and their respective successors and assigns, except that no Credit Party may assign or transfer any of its rights or obligations under this Agreement without the prior written consent of Agent and each Lender.

(b) Each Credit Party acknowledges that in the regular course of its commercial business one or more Lenders may at any time and from time to time sell participating interests in the Advances to other Persons (each such transferee or purchaser of a participating interest, a "Participant"). Each Participant may exercise all rights of payment (including rights of set-off) with respect to the portion of such Advances held by it or other Obligations payable hereunder as fully as if such Participant were the direct holder thereof provided that (i) Borrowers shall not be required to pay to any Participant more than the amount which it would have been required to pay to Lender which granted an interest in its Advances or other Obligations payable hereunder to such Participant had such Lender retained such interest in the Advances hereunder or other Obligations payable hereunder unless the sale of the participation to such Participant is made with Borrowers' prior written consent, and (ii) in no event shall Borrowers be required to pay any such amount arising from the same circumstances and with respect to the same Advances or other Obligations payable hereunder to both such Lender and such Participant. Each Credit Party agrees that each Participant shall be entitled to the benefits of Sections 3.10 (subject to the requirements and limitations therein, including the requirements under Section 3.10(f) (it being understood and agreed that the documentation required under Section 3.10(f) shall be delivered to the participating Lender)) to the same extent as if it were a Lender and had acquired its interest by assignment and delegation pursuant to this Section 16.3; provided that such Participant (A) agrees to be subject to the provisions of Section 3.10 and Section 3.12 as if it were an assignee under this Section 16.3 and (B) shall not be entitled to receive any greater payment under Section 3.10, with respect to any participation, than its participating Lender would have been entitled to receive, except to the extent such entitlement to receive a greater payment results from a Change in Law that occurs after the Participant acquired the applicable participation.

(c) Any Lender, with the consent of Agent (such consent not to be unreasonably withheld, conditioned or delayed), may sell, assign or transfer all or any part of its rights and obligations under or relating to Revolving Advances under this Agreement and the Other Documents to one or more additional Persons and one or more additional Persons may commit to make Advances hereunder (each a "Purchasing Lender"), in minimum amounts of not less than $10,000,000, pursuant to a Commitment Transfer Supplement, executed by a Purchasing Lender, the transferor Lender, and Agent and delivered to Agent for recording under this Agreement in which such Lender has an interest. Upon such execution, delivery, acceptance and recording, from and after the transfer effective date determined pursuant to such Commitment Transfer Supplement, (i) Purchasing Lender thereunder shall be a party hereto and, to the extent provided in such Commitment Transfer Supplement, have the rights and obligations of a Lender thereunder with a Revolving Commitment Percentage as set forth therein, and (ii) the transferor Lender thereunder shall, to the extent provided in such Commitment Transfer Supplement, be released from its obligations under this Agreement, the Commitment Transfer Supplement creating a novation for that purpose. Such Commitment Transfer Supplement shall be deemed to amend this Agreement to the extent, and only to the extent, necessary to reflect the addition of such Purchasing Lender and the resulting adjustment of the Revolving Commitment Percentages arising from the purchase by such Purchasing Lender of all or a portion of the rights and obligations of such transferor Lender under this Agreement and the Other Documents. Each Credit Party hereby consents to the addition of such Purchasing Lender and the resulting adjustment of the Revolving Commitment Percentages arising from the purchase by such Purchasing Lender of all or a portion of the rights and obligations of such transferor Lender

under this Agreement and the Other Documents. The Credit Parties shall execute and deliver such further documents and do such further acts and things in order to effectuate the foregoing; provided, however, that the consent of Borrowers (such consent not to be unreasonably withheld or delayed) shall be required unless (x) an Event of Default has occurred and is continuing at the time of such assignment or (y) such assignment is to a Permitted Assignee; provided that Borrowers shall be deemed to have consented to any such assignment unless it shall object thereto by written notice to Agent within ten (10) Business Days after having received prior notice thereof.

(d) Any Lender, with the consent of Agent which shall not be unreasonably withheld or delayed, may directly or indirectly sell, assign or transfer all or any portion of its rights and obligations under or relating to Revolving Advances under this Agreement and the Other Documents to an entity, whether a corporation, partnership, trust, limited liability company or other entity that (i) is engaged in making, purchasing, holding or otherwise investing in bank loans and similar extensions of credit in the ordinary course of its business and (ii) is administered, serviced or managed by the assigning Lender or an Affiliate of such Lender (a "Purchasing CLO" and together with each Participant and Purchasing Lender, each a "Transferee" and collectively the "Transferees"), pursuant to a Commitment Transfer Supplement modified as appropriate to reflect the interest being assigned ("Modified Commitment Transfer Supplement"), executed by any intermediate purchaser, the Purchasing CLO, the transferor Lender, and Agent as appropriate and delivered to Agent for recording. Upon such execution and delivery, from and after the transfer effective date determined pursuant to such Modified Commitment Transfer Supplement, (i) Purchasing CLO thereunder shall be a party hereto and, to the extent provided in such Modified Commitment Transfer Supplement, have the rights and obligations of a Lender thereunder and (ii) the transferor Lender thereunder shall, to the extent provided in such Modified Commitment Transfer Supplement, be released from its obligations under this Agreement, the Modified Commitment Transfer Supplement creating a novation for that purpose. Such Modified Commitment Transfer Supplement shall be deemed to amend this Agreement to the extent, and only to the extent, necessary to reflect the addition of such Purchasing CLO. Each Credit Party hereby consents to the addition of such Purchasing CLO. The Credit Parties shall execute and deliver such further documents and do such further acts and things in order to effectuate the foregoing.

(e) Agent shall maintain at its address a copy of each Commitment Transfer Supplement and Modified Commitment Transfer Supplement delivered to it and a register (the "Register") for the recordation of the names and addresses of each Lender and the outstanding principal, accrued and unpaid interest and other fees due hereunder. The entries in the Register shall be conclusive, in the absence of manifest error, and each Borrower, Agent and Lenders may treat each Person whose name is recorded in the Register as the owner of the Advance recorded therein for the purposes of this Agreement. The Register shall be available for inspection by Borrowing Agent or any Lender at any reasonable time and from time to time upon reasonable prior notice. Agent shall receive a fee in the amount of $3,500 payable by the applicable Purchasing Lender and/or Purchasing CLO upon the effective date of each transfer or assignment (other than to an intermediate purchaser) to such Purchasing Lender and/or Purchasing CLO. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of Borrowers, maintain a register on which it enters the name and address of each Participant and the principal amounts (and stated interest) of each Participant's interest in the Loans or other

obligations under this Agreement and Other Documents (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any Participant or any information relating to a Participant's interest in any commitments, loans, letters of credit or its other obligations under any such documents) to any Person except to the extent that such disclosure is necessary to establish that such commitment, loan, letter of credit or other obligation is in registered form for the purposes of the Code, including under Section 5f.103-1(c) of the United States Treasury Regulations or its successor. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, Agent (in its capacity as Agent) shall have no responsibility for maintaining a Participant Register. It is intended that the Register and any Participant Register be maintained such that the Obligations are in "registered form" for the purposes of the Code.

(f) Each Credit Party authorizes each Lender to disclose to any Transferee and any prospective Transferee any and all financial information in such Lender's possession concerning Holdings and such Credit Party which has been delivered to such Lender by or on behalf of such Credit Party pursuant to this Agreement or in connection with such Lender's credit evaluation of Holdings or such Credit Party in accordance with Section 16.15.

(g) Notwithstanding anything to the contrary contained in this Agreement, any Lender may at any time and from time to time pledge or assign a security interest in all or any portion of its rights under this Agreement to secure obligations of such Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank; provided that no such pledge or assignment shall release such Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.

16.4 Application of Payments. Agent shall have the continuing and exclusive right to apply or reverse and re-apply any payment and any and all proceeds of Collateral to any portion of the Obligations. To the extent that any Credit Party makes a payment or Agent or any Lender receives any payment or proceeds of the Collateral for any Credit Party's benefit, which are subsequently invalidated, declared to be fraudulent or preferential, set aside or required to be repaid to a trustee, debtor in possession, receiver, receiver/manager, custodian or any other party under any bankruptcy law, common law, equitable cause or intercreditor or subordination agreement, then, to such extent, the Obligations or part thereof intended to be satisfied shall be revived and continue as if such payment or proceeds had not been received by Agent or such Lender.

16.5 Indemnity. Each Borrower shall defend, protect, indemnify, pay and save harmless Agent, each Lender and each of their respective officers, directors, Affiliates, attorneys, employees and agents (each an "Indemnified Party") for and from and against any and all claims, demands, liabilities, obligations, losses, damages, penalties, fines, actions, judgments, suits, costs, charges, expenses and disbursements of any kind or nature whatsoever (including reasonable and invoiced fees and disbursements of outside counsel), limited to one firm of lead counsel for all Indemnified Parties, taken as a whole, and one firm of local counsel in each applicable jurisdiction for all Indemnified Parties taken as a whole and, in the event of any

circumstance reasonably determined by any such counsel to create a conflict of interest, one additional firm of conflict counsel of each type to each group of similarly situated Indemnified Parties (collectively, "Claims"), which may be imposed on, incurred by, or asserted against any Indemnified Party arising out of or in any way relating to: (i) this Agreement, the Other Documents, the Advances and other Obligations and/or the transactions contemplated hereby, (ii) any action or failure to act or action taken only after delay or the satisfaction of any conditions by any Indemnified Party in connection with and/or relating to the negotiation, execution, delivery or administration of the Agreement and the Other Documents, the credit facilities established hereunder and thereunder and/or the transactions contemplated hereby including the Transactions, (iii) any Borrower's or any Guarantor's failure to observe, perform or discharge any of its covenants, obligations, agreements or duties under or breach of any of the representations or warranties made in this Agreement and the Other Documents, (iv) the enforcement of any of the rights and remedies of Agent, Issuer or any Lender under the Agreement and the Other Documents, (v) any threatened or actual imposition of fines or penalties, or disgorgement of benefits, for violation of any Anti-Terrorism Law by any Borrower, any Affiliate or Subsidiary of any Borrowers, or any Guarantor, and (vi) any claim, litigation, proceeding or investigation instituted or conducted by any Governmental Body or instrumentality or any other Person with respect to any aspect of, or any transaction contemplated by, or referred to in, or any matter related to, this Agreement or the Other Documents, whether or not Agent or any Lender is a party thereto, except in each case to the extent arising, directly or indirectly (i) from the gross negligence, bad faith or willful misconduct of such Indemnified Party or (ii) disputes solely between or among the Indemnified Parties that do not involve any acts or omissions of any Credit Party or its Affiliates; it being understood and agreed that this clause (ii) shall not apply to limit the rights of Agent relative to disputes between or among Agent on the one hand, and one or more Lenders, or one or more of their Affiliates (or other related Indemnified Parties), on the other hand. This Section 16.5 shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc., arising from any non-Tax claim.

16.6 Notice. Any notice or request hereunder may be given to Borrowing Agent or any Credit Party or to Agent or any Lender at their respective addresses set forth below or at such other address as may hereafter be specified in a notice designated as a notice of change of address under this Section. Any notice, request, demand, direction or other communication (for purposes of this Section 16.6 only, a "Notice") to be given to or made upon any party hereto under any provision of this Agreement shall be given or made by telephone or in writing (which includes by means of electronic transmission (i.e., "e-mail") or facsimile transmission or by setting forth such Notice on a website to which Credit Parties are directed (an "Internet Posting") if Notice of such Internet Posting (including the information necessary to access such site) has previously been delivered to the applicable parties hereto by another means set forth in this Section 16.6) in accordance with this Section 16.6. Any such Notice must be delivered to the applicable parties hereto at the addresses and numbers set forth under their respective names on Section 16.6 or in accordance with any subsequent unrevoked Notice from any such party that is given in accordance with this Section 16.6. Any Notice shall be effective:

(a) in the case of hand delivery, when delivered;

(b) if given by mail, four (4) days after such Notice is deposited with the United States Postal Service, with first-class postage prepaid, return receipt requested;

(c) in the case of a telephonic Notice, when a party is contacted by telephone, if delivery of such telephonic Notice is confirmed no later than the next Business Day by hand delivery, a facsimile or electronic transmission, an Internet Posting or an overnight courier delivery of a confirmatory Notice (received at or before noon on such next Business Day);

(d) in the case of a facsimile transmission, when sent to the applicable party's facsimile machine's telephone number, if the party sending such Notice receives confirmation of the delivery thereof from its own facsimile machine;

(e) in the case of electronic transmission, when actually received;

(f) in the case of an Internet Posting, upon delivery of a Notice of such posting (including the information necessary to access such site) by another means set forth in this Section 16.6; and

(g) if given by any other means (including by overnight courier), when actually received.

Any Lender giving a Notice to Borrowing Agent or any Credit Party shall concurrently send a copy thereof to Agent, and Agent shall promptly notify the other Lenders of its receipt of such Notice.

(A) If to Agent or PNC at:

PNC Bank, National Association
One North Franklin Street, 25th Floor
Chicago, Illinois 60606
Attention: Portfolio Manager – Ferroglobe
Telephone: (312) 454-2958
Facsimile: (312) 454-2919

with a copy (which shall not constitute notice) to:

PNC Bank, National Association
PNC Agency Services
PNC Firstside Center
500 First Avenue, 4th Floor
Pittsburgh, Pennsylvania 15219
Attention: Lori Killmeyer
Telephone: (412) 762-7002
Facsimile: (412) 762-8672

with an additional copy (which shall not constitute notice) to:

Goldberg Kohn Ltd.
55 East Monroe Street, Suite 3300
Chicago, Illinois 60603
Attention: Jeffrey Dunlop
Telephone: (312) 863-7128
Facsimile: (312) 863-7828

(B) If to a Lender other than Agent, as specified on the signature pages hereof.

(C) If to Borrowing Agent or any Credit Party:

Globe Specialty Metals, Inc.
c/o Ferroglobe PLC
5 Fleet Place
London EC4M 7RD, United Kingdom
Attention: Legal Dept.
Telephone: +44 (0) 203 1292420

with a copy (which shall not constitute notice) to:

Globe Specialty Metals, Inc.
c/o Grupo FerroAtlántica, S.A.U.
Paseo de la Castellana, 259-D, P49
28046 Madrid, Spain
Attention: Legal Dept.
Telephone: +34 915 903 219

Cravath, Swaine & Moore LLP
Worldwide Plaza
825 Eighth Avenue
New York, NY 10019-7475
Attention: Sasha Rosenthal-Larrea
Telephone: (212) 474-1967

16.7 Survival; Survival of Representations and Warranties.

(a) The obligations of Credit Parties under Sections 2.2(f), 2.2(g), 2.2(h), 3.7, 3.8, 3.9, 3.10, 15.1, 16.5 and 16.9 and the obligations of the applicable Lenders under Sections 2.2, 2.15(b), 2.16, 2.18, 2.19, 3.10, 14.8 and 16.5, shall survive termination of this Agreement and the Other Documents, the replacement of Agent and payment in full of the Obligations.

(b) All representations and warranties of Holdings or any Credit Party contained in this Agreement and the Other Documents to which it is a party shall be true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the

text thereof) at the time of Holdings' or such Credit Party's execution of this Agreement and the Other Documents to which it is a party and true and correct in all in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof) as of the time of any request for an Advance (except to the extent such representations and warranties expressly relate to an earlier date, in which case they shall be true and correct as of such earlier date).

16.8 Severability. If any part of this Agreement is contrary to, prohibited by, or deemed invalid under Applicable Laws, such provision shall be inapplicable and deemed omitted to the extent so contrary, prohibited or invalid, but the remainder hereof shall not be invalidated thereby and shall be given effect so far as possible.

16.9 Expenses. Borrowers shall pay (i) all reasonable and invoiced out-of-pocket expenses incurred by Agent and its Affiliates (including the reasonable and invoiced fees, charges and disbursements of outside counsel for Agent) in connection with the syndication of the credit facilities provided for herein, the preparation, negotiation, execution, delivery and administration of this Agreement and the Other Documents or any amendments, modifications or waivers of the provisions hereof or thereof (whether or not the transactions contemplated hereby or thereby shall be consummated), including any notarial, registration and administrative fees and any stamp duties arising from the registration or other filings in connection with the foregoing, (ii) all reasonable and invoiced out-of-pocket expenses incurred by the Issuer in connection with the issuance, amendment, renewal or extension of any Letter of Credit or any demand for payment thereunder and (iii) all reasonable and reasonably invoiced out-of-pocket expenses incurred by Agent, any Lender or Issuer (including the fees, charges and disbursements of any outside counsel for Agent, any Lender or Issuer ((limited, in the case of fees and expenses of outside counsel for Lenders, to one firm of lead counsel for Agent, and one firm of local counsel in each applicable jurisdiction)) in connection with the enforcement or protection of its rights (A) in connection with this Agreement and the Other Documents, including its rights under this Section 16.9, or (B) in connection with the Advances made or Letters of Credit issued hereunder, including all such out-of-pocket expenses incurred during any workout, restructuring or negotiations in respect of such Loans or Letters of Credit.

16.10 Injunctive Relief. Each Credit Party recognizes that, in the event any Credit Party fails to perform, observe or discharge any of its obligations or liabilities under this Agreement, or threatens to fail to perform, observe or discharge such obligations or liabilities, any remedy at law may prove to be inadequate relief to Lenders; therefor, Agent, if Agent so requests, shall be entitled to temporary and permanent injunctive relief in any such case without the necessity of proving that actual damages are not an adequate remedy.

16.11 Consequential Damages. No party to this Agreement or any Other Document, nor any agent or attorney for any of them, shall be liable to any other such Person for indirect, punitive, exemplary or consequential damages arising from any breach of contract, tort or other wrong relating to the establishment, administration or collection of the Obligations or as a result of any transaction contemplated under this Agreement or any Other Document.

16.12 Captions. The captions at various places in this Agreement are intended for convenience only and do not constitute and shall not be interpreted as part of this Agreement.

16.13 Counterparts; Facsimile Signatures. This Agreement may be executed in any number of and by different parties hereto on separate counterparts, all of which, when so executed, shall be deemed an original, but all such counterparts shall constitute one and the same agreement. Any signature delivered by a party by facsimile or electronic transmission (including email transmission of a PDF image) shall be deemed to be an original signature hereto.

16.14 Construction. The parties acknowledge that each party and its counsel have reviewed this Agreement and that the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement or any amendments, schedules or exhibits thereto.

16.15 Confidentiality; Sharing Information. Agent, each Lender, the Issuer and each Transferee in each case agrees to maintain the confidentiality of all information received from the Credit Parties or any of their Subsidiaries relating to the Credit Parties or any of such Subsidiaries or any of their respective businesses, other than any such information that is available to Agent, any Lender or the Issuer on a non-confidential basis prior to disclosure by the Credit Parties or any of their Subsidiaries (the "Information"), except that Information may be disclosed; (a) to its Affiliates and to its Affiliates' respective partners, directors, officers, employees, agents, advisors and other representatives (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such Information and instructed to keep such Information confidential); (b) to the extent requested by any regulatory authority purporting to have jurisdiction over it (including any self-regulatory authority, such as the National Association of Insurance Commissioners); (c) to the extent required by Applicable Laws or regulations or by any subpoena or similar legal process; (d) to any other party hereto; (e) in connection with the exercise of any remedies hereunder or under any of the Other Documents or any action or proceeding relating to this Agreement or any of the Other Documents or the enforcement of rights hereunder or thereunder; (f) subject to an agreement containing provisions substantially the same as those of this Section, to (i) any assignee of or Participant in, or any prospective assignee of or Participant in, any of its rights or obligations under this Agreement or (ii) any actual or prospective counterparty (or its advisors) to any swap or derivative transaction relating to Borrowers and their obligations; (g) with the consent of Borrowers; or (h) to the extent such Information (i) becomes publicly available other than as a result of a breach of this Section 16.15 or (ii) becomes available to Agent, any Lender, the Issuer or any of their respective Affiliates on a nonconfidential basis from a source other than Borrowers or the other Credit Parties that is not, to the actual knowledge of the Person making disclosure (and with no such Person having any obligation to make any investigation in connection therewith), subject to contractual or fiduciary confidentiality obligations owing to the Borrowers, their Subsidiaries or their respective representatives with respect to such Information. Any Person required to maintain the confidentiality of Information as provided in this Section 16.15 shall be considered to have complied with its obligation to do so if such Person has exercised the same degree of care to maintain the confidentiality of such Information as such Person would accord to its own confidential information. Notwithstanding the foregoing, (A) none of Agent, any Lender, the Issuer or any Related Party shall have any liability under this Section 16.15 unless its breach hereunder is determined by a court of competent jurisdiction by final and nonappealable judgment to have resulted from its gross negligence or willful misconduct, and (B) on and after the Closing Date, each Lender shall be entitled to place (at their own expense) a so-called 'tombstone' advertisement in various publications and report the

effectiveness of this Agreement and the credit facility contemplated hereby to league tables and similar services. Each Credit Party acknowledges that from time to time financial advisory, investment banking and other services may be offered or provided to Borrowers or one or more of their Affiliates (in connection with this Agreement or otherwise) by any Lender or by one or more Subsidiaries or Affiliates of such Lender and each Credit Party hereby authorizes each Lender to share any information delivered to such Lender by such Credit Party and its Subsidiaries pursuant to this Agreement to any such Subsidiary or Affiliate subject to the provisions of this Section 16.15.

16.16 Publicity. Each Credit Party and each Lender hereby authorizes Agent and Lenders to make appropriate announcements of the financial arrangement entered into among Credit Parties, Agent and Lenders, including announcements which are commonly known as tombstones, in such publications and to such selected parties as Agent and each Lender shall in its reasonable discretion deem appropriate.

16.17 Certifications From Banks and Participants; USA PATRIOT Act.

(a) Each Lender or assignee or participant of a Lender that is not incorporated under the Laws of the United States of America or a state thereof (and is not excepted from the certification requirement contained in Section 313 of the USA PATRIOT Act and the applicable regulations because it is both (i) an affiliate of a depository institution or foreign bank that maintains a physical presence in the United States of America or foreign country, and (ii) subject to supervision by a banking authority regulating such affiliated depository institution or foreign bank) shall deliver to Agent the certification, or, if applicable, recertification, certifying that such Lender is not a "shell" and certifying to other matters as required by Section 313 of the USA PATRIOT Act and the applicable regulations: (1) within ten (10) days after the Closing Date, and (2) as such other times as are required under the USA PATRIOT Act.

(b) The USA PATRIOT Act requires all financial institutions to obtain, verify and record certain information that identifies individuals or business entities which open an "account" with such financial institution. Consequently, any Lender may from time to time request, and each Credit Party shall provide to such Lender, such Credit Party's name, address, tax identification number and/or such other identifying information as shall be necessary for such Lender to comply with the USA PATRIOT Act and any other Anti-Terrorism Law.

16.18 Anti-Terrorism Laws.

(a) Each Credit Party represents and warrants that (i) no Covered Entity, and none of its respective officers and directors and, to the knowledge of such Covered Entity, its employees, is a Sanctioned Person and (ii) no Covered Entity, and none of its respective officers and directors and, to the knowledge of such Covered Entity, its employees, either in its own right or (to the best of such Covered Entity's knowledge after due inquiry) through any third party, (A) has any of its assets in a Sanctioned Country or in the possession, custody or control of a Sanctioned Person in violation of any Anti-Terrorism Law; (B) does business in or with, or derives any of its income from investments in or transactions with, any Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law; or (C) engages in any dealings or transactions prohibited by any Anti-Terrorism Law.

(b) Each Credit Party covenants and agrees that (i) no Covered Entity, and none of its respective officers and directors and, to the knowledge of such Covered Entity, its employees, will become a Sanctioned Person, (ii) no Covered Entity, and none of its respective officers and directors and, to the knowledge of such Covered Entity, its employees and agents, either in its own right or (to the best of such Covered Entity's knowledge after due inquiry) through any third party, will (A) have any of its assets in a Sanctioned Country or in the possession, custody or control of a Sanctioned Person in violation of any Anti-Terrorism Law; (B) do business in or with, or derive any of its income from investments in or transactions with, any Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law; (C) engage in any dealings or transactions prohibited by any Anti-Terrorism Law or (D) use the Advances to fund any operations in, finance any investments or activities in, or, make any payments to, a Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law, (iii) the funds used to repay the Obligations will not be derived from any unlawful activity, (iv) each Covered Entity, and each of its respective officers and directors and, to the knowledge of such Covered Entity, its employees, shall comply with all Anti-Terrorism Laws and (v) the Credit Parties shall promptly notify Agent in writing upon the occurrence of a Reportable Compliance Event.

(c) No provision of this Section 16.18 shall apply to or in favor of any Person if and to the extent that it would result in a breach, by or in respect of that person, of any applicable Blocking Law.

16.19 Canadian Anti-Money Laundering Laws.

(a) Each Credit Party acknowledges that, pursuant to the *Proceeds of Crime Money Laundering) and Terrorist Financing Act* (Canada) and other applicable anti-money laundering, anti-terrorist financing, government sanction and "know your client" laws, under the laws of Canada (collectively, including any guidelines or orders thereunder, "AML Legislation"), Agent and Lenders may be required to obtain, verify and record information regarding each Credit Party, its respective directors, authorized signing officers, direct or indirect shareholders or other Persons in control of such Credit Party, and the transactions contemplated hereby. Each Credit Party shall promptly provide all such information, including supporting documentation and other evidence, as may be reasonably requested by any Lender or Agent, or any prospective assign or participant of a Lender or Agent, necessary in order to comply with any applicable AML Legislation, whether now or hereafter in existence.

(b) If Agent has ascertained the identity of any Credit Party or any authorized signatories of any Credit Party for the purposes of applicable AML Legislation, then Agent:

(i) shall be deemed to have done so as an agent for each Lender, and this Agreement shall constitute a "written agreement" in such regard between each Lender and Agent within the meaning of applicable AML Legislation; and

(ii) shall provide to each Lender copies of all information obtained in such regard without any representation or warranty as to its accuracy or completeness.

(c) Notwithstanding the provisions of this Section 16.19 and except as may otherwise be agreed in writing, each Lender agrees that Agent has no obligation to ascertain the identity of the Credit Parties or any authorized signatories of the Credit Parties on behalf of any Lender, or to confirm the completeness or accuracy of any information it obtains from the Credit Parties or any such authorized signatory in doing so.

16.20 Contractual Recognition of Bail-In. Notwithstanding any other term of this Agreement or any Other Document or any other agreement, arrangement or understanding between the parties to this Agreement or any Other Document, each party acknowledges and accepts that any liability of any party to any other party under or in connection with this Agreement or any Other Document may be subject to Bail-In Action by the relevant Resolution Authority and acknowledges and accepts to be bound by the effect of:

(a) any Bail-In Action in relation to any such liability, including (without limitation):

(i) a reduction, in full or in part, in the principal amount, or outstanding amount due (including any accrued but unpaid interest) in respect of any such liability;

(ii) a conversion of all, or part of, any such liability into shares or other instruments of ownership that may be issued to, or conferred on, it; and

(iii) a cancellation of any such liability; and

(b) a variation of any term of this Agreement or any Other Document to the extent necessary to give effect to any Bail-In Action in relation to any such liability.

16.21 Permitted Non-ABL Indebtedness. In connection with the incurrence by any Credit Party or any Subsidiary of any Credit Party of any Indebtedness permitted by Section 7.1(p), Agent agrees to execute and deliver a customary intercreditor agreement and amendments, amendments and restatements, restatements or waivers of or supplements to or other modifications to, any Collateral Document, to execute and deliver any applicable intercreditor agreement and to make or consent to any filings or take any other actions in connection therewith, as may be reasonably deemed by Borrowing Agent and Agent to be necessary or reasonably desirable for any Permitted Lien on the assets of any Credit Party permitted to secure such Indebtedness permitted by Section 7.1(p), to become a valid, perfected lien (with such priority as may be designated by the relevant Credit Party or any Subsidiary of any Credit Party, to the extent such priority is permitted by this Agreement and the Other Documents) pursuant to the Collateral Document being so amended, amended and restated, restated, waived, supplemented or otherwise modified or otherwise.

16.22 Permitted Intercreditor Agreement.

(a) Each of the Lenders, the Issuers and the other Secured Parties acknowledges that obligations of Borrowers and the other Credit Parties under any Permitted Non-ABL Indebtedness, upon incurrence thereof, may be secured by Liens on assets of Borrowers and the other Credit Parties that constitute Collateral (and by fee-owned real property

of Borrowers and the other Credit Parties, whether or not such fee-owned real property constitutes Collateral), and that the relative Lien priority and other creditor rights of the Secured Parties and the secured parties in respect of Permitted Non-ABL Indebtedness will be set forth in a Permitted Intercreditor Agreement. Each of the Lenders, the Issuers and the other Secured Parties hereby irrevocably authorizes and directs Agent to execute and deliver, in each case on behalf of such Secured Party and without any further consent, authorization or other action by such Secured Party, (i) from time to time upon the request of Borrowers, in connection with the establishment, incurrence, amendment, refinancing or replacement of any Permitted Non-ABL Indebtedness, any Permitted Intercreditor Agreement (it being understood and agreed that Agent is hereby authorized and directed to determine the terms and conditions of any such Permitted Intercreditor Agreement as contemplated by the definition of the term "Permitted Intercreditor Agreement", and that notwithstanding anything herein to the contrary, Agent shall not be liable for, or be responsible for any loss, cost or expense suffered by any Lender, any Issuer or any other Secured Party, or by any Credit Party, as a result of, any such determination) and (ii) any documents relating thereto.

(b) Each of the Lenders, the Issuers and the other Secured Parties hereby irrevocably (i) consents to the subordination of the Liens on the Non-ABL Priority Collateral securing the Obligations on the terms set forth in each Permitted Intercreditor Agreement, (ii) agrees that, upon the execution and delivery thereof, such Secured Party will be bound by the provisions of each Permitted Intercreditor Agreement as if it were a signatory thereto and will take no actions contrary to the provisions thereof, (iii) agrees that no Secured Party shall have any right of action whatsoever against Agent as a result of any action taken by Agent pursuant to this Section or in accordance with the terms of any Permitted Intercreditor Agreement and (iv) authorizes and directs Agent to carry out the provisions and intent of each such document.

(c) Each of the Lenders, the Issuers and the other Secured Parties hereby irrevocably further authorizes and directs Agent to execute and deliver, in each case on behalf of such Secured Party and without any further consent, authorization or other action by such Secured Party, any amendments, supplements or other modifications of each Permitted Intercreditor Agreement that Borrowers may from time to time request (i) to give effect to any establishment, incurrence, amendment, extension, renewal, refinancing or replacement of any Permitted Non-ABL Indebtedness, (ii) to confirm for any party that the Permitted Intercreditor Agreement is effective and binding upon Agent on behalf of the Secured Parties or (iii) to effect any other amendment, supplement or modification so long as the resulting agreement would constitute a Permitted Intercreditor Agreement if executed at such time as a new agreement.

(d) Each of the Lenders, the Issuers and the other Secured Parties hereby irrevocably further authorizes and directs Agent to execute and deliver, in each case on behalf of such Secured Party and without any further consent, authorization or other action by such Secured Party, any amendments, supplements or other modifications of any Collateral Document to add or remove any legend that may be required pursuant to any Permitted Intercreditor Agreement.

(e) Each Secured Party, whether or not a party hereto, will be deemed, by its acceptance of the benefits of the Collateral and of the Guarantees of the Obligations provided under the Loan Documents, to have agreed to the provisions of this Section 16.22.

[signature pages follow]

Each of the parties has signed this Agreement as of the day and year first above written.

BORROWERS:

GLOBE SPECIALTY METALS, INC., a Delaware corporation, as a Borrower

By: /s/ Paul Lojek
Name: Paul Lojek
Title: President

Title: President

QSIP CANADA ULC, an unlimited company organized under the laws of Nova Seotia, as a Borrower

By: /s/ Paul Lojek
Name: Paul Lojek
Title: President

GUARANTORS:

GLOBE METALLURGICAL INC., a Delaware corporation
ALDEN RESOURCES LLC, a Delaware limited liability company
ARL RESOURCES, LLC, a Delaware limited liability company
ARL SERVICES, LLC, a Delaware limited liability company
ALABAMA SAND AND GRAVEL, INC., a Delaware corporation
ALDEN SALES CORP, LLC, a Delaware limited liability company
CORE METALS GROUP HOLDINGS LLC, a Delaware limited liability company
CORE METALS GROUP LLC, a Delaware limited liability company
METALLURGICAL PROCESS MATERIALS, LLC, a Delaware limited liability company TENNESSEE ALLOYS COMPANY, LLC, a Delaware limited liability company
GSM SALES, INC., a Delaware corporation NORCHEM, INC., a Florida corporation GATLIFF SERVICES, LLC, a Delaware limited liability company
GLOBE METALS ENTERPRISES, LLC, a Delaware limited liability company
GSM ENTERPRISES LLC, a Delaware limited liability company
GSM ENTERPRISES HOLDINGS INC., a Delaware corporation
GBG HOLDINGS, LLC, a Delaware limited liability company,
GSM ALLOYS 1INC., a Delaware corporation GSM ALLOYS 11 INC., a Delaware corporation

By: /s/ Kimberly Semple
Name: Kimberly Semple
Title: VP and Treasurer

GUARANTORS CONTD:

GSM FINANCIAL, INC.

By: /s/ Paul Lojek
Name: Paul Lojek
Title: President

GUARANTORS CONTD:

SOLSIL, INC.

By: /s/ Paul Lojek
Name: Paul Lojek
Title: President

AGENT AND LENDERS:

PNC BANK, NATIONAL ASSOCIATION,
as a Lender and as Agent

By: /s/ Eamonn Brady
Name : Eamonn Brady
Title: Authorized Signatory

One North Frankli n Street, 25th Floor
Chicago, Illinois 60606
Attention: Portfolio Manager -Ferroglobe

Revol ving Commitment Percentage: 100%
Revolving Commitment Amount: $100,000,000

Exhibit 1.2(a)

Form of Borrowing Base Certificate

(see attached)

PNC Bank, N.A. / PNC Business Credit
Borrowing Base Certificate

Ferroglobe PLC
Customer #Bd

Certificate # Initial BBC
Period Ended 6/30/2019

To (i) induce PNC Bank, National Association ("Agent") to make an initial loan advance pursuant to the Revolving Credit, Term Loan and Security Agreement dated as of_____(as amended from time to time, the "Loan and Security Agreement") and (ii) comply with the ongoing requirements set forth in the Loan and Security Agreement to deliver a Borrowing Base Certificate, we hereby certify as of the above date, the following:

			From	To			Loan Status Schedule ID Total	01A/R US	02 A/R Canada
Accounts Receivable	1	Positive Certificate A/R Balance (Line 10 from Prior Cert)					$0.00		$0.00
	2	Gross Sales Since Last Certificate			+		$0.00		$0.00
	3	Debit Memos/Other Additions	5/31/2019	6/30/2019	+		$0.00		$0.00
	4	Credits Since Last Certificate	5/31/2019	6/30/2019	-		$0.00		$0.00
	5	Total Net Sales					$0.00	$0.00	$0.00
	6	Gross Collections Since Last Certificate	5/31/2019	6/30/2019	-		$0.00		$0.00
	7	Discounts/Other Deductions	5/31/2019	6/30/2019	-		$0.00		$0.00
	8	Non A/R Cash Since Last Certificate	5/31/2019	6/30/2019	+		$0.00		$0.00
	9	Total Deductions					$0.00	$0.00	$0.00
	10	Total A/R Now Being Certified to Bank				per roll forward →	$0.00	$0.00	$0.00
	11	Ineligible A/R Not Attributed			-		$0.00	$0.00	$0.00
	12	Net Eligible Trade A/R					$0.00	$0.00	$0.00
	13	Advance Rate					#DIV/0!	85%	85%
	14	Trade A/R Availability					$0.00	$0.00	$0.00
	15	Dilution Reserve					$0.00	$0.00	$0.00
	16	Net Trade A/R Availability					$0.00	$0.00	$0.00

					Loan Status Schedule ID Total	03N US
Raw Materials	17	Gross Inventory as of:			$0.00	$0.00
	18	Ineligible Inventory as of:		-	$0.00	$0.00
	19	Net Eligible Inventory:			$0.00	$0.00
	20	Advance Rate (per appraisal dtd)			#DIV/0!	57.231003%
	21	Inventory Availability before Aggregate Sub-limit			$0.00	$0.00
	22	Aggregate Inventory Sub-limit				
	23	Net Aggregate Inventory Availability:			$0.00	

					Loan Status Schedule ID Total	04N US
WIP	24	Gross Inventory as of:			$0.00	$0.00
	25	Ineligible Inventory as of:		-	$0.00	$0.00
	26	Net Eligible Inventory:			$0.00	$0.00
	27	Advance Rate (per appraisal dtd)			#DIV/0!	42.527944%
	28	Inventory Availability before Aggregate Sub-limit			$0.00	$0.00
	29	Aggregate Inventory Sub-limit				
	30	Net Aggregate Inventory Availability:			$0.00	

					Loan Status Schedule ID Total	05N PO IT	06N RM IT
In-Transit	31	Gross Inventory as of:			$0.00	$0.00	$0.00
	32	Ineligible Inventory as of:		-	$0.00	$0.00	$0.00
	33	Net Eligible Inventory			$0.00	$0.00	$0.00
	34	Advance Rate (per appraisal dtd)			#DIV/0!	72.667712%	83.179764%
	35	Inventory Availability before Aggregate Sub-limit			$0.00	$0.00	$0.00
	36	Aggregate Inventory Sub-limit		$ 5,000,000.00			
	37	Net Aggregate Inventory Availability:			$0.00		

					Loan Status Schedule ID Total	07N US
Stores/Spare Parts	38	Gross Inventory as of:			$0.00	$0.00
	39	Ineligible Inventory as of:		-	$0.00	$0.00
	40	Net Eligible Inventory			$0.00	$0.00
	41	Advance Rate (per appraisal dtd)			#DIV/0!	14.403935%
	42	Inventory Availability before Aggregate Sub-limit			$0.00	$0.00
	43	Aggregate Inventory Sub-limit		$ 2,000,000.00		
	44	Net Aggregate Inventory Availability:			$0.00	

					Loan Status Schedule ID Total	08N US	9 N Canada
Consigned PO	45	Gross Inventory as of:			$0.00	$0.00	$0.00
	46	Ineligible Inventory as of:		-	$0.00	$0.00	$0.00
	47	Net Eligible Inventory			$0.00	$0.00	$0.00
	48	Advance Rate (per appraisal dtd)			#DIV/0!	75.000000%	75.000000%
	49	Inventory Availability before Aggregate Sub-limit			$0.00	$0.00	$0.00
	50	Aggregate Inventory Sub-limit		$ 7,500,000.00			
	51	Net Aggregate Inventory Availability:			$0.00		

					Loan Status Schedule ID Total	10 N US
Packaging		Gross Inventory as of:			$0.00	$0.00
		Ineligible Inventory as of:		-	$0.00	$0.00
		Net Eligible Inventory			$0.00	$0.00
		Advance Rate (per appraisal dtd)			#DIV/0!	26.717143%
		Inventory Availability before Aggregate Sub-limit			$0.00	$0.00
		Aggregate Inventory Sub-limit		$ 500,000.00		
		Net Aggregate Inventory Availability:			$0.00	

					Loan Status Schedule ID Total	11N US	12N Canada
Finished Goods	52	Gross Inventory as of:			$0.00	$0.00	$0.00
	53	Ineligible Inventory as of:		-	$0.00	$0.00	$0.00
	54	Net Eligible Inventory			$0.00	$0.00	$0.00
	55	Advance Rate (per appraisal dtd)			#DIV/0!	74.197302%	73.979015%
	56	Inventory Availability before Aggregate Sub-limit			$0.00	$0.00	$0.00
	57	Aggregate Inventory Sub-limit					
	58	Net Aggregate Inventory Availability:			$0.00		
Total Inventory:	59	Total Gross Inventory			$0.00		
	60	Total Ineligible Inventory			$0.00		
	61	Total Eligible Inventory, Before Categorical & Divisional Sublimits			$0.00		
	62	Combined Inventory Availability before Aggregate Sublimit			$0.00		
	63	Inventory Sub-limit (i.e. Aggregate Inventory Availability <65% of BBC		$ -			
	64	Adjusted Combined Inventory Availability:			$0.00		

Collateral Reserves	65	Gross Combined Availability:		$0.00
	66	Less Availability Reserve		
	67	Less Other Reserve		
	68	Contributed Collateral Value		$0.00
	69	Reader Limit		
	70	Lesser of Line Limit and Contributed Collateral		$0.00
	71	New Loan Balance		$0.00
	72	Rent Reserve	-	
	73	Outstanding Letters of Credit	-	
	74	DSTRBT Reserve	-	
	75	Royalty Reserve	-	
	76	Tax Lien Reserve	-	
	77	Master Reserve Total (per PNC system)		$0.00
	78	Reader Loans & Reserves		$0.00
	79	Term Loans (Principal & Revolver Limit)	+	$0.00
	80	Total Loans & Reserves		$0.00
	81	Loan Availability		$0.00
	82	Remaining Reader Availability	$0.00	
	83	Remaining Line Availability		

The undersigned hereby certifies that the above representations are true and correct and subject to all conditions of the Credit and Security Agreement. We also represent that there does not exist a condition which may precipitate an Event of Default, as defined under the terms of the Credit and Security Agreement.

Authorized Signature, Title

Date

Name of Authorized Signer (Printed)

Exhibit 1.2(b)

Form of Compliance Certificate

COMPLIANCE CERTIFICATE
(this "Certificate")

This Certificate is delivered pursuant to that certain Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower and each other Person joined or party to the Credit Agreement as a borrower from time to time, collectively, "Borrowers", and each individually, a "Borrower"), each other Credit Party party thereto from time to time, the financial institutions which are now or which hereafter become a party thereto (collectively, the "Lenders", and each individually, a "Lender") and PNC BANK, NATIONAL ASSOCIATION, as agent for Lenders (in such capacity, "Agent"). Capitalized terms used and not otherwise defined herein shall have the meanings provided in the Credit Agreement.

The undersigned officer, , the [**Chief Executive Officer/President/Chief Financial Officer/Treasurer/Controller**] of the Borrowing Agent, does hereby certify (in such capacity and not in the undersigned's individual capacity), based on an examination sufficient to permit the undersigned to make an informed statement as of the [**quarter/year**] ended , 20 (the "Report Date"), as follows:

1. Minimum Covenant Liquidity. Exhibit A to this Certificate shows that Covenant Liquidity is not less than $32,500,000 and (a) no less than $22,500,000 of such Covenant Liquidity consists of Qualified Restricted Cash and (b) no less than $10,000,000 of such Covenant Liquidity consists of Undrawn Availability.

2. Event of Default or Default. As of the Report Date, except as set forth on Schedule 1 to this Certificate, no Event of Default or Default has occurred and is continuing or exists as of the date hereof. If any Event of Default or Default is set forth on Schedule 1, Schedule 1 also specifies the circumstances regarding such Event of Default or Default, when it occurred, whether it is continuing and the steps being taken by the Borrowers with respect to such default.

3. Representations, Warranties and Covenants. Except as expressly provided on Schedule 2 to this Certificate, as applicable, each of the representations and warranties made by any Credit Party in or pursuant to the Credit Agreement and each of the Other Documents is true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof) on and as of the date hereof as if made on and as of the date hereof (except to the extent any such representation or warranty expressly relates only to any earlier and/or specified date, in which case such representation and warranty shall be true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof).

4. Updates to Certain Schedules. Schedule 3 to this Certificate contains updates to Schedules [•].[1]

[**SIGNATURE PAGE FOLLOWS**]

[1] **[Borrower Representative to provide updates to Schedules 4.4(a) (Equipment and Inventory Locations; Place of Business, Chief Executive Office, Location of Books and Records; Type of Organization; Jurisdiction of Formation; State Organizational Identification Number; U.S. Federal Tax Identification Number), 5.2(b) (Subsidiaries), as applicable.]**

IN WITNESS WHEREOF, the undersigned has executed this Compliance Certificate this_____day of_____, 20_ .

GLOBE SPECIALTY METALS, INC.,
as Borrowing Agent

By: _____
Name: _____
Title: _____

Exhibit 1.2(b)

EXHIBIT A TO COMPLIANCE CERTIFICATE

[to be provided by Borrowers]

Exhibit 1.2(b)

SCHEDULE 1 TO COMPLIANCE CERTIFICATE

[to be provided by Borrowers]

Exhibit 1.2(b)

SCHEDULE 2 TO COMPLIANCE CERTIFICATE

[to be provided by Borrowers]

Exhibit 1.2(b)

SCHEDULE 3 TO COMPLIANCE CERTIFICATE

[to be provided by Borrowers]

Exhibit 1.2(b)

Exhibit 1.2(c)

Form of Credit Party Joinder

CREDIT PARTY JOINDER

This CREDIT PARTY JOINDER (this "Joinder") is entered into as of [__], by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower, collectively, the "Existing Borrowers"), [ ], a [ ] ("New Credit Party", and collectively with the Existing Borrowers and each other Credit Party (other than New Credit Party) party to the Credit Agreement described below, the "Existing Credit Parties"), and PNC BANK, NATIONAL ASSOCIATION, as agent for the Lenders party to the Credit Agreement referred to below (in such capacity, "Agent").

WHEREAS, the Existing Credit Parties, Agent, and the lenders from time to time party thereto (the "Lenders"), are party to that certain Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement");

WHEREAS, pursuant to the Credit Agreement, Agent and the Lenders have agreed to make certain loans and other financial accommodations available to the Credit Parties from time to time pursuant to the terms and conditions thereof;

WHEREAS, New Credit Party (a) is an Affiliate of the Existing Credit Parties and, as such, will benefit by virtue of the financial accommodations extended to the Credit Parties by the Agent and the Lenders and (b) by becoming a [Borrower and a] Credit Party will benefit from certain rights granted to [Borrowers and] the Credit Parties pursuant to the terms of the Credit Agreement and Other Documents; and

WHEREAS, the Borrowers have agreed to join New Credit Party as a [Borrower and a] Credit Party to the Credit Agreement and the applicable Other Documents.

NOW THEREFORE, in consideration of the premises and mutual agreements herein contained, the parties hereto agree as follows:

1. Defined Terms. Unless otherwise defined herein, capitalized terms used herein and not otherwise defined shall have the meanings ascribed to such terms in the Credit Agreement.

2. Joinder to Credit Agreement. New Credit Party is hereby joined to the Credit Agreement as a [Borrower and a] Credit Party, and New Credit Party hereby agrees to be bound by the terms and conditions (including without limitation all of the representations and warranties and covenants) applicable to it as a [Borrower and a] Credit Party under the Credit Agreement, as if New Credit Party were a direct signatory thereto. In furtherance of the preceding sentence, without limiting any provision of the Credit Agreement or any Other Document, [New Credit Party agrees to be jointly and severally liable with each other Borrower for the Revolving Advances and all Obligations, and] to secure the prompt payment and performance to Agent and

each Lender of the Obligations, New Credit Party hereby [assigns, pledges and grants to Agent for the ratable benefit of each Secured Party, a continuing security interest in and to and Lien on all of its Collateral, whether now owned or existing or hereafter created, acquired or arising and wheresoever located].

3. Joinder to Other Documents. By its signature below, New Credit Party joins itself and becomes party to each applicable Other Document to which the Existing Credit Parties are party, as a [Borrower and a] Credit Party thereunder, in each case with the same force and effect as if originally named therein as a party thereto, and New Credit Party hereby agrees to all of the terms and provisions of such Other Documents applicable to it as a party thereto.

4. Schedules to Credit Agreement. Schedules [ ] attached hereto amend and restate in their entirety the corresponding schedules to the Credit Agreement and shall be deemed a part thereof for all purposes of the Credit Agreement.

5. Schedule to Stock Pledge Agreement. Schedule I attached hereto amends and restates in its entirety the corresponding schedule to the Pledge Agreement and shall be deemed a part thereof for all purposes of the Pledge Agreement.

6. Representations and Warranties. Each Existing Borrower and each New Credit Party represents and warrants to Agent and the Lenders as follows:

(a) This Joinder (i) has been duly and validly executed and delivered by New Credit Party, and (ii) constitutes, or will constitute, a legal, valid and binding obligation of New Credit Party, enforceable against New Credit Party in accordance with its terms, except as may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or similar laws relating to or affecting creditors' rights generally or by equitable principles relating to enforceability (whether considered in a proceeding in equity or at law).

(b) New Credit Party (i) is a public company, corporation, limited partnership, limited liability company or other entity duly organized, (ii) has the lawful power to own or lease its properties and to engage in the business it presently conducts or proposes to conduct, (iii) is duly licensed or qualified and in good standing in each jurisdiction where the property owned or leased by it or the nature of the business transacted by it or both makes such licensing or qualification necessary, except in jurisdictions where the failure to be so licensed, qualified or in good standing would not reasonably be expected to cause a Material Adverse Effect, (iv) has full power to enter into, execute, deliver and carry out this Agreement and the Other Documents to which it is a party, and all such actions have been duly authorized by all necessary proceedings on its part, (v) is in compliance in all material respects with all Applicable Laws (other than Environmental Laws which are specifically addressed in Section 5.18 of the Credit Agreement) in all jurisdictions in which New Credit Party or Subsidiary of New Credit Party is presently or will be doing business except where the failure to do so would not constitute a Material Adverse Effect and (vi) has good and marketable title to or valid leasehold interest in all properties, assets and other rights which it purports to own or lease or which are reflected as owned or leased on its books and records, free and clear of all Liens and encumbrances except Permitted Liens. As of the date hereof, no Default or Event of Default has occurred and exists or is continuing.

7. Effectiveness of Joinder; Continuing Effect. Except as expressly set forth in Sections 2, 3, 4 and 5 of this Joinder, nothing in this Joinder shall constitute a modification or alteration of the terms, conditions or covenants of the Credit Agreement or any Other Document, or a waiver of any other terms or provisions thereof, and the Credit Agreement and the Other Documents shall remain unchanged and shall continue in full force and effect, in each case as amended hereby. Agent and each Lender hereby reserves and preserves all of its rights and remedies against any Credit Party under the Credit Agreement and the Other Documents.

8. Conditions to Effectiveness. This Joinder shall become effective upon the Agent's receipt of a fully executed copy of this Joinder, in form and substance acceptable to Agent.

9. Miscellaneous.

(a) Governing Law. This Joinder shall, in accordance with Section 5-1401 of the General Obligations Law of the State of New York, be governed by and construed in accordance with the laws of the State of New York.

(b) Counterparts. This Joinder may be executed in any number of counterparts and by the different parties hereto on separate counterparts and each such counterpart shall be deemed to be an original, but all such counterparts shall together constitute but one and the same Joinder. Receipt by telecopy of any executed signature page to this Joinder shall constitute effective delivery of such signature page. This Joinder to the extent signed and delivered by means of a facsimile machine or other electronic transmission (including "pdf"), shall be treated in all manner and respects and for all purposes as an original agreement or amendment and shall be considered to have the same binding legal effect as if it were the original signed version thereof delivered in person.

(c) Other Documents. This Joinder shall constitute an Other Document.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Credit Party Joinder to be executed by their respective officers thereunto duly authorized and delivered as of the date first above written.

BORROWERS:

GLOBE SPECIALTY METALS, INC.

By: _____
Name: _____
Title: _____

QSIP CANADA ULC

By: _____
Name: _____
Title: _____

NEW CREDIT PARTY:

[_____]

By: _____
Name: _____
Title: _____

AGENT:

PNC BANK, NATIONAL ASSOCIATION, as Agent

By: _____
Name: _____
Title: _____

Exhibit 2.1(a)

Form of Revolving Credit Note

REVOLVING CREDIT NOTE

$_____ Date: _____, 20____

This Revolving Credit Note (this "Note") is executed and delivered under and pursuant to the terms of that certain Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower and each other Person joined or party to the Credit Agreement as a borrower from time to time, collectively, "Borrowers", and each individually, a "Borrower"), each other Credit Party party thereto from time to time, the financial institutions which are now or which hereafter become a party thereto (collectively, the "Lenders", and each individually, a "Lender") and PNC BANK, NATIONAL ASSOCIATION, as agent for Lenders (in such capacity, "Agent"). Capitalized terms used and not otherwise defined herein shall have the meanings provided in the Credit Agreement.

FOR VALUE RECEIVED, Borrowers hereby jointly and severally promise to pay to the order of_____("Holder"), at the Payment Office or at such other place as Agent may from time to time designate to the Borrowing Agent in writing:

(i) the principal sum of_____and /100 Dollars ($_____) or, if different from such amount, the unpaid principal balance of Holder's Revolving Commitment Percentage of the Revolving Advances as may be due and owing under the Credit Agreement, payable in accordance with the provisions of the Credit Agreement, subject to acceleration upon the occurrence and during the continuation of an Event of Default under the Credit Agreement, or earlier termination of the Credit Agreement pursuant to the terms thereof; and

(ii) interest on the principal amount of this Note from time to time outstanding, payable at the Revolving Interest Rate in accordance with the provisions of the Credit Agreement. In no event, however, shall interest exceed the maximum interest rate permitted by law.

This Note is one of the Revolving Credit Notes referred to in the Credit Agreement and is secured, inter alia, by the Liens granted pursuant to the Credit Agreement and the Other Documents, is entitled to the benefits of the Credit Agreement and the Other Documents and is subject to all of the agreements, terms and conditions therein contained.

This Note is subject to mandatory prepayment and may be voluntarily prepaid, in whole or in part, on the terms and conditions set forth in the Credit Agreement.

This Note shall be governed by and construed in accordance with the laws of the State of New York.

Each Borrower expressly waives any presentment, demand, protest, notice of protest, or notice of any kind except as expressly provided in the Credit Agreement.

[**SIGNATURE PAGE FOLLOWS**]

IN WITNESS WHEREOF, this Revolving Credit Note has been executed and delivered as of the first date written above.

GLOBE SPECIALTY METALS, INC., as a Borrower

By: _____
Name: _____
Title: _____

QSIP CANADA ULC, as a Borrower

By: _____
Name: _____
Title: _____

Exhibit 2.1(a)

Exhibit 2.4(a)

Form of Swing Loan Note

SWING LOAN NOTE

$_____ Date: _____, 201__

This Swing Loan Note (this "Note") is executed and delivered under and pursuant to the terms of that certain Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower and each other Person joined or party to the Credit Agreement as a borrower from time to time, collectively, "Borrowers", and each individually, a "Borrower"), each other Credit Party party thereto from time to time, the financial institutions which are now or which hereafter become a party thereto (collectively, the "Lenders", and each individually, a "Lender") and PNC BANK, NATIONAL ASSOCIATION, as agent for Lenders (in such capacity, "Agent"). Capitalized terms used and not otherwise defined herein shall have the meanings provided in the Credit Agreement.

FOR VALUE RECEIVED, Borrowers hereby jointly and severally promise to pay to _____("Holder"), at the Payment Office or at such other place as Agent may from time to time designate to the Borrowing Agent in writing:

(i) the principal sum of [**$**_____] and 00/100 Dollars ([**$**_____]) or, if different from such amount, the unpaid principal balance of Swing Loans as may be due and owing under the Credit Agreement, payable in accordance with the provisions of the Credit Agreement, subject to acceleration upon the occurrence and during the continuation of an Event of Default under the Credit Agreement, or earlier termination of the Credit Agreement pursuant to the terms thereof; and

(ii) interest on the unpaid principal amount of this Note from time to time outstanding, payable at the Revolving Interest Rate in accordance with the provisions of the Credit Agreement. In no event, however, shall interest exceed the maximum interest rate permitted by law.

This Note is one of the Swing Loan Notes referred to in the Credit Agreement and is secured, inter alia, by the Liens granted pursuant to the Credit Agreement and the Other Documents, is entitled to the benefits of the Credit Agreement and the Other Documents and is subject to all of the agreements, terms and conditions therein contained.

This Note is subject to mandatory prepayment and may be voluntarily prepaid, in whole or in part, on the terms and conditions set forth in the Credit Agreement.

This Note shall be governed by and construed in accordance with the laws of the State of New York.

Borrowers expressly waive any presentment, demand, protest, notice of protest, or notice of any kind except as expressly provided in the Credit Agreement.

[SIGNATURE PAGE FOLLOWS]

Exhibit 2.4(a)

IN WITNESS WHEREOF, this Swing Loan Note has been executed and delivered as of the first date written above.

GLOBE SPECIALTY METALS, INC., as a Borrower

By: _____
Name: _____
Title: _____

QSIP CANADA ULC, as a Borrower

By: _____
Name: _____
Title: _____

Exhibit 2.4(a)

Exhibit 5.5(b)

Financial Projections

(see attached)

Exhibit 8.1(c)

Form of Financial Condition Certificate

FINANCIAL CONDITION CERTIFICATE
(this "Certificate")

[_____], 2019

This Certificate is delivered pursuant to that certain Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower and each other Person joined or party to the Credit Agreement as a borrower from time to time, collectively, "Borrowers", and each individually, a "Borrower"), each other Credit Party party thereto from time to time, the financial institutions which are now or which hereafter become a party thereto (collectively, the "Lenders", and each individually, a "Lender") and PNC BANK, NATIONAL ASSOCIATION, as agent for Lenders (in such capacity, "Agent"). Capitalized terms used and not otherwise defined herein shall have the meanings provided in the Credit Agreement.

I, the duly elected, qualified and acting [**Chief Executive Officer/President/Chief Financial Officer/Treasurer/Controller**] of the Borrowing Agent, hereby certify (in such capacity and not in my individual capacity) that:

1. I am fully familiar with all of the business and financial affairs of the Credit Parties, including, without limiting the generality of the foregoing, all of the matters hereinafter described, and I have reviewed the relevant terms of the Credit Agreement and the Other Documents and have made or have caused to be made under my supervision a reasonable review of the transactions contemplated by the Credit Agreement and financial condition of each Credit Party as of the date of this Certificate and have made such investigation and inquiries as I have deemed necessary and prudent therefor.

2. The Credit Parties, taken as a whole, are Solvent on the Closing Date after giving effect to the initial Advances made, and the Use of Proceeds contemplated to be made, on the Closing Date.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the undersigned has executed this Financial Condition Certificate as of the date first above written.

GLOBE SPECIALTY METALS, INC., as Borrowing Agent

By: _____
Name: _____
Title: _____

Exhibit 8.1(c)

Exhibit 16.3

Form of Commitment Transfer Supplement

COMMITMENT TRANSFER SUPPLEMENT

COMMITMENT TRANSFER SUPPLEMENT, dated as of _____,_____, among _____(the "Transferor Lender"), each Purchasing Lender executing this Commitment Transfer Supplement (each, a "Purchasing Lender"), and Agent (as defined below) under the Credit Agreement (as defined below).

W I T N E S S E T H:

WHEREAS, this Commitment Transfer Supplement is being executed and delivered in accordance with Section 16.3 of the Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, a limited company amalgamated under the laws of Canada; together with US Borrower and each other Person joined or party to the Credit Agreement as a borrower from time to time, collectively, "Borrowers", and each individually, a "Borrower"), each other Credit Party party thereto from time to time, the financial institutions which are now or which hereafter become a party thereto (collectively, the "Lenders", and each individually, a "Lender") and PNC BANK, NATIONAL ASSOCIATION, as agent for Lenders (in such capacity, "Agent");

WHEREAS, each Purchasing Lender wishes to become a Lender party to the Credit Agreement; and

WHEREAS, the Transferor Lender is selling and assigning to each Purchasing Lender, rights, obligations and commitments under the Credit Agreement;

NOW, THEREFORE, the parties hereto hereby agree as follows:

1. All capitalized terms used herein which are not defined shall have the meanings given to them in the Credit Agreement.

2. Upon receipt by Agent of four (4) counterparts of this Commitment Transfer Supplement, to each of which is attached a fully completed Schedule I, and each of which has been executed by the Transferor Lender and Agent, Agent will transmit to Transferor Lender and each Purchasing Lender a Transfer Effective Notice, substantially in the form of Schedule II to this Commitment Transfer Supplement (a "Transfer Effective Notice"). Such Transfer Effective Notice shall set forth, inter alia, the date on which the transfer effected by this Commitment Transfer Supplement shall become effective (the "Transfer Effective Date"), which date shall not be earlier than the first Business Day following the date such Transfer Effective Notice is received. From and after the Transfer Effective Date, each Purchasing Lender shall be a Lender party to the Credit Agreement for all purposes thereof.

3. At or before 12:00 Noon (New York City time) on the Transfer Effective Date, each Purchasing Lender shall pay to Transferor Lender, in immediately available funds, an

amount equal to the purchase price, as agreed between Transferor Lender and such Purchasing Lender (the "Purchase Price"), of the portion of the Advances being purchased by such Purchasing Lender (such Purchasing Lender's "Purchased Percentage") of the outstanding Advances and other amounts owing to the Transferor Lender under the Credit Agreement and any applicable Note. Effective upon receipt by Transferor Lender of the Purchase Price from a Purchasing Lender, Transferor Lender hereby irrevocably sells assigns, and transfers to such Purchasing Lender, without recourse, representation or warranty, and each Purchasing Lender hereby irrevocably purchases, takes and assumes from Transferor Lender, such Purchasing Lender's Purchased Percentage of the Advances and other amounts owing to the Transferor Lender under the Credit Agreement and any applicable Note together with all instruments, documents and collateral security pertaining thereto.

4. Transferor Lender has made arrangements with each Purchasing Lender with respect to (i) the portion, if any, to be paid, and the date or dates for payment, by Transferor Lender to such Purchasing Lender of any fees heretofore received by Transferor Lender pursuant to the Credit Agreement prior to the Transfer Effective Date and (ii) the portion, if any, to be paid, and the date or dates for payment, by such Purchasing Lender to Transferor Lender of fees or interest received by such Purchasing Lender pursuant to the Credit Agreement from and after the Transfer Effective Date.

5. (a) All principal payments that would otherwise be payable from and after the Transfer Effective Date to or for the account of Transferor Lender pursuant to the Credit Agreement and any applicable Note shall, instead, be payable to or for the account of Transferor Lender and Purchasing Lender, as the case may be, in accordance with their respective interests as reflected in this Commitment Transfer Supplement.

(b) All interest, fees and other amounts that would otherwise accrue for the account of Transferor Lender from and after the Transfer Effective Date pursuant to the Credit Agreement and any applicable Note shall, instead, accrue for the account of, and be payable to, Transferor Lender and Purchasing Lender, as the case may be, in accordance with their respective interests as reflected in this Commitment Transfer Supplement. In the event that any amount of interest, fees or other amounts accruing prior to the Transfer Effective Date was included in the Purchase Price paid by any Purchasing Lender, Transferor Lender and each Purchasing Lender will make appropriate arrangements for payment by Transferor Lender to such Purchasing Lender of such amount upon receipt thereof from Borrower.

6. Each of Transferor Lender and Purchasing Lender agrees that at any time and from time to time, upon the written request of any other party, it will execute and deliver such further documents and do such further acts and things as such other party may reasonably request in order to effect the purposes of this Commitment Transfer Supplement.

7. By executing and delivering this Commitment Transfer Supplement, Transferor Lender and each Purchasing Lender confirm to and agree with each other and Agent and Lenders as follows: (i) Transferor Lender represents and warrants that it is the legal and beneficial owner of the interest being assigned hereby free and clear of any adverse claim, it has full power and authority, and has taken all action necessary, to execute and deliver this Commitment Transfer Supplement and to consummate the transactions contemplated hereby; (ii) Transferor Lender makes no representation or warranty and assumes no responsibility with respect

to any statements, warranties or representations made in or in connection with the Credit Agreement or the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Credit Agreement, any applicable Note or any other instrument or document furnished pursuant thereto; (iii) Transferor Lender makes no representation or warranty and assumes no responsibility with respect to the financial condition of Borrowers or the performance or observance by Borrowers of any of their Obligations under the Credit Agreement, any applicable Note or any other instrument or document furnished pursuant hereto; (iv) each Purchasing Lender confirms that (x) it has full power and authority, and has taken all action necessary, to execute and deliver this Commitment Transfer Supplement and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (y) it meets all requirements of an eligible assignee under the Credit Agreement (subject to receipt of such consents as may be required under the Credit Agreement) and (z) it is sophisticated with respect to decisions to acquire assets of the type represented by the interest being assigned and either it, or the Person exercising discretion in making its decision to acquire the assigned interest, is experienced in acquiring assets of such type; (v) each Purchasing Lender confirms that it has received a copy of the Credit Agreement, together with copies of such financial statements and such other documents and information as it has deemed appropriate to make its own credit analysis and decision to enter into this Commitment Transfer Supplement; (vi) each Purchasing Lender will, independently and without reliance upon Agent, Transferor Lender or any other Lenders and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Credit Agreement; (vii) each Purchasing Lender appoints and authorizes Agent to take such action as agent on its behalf and to exercise such powers under the Credit Agreement as are delegated to Agent by the terms thereof; (viii) each Purchasing Lender agrees that it will perform all of its respective obligations as set forth in the Credit Agreement to be performed by each as a Lender; and (ix) each Purchasing Lender represents and warrants to Transferor Lender, Lenders, Agent and Borrower that it is either (x) entitled to the benefits of any income tax treaty with the United States of America that provides for an exemption from the United States withholding tax on interest and other payments made by Borrowers under the Credit Agreement and the Other Documents or (y) is engaged in trade or business within the United States of America.

8. Schedule I hereto sets forth the revised Revolving Commitment Percentage of the Transferor Lender and the Revolving Commitment Percentage of each Purchasing Lender as well as administrative information with respect to each Purchasing Lender.

9. This Commitment Transfer Supplement shall be governed by, and construed in accordance with, the laws of the State of New York.

IN WITNESS WHEREOF, the parties hereto have caused this Commitment Transfer Supplement to be executed by their respective duly authorized officers on the date set forth above.

_____, as the Transferor Lender

By: _____
Name: _____
Title: _____

_____, as a Purchasing Lender

By: _____
Name: _____
Title: _____

PNC BANK, NATIONAL ASSOCIATION, as Agent

By: _____
Name: _____
Title: _____

[Consented and Acknowledged:

GLOBE SPECIALTY METALS, INC., as the Borrowing Agent

By: _____
Name: _____
Title: _____]²

² If consent is required pursuant to Section 16.3 of the Credit Agreement.

SCHEDULE I TO COMMITMENT TRANSFER SUPPLEMENT

LIST OF OFFICES, ADDRESSES FOR NOTICES AND COMMITMENT AMOUNTS

(Transferor Lender)	Revised Revolving Commitment Amount	$_____
	Revised Revolving Commitment Percentage	_____%
(Purchasing Lender)	Revolving Commitment Amount	$_____
	Revolving Commitment Percentage	_____%

Addresses for Notices

_____
_____
_____

Attention:
Telephone:
Telecopier:

Exhibit 16.3

SCHEDULE II TO COMMITMENT TRANSFER SUPPLEMENT

(Form of Transfer Effective Notice)

To:_____, as the Transferor Lender and _____ , as a Purchasing Lender:

The undersigned, as Agent under the Credit and Security Agreement dated as of October 11, 2019 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among GLOBE SPECIALTY METALS, INC., a Delaware corporation ("US Borrower"), QSIP CANADA ULC, an unlimited company amalgamated under the laws of Nova Scotia ("Canadian Borrower"; together with US Borrower and each other Person joined or party to the Credit Agreement as a borrower from time to time, collectively, "Borrowers", and each individually, a "Borrower"), each other Credit Party party thereto from time to time, the financial institutions which are now or which hereafter become a party thereto (collectively, the "Lenders", and each individually, a "Lender") and PNC BANK, NATIONAL ASSOCIATION, as a Lender and as agent for Lenders, acknowledges receipt of four (4) executed counterparts of a completed Commitment Transfer Supplement in the form attached hereto. [**Note: Attach copy of Commitment Transfer Supplement**]. All capitalized terms used herein which are not defined shall have the meanings given to them in the such Commitment Transfer Supplement.

Pursuant to such Commitment Transfer Supplement, you are advised that the Transfer Effective Date will be [**insert date of Transfer Effective Notice**].

PNC BANK, NATIONAL ASSOCIATION, as Agent

By: _____
Name: _____
Title: _____

Schedule 1.2(a)
Controlled Accounts

Debtor	Name of Bank	Type of Account	Account Number
Norchem, Inc.	Fifth Third Bank	Operating	7026916770
QSIP Canada ULC	Bank of America	Master	711450230200
QSIP Canada ULC	Bank of America	Receipts	711450230226
QSIP Canada ULC	Bank of America	Disbursements	711450230218
QSIP Canada ULC	Bank of America	Master	711450230101
QSIP Canada ULC	Bank of America	Receipts	711450230127
QSIP Canada ULC	Bank of America	Disbursements	711450230119
QSIP Canada ULC	Bank of America	Master	711450230804

Schedule 1.2(b)
Permitted Holders

Javier Lopez Madrid
Pedro Larrea Paguaga
Jose Maria Alapont
Donald Barger Jr.
Bruce L. Crockett
Stuart Eizenstat
Manuel Garrido y Ruano
Greger Hamilton
Juan Villar-Mir De Fuentes

Schedule 1.2(c)
Existing Liens

1. Liens on specified equipment of Alabama Sand and Gravel, Inc. pursuant to various existing agreements, by and between Alabama Sand and Gravel, Inc. and Thompson Tractor Co., Inc. and VFS Leasing Co. amounting to $35,747.22 as of December 31, 2018.

2. Liens on specified equipment of Globe Metallurgical Inc. pursuant to various existing agreements, by and between Globe Metallurgical Inc. and Cecil I Walker Machinery Company (lease payments of $2810 per month)

3. Common law and/or statutory rights of offset and liens that may arise in connection with the performance/surety bonds listed in Item 4 of Schedule 7.1.

4. Liens pursuant to the Full Service Lease, dated December 15, 2017, between PNC Equipment Finance LLC and Globe Metallurgical Inc. listed in Item 5 of Schedule 7.1.

Schedule 2.11
Existing Letters of Credit

Account Party	Issuing Lender	Expiry Date	LOC Amount	Beneficiary
Ferroglobe PLC	PNC	4/19/20	$2,000,000.00	Tennessee Valley Authority
Ferroglobe PLC	PNC	6/28/20	$1,055,000.00	National Union Fire Insurance Co.
Ferroglobe PLC	PNC	8/1/20	$1,050,000.00	Global Energy AIG

Schedule 4.4(a)

Equipment and Inventory Locations; Place of Business; Chief Executive Office; Location of Books and Records; Type of Organization; Jurisdiction of Formation; State Organizational Identification Number; U.S. Federal Tax Identification Number; Real Property

Credit Party	Principal Place of Business	Chief Executive Office	Name/ Location of Equipment and Inventory Storage Locations	Jurisdiction/Entity Identification Number/Federal Tax ID
Globe Specialty Metals, Inc.	1595 Sparling Road Waterford, OH 45786 Washington County	1595 Sparling Road Waterford, OH 45786 Washington County	Ohio Valley Alloy: 100 Westview Ave Marietta OH, 45750 Wetz Warehouse: 1300 Blue Knob Road Marietta, OH 45750 S.H. Bell Co.: 2217 Michigan Ave East Liverpool, OH 43920 S.H. Bell Co.: 3501 E Biddle St Baltimore, MD 21213 Western Iron Works: 3360 Davey Allison Blvd Hueytown, AL 35023	DE corporation 3903081 20-2055624 (Federal)
Globe Metallurgical Inc.	1595 Sparling Road Waterford, OH 45786 Washington County	1595 Sparling Road Waterford, OH 45786 Washington County	Ohio Valley Alloy: 100 Westview Ave Marietta OH, 45750 Wetz Warehouse: 1300 Blue Knob Road	DE corporation 4211459 20-5573569 (Federal)

			Marietta, OH 45750 S.H. Bell Co.: 2217 Michigan Ave, East Liverpool, OH 43920 S.H. Bell Co.: 3501 E Biddle St Baltimore, MD 21213 Western Iron Works: 3360 Davey Allison Blvd Hueytown, AL 35023	
Alden Resources LLC	332 W Cumberland Gap Pkwy Corbin KY 40701-4818 Laurel County	332 W Cumberland Gap Pkwy Corbin KY 40701-4818 Laurel County	N/A	DE limited liability company 4210991 20-5454565 (Federal)
ARL Resources, LLC	332 W Cumberland Gap Pkwy Corbin KY 40701-4818 Laurel County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE limited liability company 5048387 20-0817277 (Federal)
ARL Services, LLC	332 W Cumberland Gap Pkwy Corbin KY 40701-4818 Laurel County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE limited liability company 5806315 N/A (Federal)
Alden Sales Corp, LLC	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE limited liability company 5017647 45-2943308 (Federal)
Core Metals Group Holdings LLC	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE limited liability company 4500380 26-1960794 (Federal)

Core Metals Group LLC	101 Garner Road Bridgeport, AL 35740 Jackson County	1595 Sparling Road Waterford, OH 45786 Washington County	Maverick Warehouse (US18, Sales Org: 3010 MPM): Maverick Warehouse (Ft. Smith AR) Gerdau Mac Steel C/O Maverick Warehouse 5404 Planters Road Fort Smith, AR 72903 Fullen Dock & Warehouse: 382 Klinke Rd Memphis, TN 38127 S.H. Bell Co.: 3501 E Biddle St Baltimore, MD 21213 115 Steel Drive Portage, IN 46368 10218 South Avenue O Chicago, IL 60617 Watco: 2926 E 126th St Chicago, IL 60633 3401 Process Drive NW Decatur, AL 35601 13609 Industrial Rd Gate 5 Houston, TX 77015 2701 Route 68 Industry, PA 15052 Beelman River: 210 Bremen Ave	DE limited liability company 4148247 20-4787573 (Federal)

			Venice, IL 62090 Cooper Marine: 581 Cochrane Causeway Mobile, AL 36610 New Orleans Port: 1350 Port of New Orleans Place New Orleans 70130 Baltimore Port: 401 E Pratt St Ste 1653 Baltimore, MD 21202 Gulf Atlantic MS: 2735 Front St. Georgetown, SC 29440	
Metallurgical Process Materials, LLC	133 Franklin Street Aurora, IN 47001 Dearborn County	1595 Sparling Road Waterford, OH 45786 Washington County	Maverick Warehouse (US18, Sales Org: 3010 MPM): Maverick Warehouse (Ft. Smith AR) Gerdau Mac Steel C/O Maverick Warehouse 5404 Planters Road Fort Smith, AR 72903 133 Franklin Street Aurora, IN 47001	DE limited liability company 4149032 20-4787682 (Federal)
Tennessee Alloys Company, LLC	101 Garner Road Bridgeport, AL 35740 Jackson County	1595 Sparling Road Waterford, OH 45786 Washington County	SH Bell-East Liverpool, OH: 101 State Route 68 Midland, PA 15059 101 Garner Road, Bridgeport, AL 35740	DE limited liability company 4157094 20-4889295 (Federal)

Alabama Sand and Gravel, Inc.	1565 Autauga Co. Rd. 24 Billingsley, AL 36006 Autauga County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE corporation 3839963 74-3128429 (Federal)
GSM Sales, Inc.	1595 Sparling Road Waterford, OH 45786 Washington County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE corporation 4285830 20-8355712 (Federal)
Norchem, Inc.	985 Seaway Drive Suite-A Fort Pierce, FL 34949 St. Lucie County	1595 Sparling Road Waterford, OH 45786 Washington County	OVAS: 100 Westview Ave, Marietta, OH 45750 SH Bell Co.: 1200 East Patapsco Ave Baltimore, MD 21225	FL corporation P93000028465 65-0424926 (Federal)
Gatliff Services, LLC	8555 East Highway 904 Williamsburg, KY 40769 Whitley County	1595 Sparling Road Waterford, OH 45786 Washington County	N/A	DE limited liability company 4875395 27-3533772 (Federal)
Globe Metals Enterprises, LLC	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE limited liability company 4518398 27-0201740 (Federal)
GSM Enterprises LLC	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE limited liability company 4809058 90-0731505 (Federal)
GSM Enterprises Holdings Inc.	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE corporation 5172868 45-5598738 (Federal)
GBG Holdings, LLC	1595 Sparling Road, Waterford, OH 45786	1595 Sparling Road, Waterford, OH 45786	N/A	DE limited liability company 5012029

	Washington County	Washington County		45-2779132 (Federal)
GSM Alloys I Inc.	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE corporation 4744599 36-4661857 (Federal)
GSM Alloys II Inc.	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE corporation 4744601 36-4661860 (Federal)
QSIP Canada ULC	Suite 900, 1959 Upper Water Street, PO BOX 997 Halifax NSB3J 2X2 (Registered Office)	1595 Sparling Road, Waterford, OH 45786	Dômeplex 045 Route Marie-Victorin, Contrecoeur, Québec, Canada J0L 1C0 Federal Marine Terminals (FMT) 95 Flank Road Pier 12 14, Hamilton, Ontario, Canada L8L 7W9	Nova Scotia unlimited company 3290773
GSM Financial, Inc.	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE corporation 4285831 20-8953858 (Federal)
Solsil, Inc.	1595 Sparling Road, Waterford, OH 45786 Washington County	1595 Sparling Road, Waterford, OH 45786 Washington County	N/A	DE corporation 4134059 20-4617464 (Federal)

Real Estate Assets

Credit Party	Name/Address/City/State/Zip Code	County/ Parish	Own/Lease
Globe Metallurgical Inc.	1595 Sparling Road, Waterford, OH 45786	Washington County	Own
Globe Metallurgical Inc.	2401 Old Montgomery Highway, Selma, AL 36703	Dallas County	Own
Globe Metallurgical Inc.	3807 Highland Ave., Niagara Falls, NY 14305	Niagara County	Own
Tennessee Alloys Company, LLC	101 Garner Rd, Bridgeport, AL 35740	Jackson County	Own
Metallurgical Process Materials, LLC	113 Franklin Street, Aurora, IN 47001	Dearborn County	Own
Alden Resources LLC	332 W Cumberland Gap Pkwy, Corbin, KY 40701	Laurel County	Lease
Alden Resources LLC	4184 South Hwy 25 West, Williamsburg,KY 40769	Whitley County	Lease
Alabama Sand & Gravel, Inc.	3714 County Road 40E, Lowndesboro, AL 36752	Lowndesboro County	Lease
Globe Specialty Metals, Inc.	600 Brickell Ave, Suite 3100, Miami, FL 33131	Miami-Dade County	Lease
Norchem, Inc.	985-A Seaway Drive, Fort Pierce, FL 34949	St. Lucie County	Lease
Gatliff Services, LLC	8555 East Highway 904, Williamsburg, KY40769	Whitley County	Lease

Schedule 4.8(i)

Deposit and Investment Accounts; Securities Accounts; Commodities Accounts

Debtor	Name of Bank	Type of Account	Account Number
Alden Resources LLC	Citizens Bank	Operating	6238670200
Alden Resources LLC	Citizens Bank	Controlled Disbursement	6238670227
Alden Sales Corp, LLC	Citizens Bank	Operating	6238670219
Core Metals Group LLC	Citizens Bank	Operating	6238670243
Core Metals Group LLC	Citizens Bank	Controlled Disbursement	6238670251
Globe Metallurgical Inc.	Citizens Bank	CSX Direct Debit	6238670316
Globe Metallurgical Inc.	Citizens Bank	Operating	6238670286
Globe Metallurgical Inc.	Citizens Bank	Controlled Disbursement	6238670308
Globe Specialty Metals, Inc.	Citizens Bank	Operating	6239366424
GSM Sales, Inc.	Citizens Bank	Operating	6238670294
Norchem, Inc.	Citizens Bank	Operating	6300898389
Norchem, Inc.	Citizens Bank	Controlled Disbursement	6699000571
Norchem, Inc.	Fifth Third Bank	Operating	7026916770
Globe Specialty Metals, Inc.	Citizens Bank	Operating	6238670197

QSIP Canada ULC	Bank of America	Master	711450230200
QSIP Canada ULC	Bank of America	Receipts	711450230226
QSIP Canada ULC	Bank of America	Disbursements	711450230218
QSIP Canada ULC	Bank of America	Master	711450230101
QSIP Canada ULC	Bank of America	Receipts	711450230127
QSIP Canada ULC	Bank of America	Disbursements	711450230119
QSIP Canada ULC	Bank of America	Master	711450230804
Globe Specialty Metals, Inc.	PNC	Checking	8026437514
Globe Specialty Metals, Inc.	PNC	Checking	8026437506
Globe Specialty Metals, Inc.	PNC	Checking	8026438605
Globe Specialty Metals, Inc.	PNC	Checking	8026437493
Globe LSE Inc.	Fifth Third Bank	Operating	7026197133
Core Metals Group LLC	Fifth Third Bank	Operating	7026927272
Globe Metallurgical Inc.	Fifth Third Bank	Direct Debit	7026927769
Globe Metallurgical Inc.	Fifth Third Bank	Operating	7026927827
Alden Sales Corp, LLC	Fifth Third Bank	Operating	7026927876

Core Metals Group LLC	Fifth Third Bank	Operating	7026927884
WVA Manufacturing LLC	Fifth Third Bank	Operating	7026927942
Globe Metallurgical Inc.	Fifth Third Bank	Direct Debit	7026927983
Alden Resources, LLC	Fifth Third Bank	Operating	7026928007
Globe Metallurgical Inc.	Fifth Third Bank	Payroll	7026928049
GSM Sales, Inc.	Fifth Third Bank	Operating	7026928106
Alden Resources, LLC	Fifth Third Bank	Operating	7026928163
Alden Resources, LLC	Fifth Third Bank	Payroll	7026928221
WVA Manufacturing, LLC	Fifth Third Bank	Operating	7026928288
WVA Manufacturing, LLC	Fifth Third Bank	Payroll	7026928346
Core Metals Group LLC	Fifth Third Bank	Payroll	7026928403
Solsil, Inc	Fifth Third Bank	Operating	7026936562
Globe Metallurgical Inc.	Fifth Third Bank	CDA	7481608557
Alden Resources, LLC	Fifth Third Bank	CDA	7481608615
Core Metals Group LLC	Fifth Third Bank	CDA	7481608672
WVA Manufacturing, LLC	Fifth Third Bank	CDA	7481608730

Solsil, Inc	Fifth Third Bank	Operating	7481608789

Securities Accounts

None.

Commodities Accounts

None.

Schedule 5.2(b)
Subsidiaries

Subsidiary	Jurisdiction of Organization	Amount, percentage and type of Equity Interests (unless otherwise indicated, 100% owned)
Globe Argentina Holdco LLC	Delaware	Globe Specialty Metals, Inc. limited liability company interest
Globe Metales, S.R.L.	Argentina	Globe Specialty Metals, Inc. (90%) Globe Argentina Holdco LLC (10%) N/A
Ultracore Energy S.A.	Argentina	Globe Metales, S.A. (97.55%) Globe Specialty Metals, Inc. (2.45%) N/A
Globe Metallurgical Inc.	Delaware	Globe Specialty Metals, Inc. 3,000 common stock shares
Alabama Sand and Gravel, Inc.	Delaware	Globe Metallurgical Inc. Inc. 100 common shares
Globe Metals Enterprises, LLC	Delaware	Globe Specialty Metals, Inc. limited liability company interest
Core Metals Group Holdings LLC	Delaware	Globe Metals Enterprises LLC limited liability company interest
Core Metals Group LLC	Delaware	Core Metals Group Holdings LLC limited liability company interest
Metallurgical Process Materials, LLC	Delaware	Core Metals Group LLC limited liability company interest
Tennessee Alloys Company, LLC	Delaware	Core Metals Group LLC limited liability company interest
ECPI Inc.	Delaware	GSM Enterprises Holdings, Inc. 100 shares of common stock
16 Front Street, LLC	Delaware	ECPI Inc. limited liability company interest
Globe LSE Inc.	Delaware	Globe Metallurgical Inc. 100 common shares
Norchem, Inc.	Florida	Globe Metallurgical Inc. (50%) GSM Enterprises Holdings Inc. (50%) 200 shares
Laurel Ford Resources, Inc.	Kentucky	Globe Metallurgical Inc. 100 common shares
West Virginia Alloys, Inc.	Delaware	Globe Metallurgical Inc. 100 common shares

GSM Alloys I, Inc.	Delaware	Globe Specialty Metals, Inc. 100 common shares
GSM Alloys II, Inc.	Delaware	Globe Specialty Metals, Inc. 100 common shares
WVA Manufacturing, LLC	Delaware	GSM Alloys I, Inc. (5.43%) GSM Alloys II, Inc. (45.57%) limited liability company interest
GSM Enterprises LLC	Delaware	Globe Specialty Metals, Inc. limited liability company interest
GSM Enterprises Holdings Inc.	Delaware	GSM Enterprises, LLC 100 shares
GBG Financial, LLC	Delaware	GSM Enterprises Holdings, LLC limited liability company interest
GBG Holdings, LLC	Delaware	GSM Enterprises Holdings, LLC limited liability company interest
Alden Resources LLC	Delaware	GBG Holdings LLC limited liability company interest
ARL Resources, LLC	Delaware	Alden Resources LLC limited liability company interest
ARL Services, LLC	Delaware	Alden Resources LLC limited liability company interest
Alden Sales Corp, LLC	Delaware	GBG Holdings, LLC limited liability company interest
Gatliff Services, LLC	Delaware	GBG Holdings, LLC limited liability company interest
Globe BG, LLC	Delaware	GSM Enterprises Holdings, LLC limited liability company interest
GSM Financial, Inc.	Delaware	Globe Specialty Metals, Inc. 10 common shares
LF Resources, Inc.	Delaware	Globe Specialty Metals, Inc. 100 common shares
Ningxia Yonvey Coal Industrial Co., Ltd.	China	LF Resources, Inc. (98%) 98 shares
MST Financial Holdings, LLC	Delaware	Globe Specialty Metals, Inc. limited liability company interest
MST Financial LLC	Delaware	Globe Specialty Metals, Inc. limited liability company interest
MST Resources, LLC	Delaware	MST Financial LLC limited liability company interest
GSM Netherlands, B.V.	Netherlands	Globe Specialty Metals, Inc. 18,000 total shares

Islenska Kisilfelagio EHF. (Icelandic Silicon Corporation)	Iceland	GSM Netherlands, B.V. (20.1033%) 703.6155 shares
Silicon Technology (Proprietary) Limited	South Africa	GSM Netherlands, B.V. (100%)
QSIP Canada ULC	Canada	GSM Netherlands B.V. (100%)
Quebec Silicon General Partner Inc.	Canada	QSIP Canada ULC (51%) 51 Class-A Shares
Quebec Silicon Limited Partnership	Canada	QSIP Canada ULC (50.99%) Quebec Silicon General Partner Inc. (0.01%) 51,995.099 shares
GSM Sales, Inc.	Delaware	Globe Specialty Metals, Inc. 10 common shares
Solsil, Inc.	Delaware	Globe Specialty Metals, Inc. (92.39%) Common Stock
Globe Metallurgical Carbon, LLC	Delaware	Globe LSE Inc. limited liability company interest

Schedule 5.26
Commercial Tort Claims

None.

Schedule 5.27
Letter of Credit Rights

None.

Schedule 7.1
Existing Indebtedness

1. A Capital Lease Agreement dated May 24, 2012 by and between Newco Mining KY, LLC, a Minnesota limited liability company and ARL Resources, LLC, of which $1,218,120.16 was outstanding as of September 30, 2019.

2. Working Capital financing by and between Globe Metales S.R.L. and Santander Rio Bank with a line of $500,000, for purposes of prefinancing of exports, of which $500,000 has been taken.

3. Working Capital financing by and between Globe Metales, S.R.L. and Banco Bilbao Vizcaya Argentaria, S.A. with a line of $500,000 of which $171,176 has been taken.

4. The several performance and surety bonds issued by RLI Insurance Company on behalf of Alden Resources LLC; ARL Resources, LLC; Alabama Sand and Gravel, Inc.; Core Metals Group LLC; WVA Manufacturing, LLC and Globe Metallurgical Inc. of which $9,480,350 was outstanding as of September 30, 2019.

5. Full Service Lease, between PNC Equipment Finance LLC and Globe Metallurgical Inc., for 350 railcars, with a 3-year lease value of $4,410,000.

6. Interest rate swap by and between FerroGlobe PLC and Goldman Sachs International, dated May 19, 2017, with a notional principal amount of
$192,500,000.

7. Existing Letters of Credit

Account Party	Issuing Lender	Expiry Date	LOC Amount	Beneficiary
Globe Specialty Metals, Inc.	Citizens	11/3/19	$82,436.82	Brickell Holdings, LLC
Globe Specialty Metals, Inc.	Citizens	10/10/19	$300,000.00	The County of Niagara
Ferroglobe PLC	PNC	4/19/20	$2,000,000.00	Tennessee Valley Authority
Ferroglobe PLC	PNC	6/28/20	$1,055,000.00	National Union Fire Insurance Co.
Ferroglobe PLC	PNC	8/1/20	$1,050,000.00	Global Energy AIG

Globe Specialty Metals, Inc.	PNC	11/13/20	$393,909.92	Citizens Bank, N.A.

8. Intercompany Loans

	Borrower	Lender	Maximum Amount
A.	Globe Metales S.R.L.	Ferroglobe PLC	$3,500,000
B.	Ningxia Yonvey Coal Industrial Co., Ltd.	Ferroglobe PLC	$5,000,000
C.	Globe Specialty Metals, Inc.	Ferroglobe PLC	$50,000,000
D.	Quebec Silicon L.P.	Globe Specialty Metals, Inc.	$5,000,000
E.	Ningxia Yonvey Coal Industry Co., Ltd.	LF Resources, Inc.	$3,000,000* (plus accruing interest at 10% per annum)
F.	Ningxia Yonvey Coal Industry Co., Ltd.	LF Resources, Inc.	$2,000,000* (plus accruing interest at 10% per annum)
G.	Silicon Technology (Proprietary) Limited	GSM Netherlands BV	$35,000,000
H.	QSIP Canada ULC	GSM Netherlands BV	$5,000,000
I.	QSIP Canada ULC	GSM Netherlands BV	$4,000,000
J.	GSM Netherlands BV	Globe Metales S.R.L.	$6,000,000

Schedule 7.4
Existing Investments

	Description of Investment	Amount invested	Execution Date of Agreement	Credit Party
1.	Receivables due from Ningxia Yonvey Coal Industrial Co., Ltd. for financing production of electrodes and capital expenditures related to expansions of productive capacity	$12,174,555 (as of September 30, 2019)	N/A	Globe Specialty Metals, Inc.

2. The following loans or advances to employees:

Employee Code	Amount Outstanding (€)
8003	**2.200 €**
8048	**1.125 €**
8010	**25.125 €**
8005	**0 €**
8071	**4.933,18€**
8102	**1.333,50€**
8103	**0 €**
8024	**13.200 €**
8102	**7.291,84€**
8123	**7.833,42€**
8079	**10.000 €**
8082	**4.666,80€**
544	**1.980,12€**
671	**1.007,54 €**
689	**2.099,96 €**
731	**1.060 €**
741	**5.219,88 €**
780	**2.339,88 €**
801	**0 €**
812	**179,88 €**
815	**5.579,88 €**
853	**0 €**
855	**1.439,88 €**
859	**0 €**
873	**0 €**

883	**899,88 €**
885	**3.720,04 €**
918	**0 €**
963	**5.579,88 €**
988	**4.679,88 €**
1009	**1.151,88 €**
1037	**3.239,88€**
1039	**1.260,08 €**
0347	**3.779,88 €**
0735	**2.915,00 €**
0909	**5.579,88 €**
0930	**5.039,88 €**
0957	**1.720,04€**
1001	**4.157,88 €**
1039	**1.260,08 €**

3. The following intercompany loans:

	Borrower	Lender	Maximum Amount
A.	Ferroglobe PLC	Globe Specialty Metals, Inc.	$5,405,244.54
B.	Ferroglobe PLC	Globe Specialty Metals, Inc.	$3,130,065
C.	Ferroglobe PLC	Globe Metallurgical Inc.	$20,000,000
D.	Ferroglobe PLC	QSIP Canada ULC	$10,000,000
E.	Ferroglobe PLC	Globe Argentina Holdco LLC	$3,200,000

Schedule 7.8
Transactions with Affiliates

Schedule 7.8(a)

1. The following intercompany loans:

	Borrower	Lender	Maximum Amount
F.	Ferroglobe PLC	Globe Specialty Metals, Inc.	$5,405,244.54
G.	Ferroglobe PLC	Globe Specialty Metals, Inc.	$3,130,065
H.	Ferroglobe PLC	Globe Metallurgical Inc.	$20,000,000
I.	Ferroglobe PLC	QSIP Canada ULC	$10,000,000
J.	Ferroglobe PLC	Globe Argentina Holdco LLC	$3,200,000

Schedule 7.8(b)

2. Management fees and corporate overhead charges paid by Globe Metallurgical Inc., Tennessee Alloys Company, Metallurgical Process Materials, LLC, Alden Resources LLC, Norchem, Inc, QSIP Canada ULC and GSM Sales, Inc. to Ferroglobe PLC in the aggregate amount of approximately $3 million per year.

3. Charges from Ferroglobe PLC to Globe Specialty Metals, Inc. for insurance premiums that are contracted and paid by Ferroglobe PLC on behalf of Globe Specialty Metals, Inc. of approximately $2 million per year.

4. One commercial employee that is in the payroll of QSLP and whose cost of approximately $165,000 per year is charged to Globe Specialty Metals, Inc.

SCHEDULE 8.3

Post-Closing

Loan Documents

1. No later than thirty (30) days following the Closing Date (or such later date as Agent may consent in its Permitted Discretion), the Credit Parties shall have delivered evidence satisfactory to Agent that all tax Liens on file with respect to any Credit Party have been terminated.

2. No later than thirty (30) days following the Closing Date (or such later date as Agent may consent in its Permitted Discretion), Credit Parties shall use commercially reasonable efforts to deliver Lien Waiver Agreements with respect to each location where Credit Parties maintain Collateral in excess of $1,000,000 at such location in the United States and Canada.

3. No later than thirty (30) days following the Closing Date (or such later date as Agent may consent in its Permitted Discretion), Credit Parties shall deliver to Agent copies of an issuer acknowledgment for each Subsidiary of US Borrower subject to a share pledge under the Pledge Agreement on the Closing Date.

United States

4. No later than thirty (30) days following the Closing Date (or such later date as Agent may consent in its Permitted Discretion), Credit Parties shall have delivered, in form and substance reasonably satisfactory to Agent, (i) additional insured endorsements with respect to MAPFRE issued by the Credit Parties' insurer naming Agent as an additional insured and (ii) loss payable endorsements with respect to MAPFRE issued by Credit Parties' insurer naming Agent as lenders loss payee.

Canada:

5. No later than thirty (30) days following the Closing Date (or such later date as Agent may consent in its Permitted Discretion), Credit Parties shall deliver a pledge of the Equity Interests of QSIP Canada ULC, in form and substance acceptable to Agent in its Permitted Discretion

United Kingdom

6. On or prior to the date that is ten (10) Business Days after the Closing Date (or such later date as Agent may consent in its Permitted Discretion), Credit Parties shall deliver to Agent evidence satisfactory to Agent in its Permitted Discretion of the delivery of original signature pages for the Non-Recourse Pledge Agreement.

Netherlands:

7. No later than thirty (30) days following the Closing Date (or such later date as Agent may consent in its Permitted Discretion), GSM Netherlands, B.V. shall execute and deliver to Agent a Guaranty in form and substance satisfactory to Agent in its Permitted Discretion.

8. GSM Netherlands, B.V. shall deliver Collateral Documents requested by Agent in its Permitted Discretion, in form and substance acceptable to Agent in its Permitted Discretion, including without limitation no later than the dates specified below (or such later date as Agent may consent in its Permitted Discretion):

   A. No later than thirty (30) days following the Closing Date, a Secretary's Certificate, including without limitation, the following materials:

      i. copies of its Organizational Documents

      ii. a copy of the board resolutions approving the Subject Documents;

      iii. if required, shareholder and/or supervisory board resolutions; and

      iv. if applicable, unconditional positive works council advice and request for works council advice.

   B. No later than thirty (30) days following the Closing Date, a pledge of shares with respect to the equity interests of QSIP Canada ULC;

   C. No later than thirty (30) days following the Closing Date, a deed of pledge of bank accounts, insurance receivables, intellectual property rights, intercompany receivables, movable assets and receivables by GSM Netherlands B.V., as pledgor, and Agent, as pledgee, with the same submitted for registration with the Dutch tax authorities on the day of execution or on the first Business Day following the day of execution; and

   D. No later than thirty (30) days following the Closing Date, powers of attorney granted by GSM Netherlands, B.V. and Agent, to a Dutch civil law notary, granting such Dutch civil law notary power to sign and execute the notarial deed of pledge on shares, with the same to be legalized and apostilled within a commercially practicable time thereafter.

9. In connection with the foregoing, each applicable Credit Party shall deliver legal opinions in form and substance acceptable to Agent in its Permitted Discretion requested by Agent in its Permitted Discretion.

CONTRATO DE ARRENDAMIENTO DE FINCAS URBANAS PARA USO DISTINTO A VIVIENDA

I.- PLIEGO DE CLÁUSULAS ESPECIALES

En Madrid, a 1 de octubre de 2019

REUNIDOS

De una parte: TORRE ESPACIO CASTELLANA, S.A.U., con NIF A-78917440 y domiciliada en Madrid, Paseo de la Castellana nº 259D, planta 28N; constituida por tiempo indefinido mediante escritura otorgada el 17 de octubre de 1988 ante el Notario de Madrid Don Rafael Ruiz Gallardón, con el nº 2.973 de su protocolo, e inscrita en el Registro Mercantil de Madrid, Libro 0, Folio 102, Tomo 4.667, Hoja M-76714.

Firma en representación de esta Sociedad **Don Eduardo Corral Pazos de Provens**, como Apoderado de la misma, en uso de las facultades que tiene conferidas a virtud de escritura de Poder de fecha 14 de noviembre de 2016, autorizada por el Notario de Madrid Don Ignacio Manrique Plaza, al nº 3149 de su protocolo.

Domicilio a efectos de notificaciones: en Paseo de la Castellana nº 259D, 51ª planta. 28046-Madrid-
Persona autorizada para recibir comunicaciones: Don Eduardo Corral Pazos de Provens
Correo electrónico: mailto: ecorral@torrespacio.com
Tlfno.: +3491-417.69.30

(A partir de ahora en este contrato denominada el **"ARRENDADOR"**)

De otra parte: GRUPO FERROATLANTICA DE SERVICIOS, S.L.U., con NIF B88463260 y domiciliada en Paseo de la Castellana 259-D, Planta 49, 28046, Madrid; constituida por tiempo indefinido mediante escritura otorgada el 13 de agosto de 2019, ante el Notario de Madrid D. Jaime Recarte Casanova, con el número 4690 de orden de su protocolo. Inscrita en el Registro Mercantil de Madrid, al Tomo 29861, Folio 209, Hoja número M-63610.

Firma en representación de esta Sociedad **D. José María Merino Matesanz**, con DNI 01909214F, como representante legal de la misma, en virtud de escritura pública otorgada el 13 de agosto de 2019, ante el Notario de Madrid D. Jaime Recarte Casanova, con el número 4693 de orden de su protocolo.

Domicilio a efectos de notificaciones: Paseo de la Castellana 259-D, Planta 49, 28046, Madrid
Persona autorizada para recibir comunicaciones: Don José María Merino Matesanz
Correo electrónico: mailto: jmmerinom@ferroglobe.com
Tlfno.: +34 915 903 219

(A partir de ahora en este contrato denominada el **"ARRENDATARIO"**)

Se reconocen ambas partes la capacidad legal necesaria para formalizar el presente contrato de arrendamiento para uso distinto de vivienda conforme a los siguientes

ANTECEDENTES

I.- Que el ARRENDADOR es dueño en pleno dominio de un edificio de oficinas denominado "Torre Espacio", que se encuentra debidamente inscrito a su nombre en el Registro de la Propiedad nº 34 de Madrid, al Tomo 1.006, Libro 184, Folio 99, Finca 8.244, Inscripción 4º, sito en Madrid, Paseo de la Castellana, nº 259D.

Le pertenece en virtud de escritura pública de Declaración de Obra nueva otorgada ante el Notario de Madrid Don Jaime Recarte Casanova el 19 de noviembre de 2007, con el nº 4.110 de su protocolo.

II.- Que el edificio "Torre Espacio" tiene una superficie máxima computable sobre rasante de 56.250 m^2, dividido en 54 plantas (Planta Baja, tres Entreplantas, 45 Plantas de Oficinas, dos Plantas Mecánicas dobles y una sencilla y Planta Cubierta), más planta de aljibe contra-incendios, más coronación; altura máxima de cornisa de 224 metros sin contar elementos exteriores de comunicaciones; 1.150 plazas de garaje como mínimo, distribuidas en 6 sótanos bajo rasante.

El ARRENDADOR manifiesta que le ha sido concedida por el Excmo. Ayuntamiento de Madrid la licencia de Primera Ocupación y Funcionamiento del Edificio con anterioridad a la fecha de este contrato y, por lo tanto, de la entrega y puesta a disposición al ARRENDATARIO de las fincas arrendadas, quien deberá solicitar y obtener la licencia que ampare el ejercicio de su actividad concreta.

III.- El edificio en su totalidad está destinado a alquiler a terceros por el ARRENDADOR.

Y, por su parte, el ARRENDATARIO tiene interés en alquilar al ARRENDADOR la **planta 45 Norte (en numeración comercial y planta 38 Norte en numeración de obra)**, identificada como de "Uso Oficina", con una superficie alquilable aproximada de **578,45 m^2 y 10 plazas de aparcamiento ubicadas en el Sótano 6 e identificadas con los números 44 a 53, a.i.**

A partir de ahora denominada en este contrato "**LAS FINCAS ARRENDADAS" o "LA OFICINA"** si se refiere al local arrendado.

A LA OFICINA antes citada le corresponde un coeficiente de participación en los Gastos Comunes del Edificio de **0.96179600%** y para las **plazas de aparcamiento** alquiladas se determinará su participación unitaria en los Gastos Comunes mediante el cociente entre aquellos de los Gastos que sean propios de las plantas de aparcamiento y el número de plazas de aparcamiento existentes.

Este coeficiente se aplicará, salvo pacto en contrario de las partes, sobre el total de gastos y conceptos que se recogerán en cada momento en el Presupuesto Vigente (Anexo nº 3 del PLIEGO DE CLÁUSULAS GENERALES de este Contrato).

Teniendo en cuenta los anteriores antecedentes las partes acuerdan en obligarse conforme a las siguientes

CLÁUSULAS ESPECIALES

PRIMERA.- OBJETO DEL CONTRATO.-

1.1.- Objeto y compromisos asumidos

El ARRENDADOR cede en arrendamiento al ARRENDATARIO, que lo toma y acepta, LAS FINCAS ARRENDADAS referidas en el ANTECEDENTE III de este contrato, en los términos y condiciones que aquí se recogen.

Es por ello que el ARRENDATARIO, con la firma del presente contrato, se compromete a cumplir con las obligaciones derivadas para él, que consiente y acepta desde este momento y que se recogen a continuación como CLÁUSULAS ESPECIALES o específicas de este contrato y en el PLIEGO DE CLÁUSULAS GENERALES adjunto con respecto a las de carácter común a todos los arrendatarios del edificio citado.

Se adjunta a este contrato planos de las plantas en que se ubican LAS FINCAS ARRENDADAS (**Anexo nº 1**).

1.2.- Entrega de LAS FINCAS ARRENDADAS.

La entrega de LA OFICINA se realiza con mamparas y mobiliario, con aseos terminados, falso suelo, con las instalaciones de climatización, protección contra incendios, iluminación, megafonía de emergencia, cuadro eléctrico, terminales de fibra óptica y cobre para voz y datos y control a distancia de persianas e iluminación (este apartado se detalla en la Guía Técnica de Obras Privativas- G.T.O.P.-, que se anexa como documento nº 4 del PLIEGO de CLÁUSULAS GENERALES de este Contrato).

Será de cuenta y riesgo del ARRENDATARIO la obtención de la licencia municipal correspondiente con objeto de poder desarrollar en ésta la actividad propia de su objeto social, con las consecuencias que se prevén para el caso de no obtención de las licencias o retirada de las mismas una vez concedidas, en la CLÁUSULA QUINTA, apartado 5.5.- del PLIEGO DE CLÁUSULAS GENERALES de este contrato.

1.3.- Fecha de entrega oficial

LAS FINCAS ARRENDADAS son entregadas y puestas a disposición del ARRENDATARIO con fecha de este contrato, esto es, 1 de octubre de 2019, sirviendo el presente documento como Acta de Entrega y Recepción de las mismas.

SEGUNDA.-. VIGENCIA DEL CONTRATO. -

2.1.- Plazo inicial

La duración de este contrato se establece por un plazo obligatorio de TRES **(3) AÑOS** a contar de fecha a fecha desde la fecha de entrada en vigor del mismo, esto es, hasta el 1 de octubre de 2022.

2.2.- Exigencia de obligaciones y cómputos de plazos

Este contrato estará vigente y surtirá plenos efectos jurídicos desde el 1 de octubre de 2019.

No obstante, en relación al pago de correspondientes a las FINCAS ARRENDADAS las partes pactan expresamente lo siguiente:

a) Hasta el 1 de enero de 2020 *(período de carencia)* no comenzará la obligación de pago de renta ni de Gastos Generales por parte del ARRENDATARIO respecto a la totalidad de las FINCAS ARRENDADAS.

b) Llegada esa fecha, 1 de enero de 2020 (fin del período de carencia), el ARRENDATARIO comenzará a pagar la renta y Gastos Generales correspondientes a las FINCAS ARRENDADAS.

En todos los demás aspectos de este contrato, incluido especialmente el cómputo a efectos de la revisión de la renta (en las condiciones pactadas en la cláusula Tercera siguiente), la fecha de inicio de las relaciones arrendaticias será la de la fecha de la entrada en vigor de este contrato, esto es, desde el 1 de octubre de 2019.

2.3.- Prórrogas

Transcurrido el plazo anterior de tres años, esto es, llegado el 1 de octubre de 2022, el presente contrato se renovará automáticamente hasta un máximo de tres periodos anuales sucesivos de un año de duración cada uno de ellos, salvo que cualquiera de las partes comunique a la otra su voluntad de no prorrogar el contrato con una antelación mínima de 6 meses a la fecha de vencimiento inicial del contrato o de la prórroga correspondiente, mediante carta certificada con acuse de recibo o por cualquier otro medio que acredite su recepción-.

Consecuentemente, mediada notificación de resolución cualquiera que sea la parte que lo ha instado, el ARRENDATARIO quedará obligado a desalojar LAS FINCAS ARRENDADAS y ponerlas a la total y libre disposición del ARRENDADOR el día previsto en la citada notificación (que coincidirá con el día previsto en este contrato como el de vencimiento del plazo inicial o de la prórroga correspondiente) y si ninguna de las partes ejerciera su derecho o no lo ejercitare en tiempo y forma, el contrato se entenderá plenamente vigente hasta la nueva fecha de vencimiento de la prórroga automática.

Definido este régimen optativo de renovación y de conformidad con lo establecido en la legislación aplicable, al presente contrato no le será de aplicación, por acuerdo expreso de las partes, régimen legal de prórroga alguno y, en concreto, no será en ningún caso aplicable la institución civil de la tácita reconducción prevista en el artículo 1.566 del Código Civil, ni será preciso requerimiento ni notificación alguna del ARRENDADOR al ARRENDATARIO.

2.4.- Retraso en la devolución de LAS FINCAS ARRENDADAS

Expirado el plazo por el que se pacta el arrendamiento o el de sus prórrogas, el contrato se extinguirá de pleno derecho, excepto en lo relativo a la obligación de satisfacer cualesquiera derechos económicos existentes entre las partes en virtud del contrato y, en particular, de la obligación del ARRENDADOR de devolver al ARRENDATARIO las cantidades abonadas en concepto de fianza en los términos acordados.

Consecuentemente, el ARRENDATARIO deberá proceder a la devolución al ARRENDADOR de las llaves y la libre posesión y disposición de LAS FINCAS ARRENDADAS objeto del mismo, quedando requerido desde este momento a los efectos de lo dispuesto en el artículo 1.566 del Código Civil y advertido de que el incumplimiento de esta obligación llevará consigo, como cláusula penal o de pena acumulativa, la obligación de indemnizar al ARRENDADOR con la cantidad equivalente al doble de la última renta mensual exigible, calculada "prorrata temporis" con respecto al periodo de tiempo que tarde en desalojar, contado a partir de la fecha de extinción o, en su caso, de la fecha en que se declare judicialmente la misma y sin perjuicio de las acciones que procedan para exigir ésta judicialmente.

El resto de las condiciones en que debe realizarse dicha devolución de LAS FINCAS ARRENDADAS, aplicables también a la resolución del contrato por cualquier causa, ha sido recogido en la CLÁUSULA DÉCIMA del PLIEGO DE CLÁUSULAS GENERALES de este Contrato.

2.5.- Pacto esencial

El presente arrendamiento se ha convenido teniendo especialmente en consideración la duración pactada, dado que la misma es un elemento esencial en el desarrollo del proyecto de explotación del Edificio.

Es por ello que, en el supuesto de que el Contrato se vea resuelto antes del vencimiento pactado, por cualquier causa imputable al ARRENDATARIO, nacerá el derecho del ARRENDADOR a una indemnización, que se acuerda como cláusula penal y sin necesidad de acreditar las pérdidas y daños, tal y como acepta expresamente como justo el ARRENDATARIO y que, por pacto expreso entre las partes, no será modulable judicialmente, por un importe equivalente a **SEIS (6) meses** de renta, los Gastos Generales y cargas vigentes en el mes en que se produce la resolución.

No obstante lo anterior, si en la fecha de la resolución el período que reste, con respecto al acordado por las partes como de vigencia del contrato, fuera inferior a seis meses, la cláusula penal coincidirá con el importe equivalente a la renta, Gastos Generales y cargas vigentes en el mes en que se produce la resolución, multiplicada por el tiempo que reste hasta la extinción de la vigencia del contrato, siempre que el ARRENDATARIO haya preavisado al ARRENDADOR con, al menos, seis meses de anticipación.

En caso de que el ARRENDATARIO no realice el preaviso correspondiente en los términos previstos en el párrafo anterior, la cláusula penal tendrá en todo caso un importe equivalente a SEIS (6) meses de renta, Gastos Generales y cargas vigentes en el mes en que se produce la resolución.

TERCERA.- REVISIÓN DE LA RENTA.-

3.1.- Criterios de revisión ordinaria (I.P.C.)

Las revisiones de la renta se producirán conforme a los siguientes criterios:

1º.- La renta pactada será actualizada el 31 de enero de cada año de los de vigencia pactada del contrato (produciéndose la primera revisión el **31 de enero de 2021**), aplicando a la renta anual las siguientes correcciones al alza:

Con carácter general, se aplicará la variación porcentual, positiva, experimentada por el Índice General del Sistema de **Índices de Precios al Consumo** (que fije el Instituto Nacional de Estadística u Organismo que le sustituya) para el Conjunto Nacional Total (Índice General) en el período de doce meses inmediatamente anterior

al 1 de enero de cada año en que se actualice la renta, es decir, la variación porcentual del Índice General Nacional en un año contado éste desde el 31 de diciembre del año anterior a aquel en que la renta es objeto de revisión, al 31 de diciembre de dos años antes.

2º.- La renta así actualizada será **aplicable** a partir del mes de febrero (éste incluido) del año de que se trate.

3º.- Si en dicha fecha no se conociese el índice corrector debido a un retraso en su publicación, el ARRENDADOR queda facultado para practicar **revisiones provisionales o a cuenta** aplicando índices provisionales si se conociesen y si no se conociesen, a girar recibos con carácter provisional en base a la renta vigente en ese momento, liquidando los incrementos o disminuciones que correspondan a los meses transcurridos, mediante recibo complementario, una vez que dichos índices sean publicados.

4º.- En los dos casos anteriores (revisiones sobre índices provisionales o en base a la renta vigente), **la revisión provisional** así practicada **se considerará** plenamente válida, vigente y **definitiva**, salvo el derecho de cualquiera de las partes, dentro de los seis (6) meses siguientes a la fecha de su entrada en vigor de instar su exacto cálculo por aplicación de los índices oficiales definitivos que se hayan publicado.

5º.- Si por cualquier causa **dejaran de publicarse los índices de Precios** al Consumo por el Instituto Nacional de Estadística, o por otro organismo que pudiera haber asumido sus funciones, aquellos serán sustituidos por los índices que los reemplacen; o en su defecto, por otras publicaciones o datos oficiales que recojan las variaciones del coste de la vida; o en otro caso, por Sentencia de los Tribunales a la demanda del más diligente.

3.2.- Revisión según renta de mercado

Cláusula sin contenido para este contrato.

3.3.- Renta base sobre la que se calculan las revisiones. Acumulación

Las revisiones tendrán carácter acumulativo, de suerte tal que la primera revisión se efectuará tomando como base la renta inicialmente convenida y para las sucesivas la renta revalorizada (renta+incrementos) o minusvalorizada (renta-disminuciones) como consecuencia de las actualizaciones precedentes.

3.4.- Notificación vinculante

A los efectos de revalorización de la renta, las partes convienen que tendrá plena eficacia vinculante (salvo errores materiales en el cálculo) la notificación que practique el ARRENDADOR por escrito dirigido al ARRENDATARIO (para la revisión por aplicación del I.P.C.), en el mes anterior a aquel en que la revalorización de la renta haya de surtir efecto (en el mes de enero).

3.5.- Retraso en aplicar la revisión

En ningún caso, la demora, retraso o tardanza en la aplicación de dicha actualización implicará la pérdida o renuncia del derecho del ARRENDADOR a practicar la misma.

3.6.- Pacto esencial

Los pactos anteriores referentes a la revisión de la renta constituyen condición esencial y determinante del presente Contrato, sin los cuales el ARRENDADOR no habría otorgado, lo que el ARRENDATARIO reconoce y acepta expresamente.

En consecuencia, las partes hacen constar expresamente que la revisión será procedente y se practicará tanto durante la vigencia contractual como, en su caso, en los supuestos de prórroga que pudieran pactarse expresamente.

CUARTA.- FIANZA.- GARANTÍAS ADICIONALES.-

4.1.- Fianza

El ARRENDATARIO entrega en este acto al ARRENDADOR el importe de **TREINTA Y SEIS MIL NOVECIENTOS CINCUENTA EUROS CON DIEZ CÉNTIMOS DE EURO (36.950,10€),** que se corresponde con el de dos mensualidades de renta inicial pactada en este contrato, cantidad que será depositada en la Administración Autonómica o ente público que la Ley determine, hasta la finalización del Contrato, en concepto de fianza legal prevista en el artículo 36.1 de la vigente Ley de Arrendamiento Urbanos, Ley 29/1994, de 24 de noviembre.

4.2.- Condiciones por las que se rige la fianza

La fianza entregada se regirá por las siguientes condiciones:

1º.- Durante el periodo de vigencia inicial del CONTRATO la fianza legal no estará sujeta a actualización, pero transcurrido dicho período, es decir, en la fecha de comienzo de la primera prórroga automática, la fianza se actualizará de tal forma que su importe coincida con el de dos (2) mensualidades de la Renta vigente en ese momento.

2º.- La prestación de fianza no exime al arrendatario del pago de la renta o cantidades asimiladas, ni podrá en consecuencia, imputar aquella al pago de esta.

3º.- La fianza señalada servirá para responder del cumplimiento de las obligaciones del ARRENDATARIO y será devuelta, en su caso, al finalizar el presente contrato, siempre que no esté sujeto a las responsabilidades correspondientes y sin que la misma represente límite a dicha responsabilidad.

4º.- Sesenta (60) días antes de la fecha de terminación del contrato por cualquier causa, el ARRENDADOR realizará una primera visita a LAS FINCAS ARRENDADADAS a los efectos de examinar las mismas y sus instalaciones. Ambas partes suscribirán en dicho momento un Acta en la cual se detallarán las obras que el ARRENDATARIO debe realizar a su costa a los efectos de proceder a la devolución de LAS FINCAS ARRENDADAS en el estado en que se establece en este contrato.

Asimismo, quince (15) días antes de la terminación del contrato, el ARRENDADOR realizará una segunda visita a LAS FINCAS ARRENDADAS a los efectos de comprobar que se han realizado las obras recogidas en el Acta referida en el párrafo anterior, o bien para dejar constancia de las obras que quedan pendientes de realizar o subsanar, suscribiendo las partes a tales efectos una nueva Acta.

Finalmente, el día de terminación del contrato las partes suscribirán un acta de restitución de LAS FINCAS ARRENDADAS a los efectos de acreditar su devolución al ARRENDADOR y el estado de las mismas.

En caso de que llegada dicha fecha LAS FINCAS ARRENDADAS sean devueltas al ARRENDADOR sin haberse efectuado todas las obras de restitución necesarias, el ARRENDADOR las ejecutará a cargo del ARRENDATARIO, descontando su importe, en primer término, de la fianza entregada.

5º.- En este último supuesto, es decir, si el ARRENDADOR no pudiera disponer libremente de LAS FINCAS ARRENDADAS por estar realizando obra de restitución necesarias a cuenta del ARRENDATARIO, se establece como cláusula penal expresa que éste deberá pagar al ARRENDADOR por la no disponibilidad de LAS FINCAS ARRENDADAS, una cantidad igual al doble de la última renta diaria vigente hasta que se produzca la total reparación de los desperfectos y deterioros y se hayan efectuado las obras necesarias para devolver LAS FINCAS ARRENDADAS a su estado inicial o al establecido por el ARRENDADOR, según lo recogido en la CLÁUSULA DÉCIMA del PLIEGO DE CLÁUSULAS GENERALES de este Contrato.

4.3.- Garantía adicional

Cláusula sin contenido para este contrato.

QUINTA.- RENTA.- DOMICILIACIÓN DE PAGOS.- DEMORA.-

5.1.- Renta

Se estipula en la cantidad anual de **DOSCIENTO VEINTIÚN MIL SETECIENTOS EUROS CON SESENTA CÉNTIMOS DE EURO (221.700,60 €)**, pagadera por mensualidades de **DIECIOCHO MIL CUATROCIENTOS SETENTA Y CINCO EUROS (18.475,05€)**, anticipadamente y dentro de los cinco primeros días de cada mes natural.

De dicha mensualidad, la cantidad de 16.775,05 € se corresponde con la renta mensual de LA OFICINA (578,45m^2 x 29 Euros/m^2) y la de 1.700,00 € con la de las plazas de aparcamiento alquiladas (170 € cada una de ellas).

5.2.- Cantidades asimiladas

Asimismo, el ARRENDATARIO deberá satisfacer en el mismo plazo en concepto de cantidades asimiladas a la renta los Gastos Generales correspondientes a LAS FINCAS ARRENDADAS y que se concretan en la cantidad mensual de 7,00 €/m^2 por LA OFICINA y de 22,00 €/plaza por las plazas de aparcamiento, lo que determina una cantidad inicial mensual total a pagar de **CUATRO MIL DOSCIENTOS SESENTA Y NUEVE EUROS CON QUINCE CÉNTIMOS DE EURO (4.269,15 €)** a razón de:

- Para LA OFICINA: 4.049,15 € mensuales.

- Para las 10 plazas de aparcamiento: 220,00 € mensuales.

Estás cantidades serán actualizadas anualmente al alza de acuerdo con la variación positiva experimentada por el IPC en las mismas condiciones que la renta, siendo de aplicación a estos efectos lo dispuesto en la Cláusula Tercera de este documento.

El presente sistema de cálculo para el pago por parte del ARRENDATARIO de los Gastos Generales sustituye al sistema previsto en la Cláusula 6.1- *"Gastos Generales"* del Pliego de Cláusulas Generales del CONTRATO, relativo a la aplicación de una cuota de participación sobre el Presupuesto vigente en cada momento, el cual queda sin efectos para este contrato.

Adicionalmente, el ARRENDATARIO deberá satisfacer al ARRENDADOR todas aquellas otras cantidades que deba, en su caso, como consecuencia de la aplicación de lo recogido en el presente contrato, como los consumos o gastos derivados del uso de ciertos servicios extraordinarios prestados a LA OFICINA fuera del horario habitual, recogidos en la CLÁUSULA QUINTA apartado 5.6.- del PLIEGO DE CLÁUSULAS GENERALES de este contrato.

5.3.- Retención

EL ARRENDADOR justificará al ARRENDATARIO el cumplimiento de requisitos legalmente exigidos para no estar obligado este último a practicar la retención en los términos previstos en el art. 61 i) 3º del Reglamento del Impuesto sobre Sociedades (RD 634/2015, de 10 de julio), en caso contrario, el ARRENDATARIO retendrá el porcentaje de la renta mensual que en cada momento se establezca, procediendo a su declaración e ingreso a cuenta en los plazos legalmente fijados.

El ARRENDATARIO, en este caso, deberá enviar copia al ARRENDADOR de cada declaración e ingreso a cuenta que realice dentro de los diez días siguientes a su presentación.

5.4.- Domiciliación

Para facilitar el cobro de la renta, gastos, impuestos y, en general, de cualquier cantidad adeudada por el ARRENDATARIO al ARRENDADOR en virtud del presente Contrato, las partes convienen que la renta sea abonada por el ARRENDATARIO mediante el pago del recibo que le será presentado al cobro por el ARRENDADOR, por lo que el ARRENDATARIO autoriza expresa e irrevocablemente al ARRENDADOR para que puedan cargar todas las cantidades que se le adeudaran, a su vencimiento, en la cuenta corriente que se designa en la Orden de Domiciliación que se adjunta como **Anexo nº 2** a este Contrato y que el ARRENDATARIO designa en este acto:

Entidad: CAIXABANK
Cuenta nº: ES70 2100 2931 96 0200674535
Dirección: Pº de la Castellana, 51 – 28046 MADRID

Esta cuenta bancaria designada tendrá el carácter de domicilio de pago únicamente en tanto exista en la cuenta provisión de fondos suficiente, y el ARRENDADOR no haga uso de su derecho de cobro en otra forma distinta, de conformidad con lo dispuesto en el último párrafo del presente apartado.

El impago total o parcial durante la vigencia del contrato de uno cualesquiera de los recibos domiciliados bancariamente exonerará al ARRENDADOR, de forma automática y sin necesidad de requerimiento alguno al ARRENDATARIO, en evitación de gastos, de presentar al cobro los recibos domiciliados en la entidad bancaria o de ahorro.

Si el ARRENDATARIO deseara cambiar de domiciliación bancaria, deberá remitir al ARRENDADOR, por cualquier medio válido en Derecho que acredite su recepción, un nuevo impreso de domiciliación cumplimentado y firmado, con al menos quince (15) días naturales de antelación al devengo del pago más próximo.

La autorización de domiciliación dada por el ARRENDATARIO al ARRENDADOR constituye una cláusula esencial del presente Contrato. En consecuencia, cualquier obstaculización del ARRENDATARIO a dicha domiciliación o cualquier incumplimiento a este respecto, facultarán al ARRENDADOR para resolver el Contrato.

En todo caso EL ARRENDADOR se reserva el derecho a fijar cualquier otro sistema de pago, previa notificación al ARRENDATARIO con una antelación mínima de quince (15) días naturales con respecto al devengo del pago más próximo.

5.5.- I.V.A.

Sobre la renta vigente, las cantidades asimiladas y las que resulten en cada momento como consecuencia de los pagos a realizar por el ARRENDATARIO en aplicación de lo pactado en este contrato, el ARRENDADOR repercutirá el Impuesto sobre el Valor Añadido (IVA), según la normativa del citado impuesto o el que pueda sustituirle en su día, obligándose el ARRENDATARIO a asumir cualquier cambio que se produzca en el desarrollo de dicha normativa en lo sucesivo.

5.6.- Incumplimiento

En el caso de que el ARRENDATARIO incumpliese la obligación de pago de precio de alquiler y/o de las cantidades asimiladas, dentro de los cinco días primeros de cada mes, el ARRENDADOR queda plenamente facultado para resolver el contrato e iniciar, en su caso, el procedimiento judicial, bien de desahucio por falta de pago de dicho precio o bien de reclamación de cantidad.

Expresamente se conviene que el simple retraso en el pago de cualquier obligación económica derivada del presente Contrato, por cualquier concepto (renta, cantidades asimiladas, etc.), devengará intereses de demora en favor del ARRENDADOR por importe equivalente al tipo del interés legal del dinero incrementado en tres (3) puntos.

La estipulación de interés de demora no implica autorización o facultad alguna de retraso en los pagos convenidos; por ello, la exigencia del interés no impedirá, en cualquier momento, el ejercicio del derecho del ARRENDADOR a la resolución del Contrato por falta de pago.

El devengo de los intereses se producirá desde el momento en que debieron efectuarse los pagos conforme a contrato, sin necesidad de requerimiento alguno por parte del ARRENDADOR, al que el ARRENDATARIO renuncia expresamente.

5.7.- Imputación de cantidades

Si existieran varios débitos vencidos del ARRENDATARIO frente al ARRENDADOR, este último queda facultado para determinar libremente el débito a cuyo pago se aplicará cada una de las cantidades que reciba del ARRENDATARIO. A tal efecto, el ARRENDATARIO renuncia expresamente a favor del ARRENDADOR a la imputación prevista en los artículos 1172 a 1174 del Código Civil.

SEXTA.- MISCELÁNEA.-

6.1.- Se hace constar expresamente que el orden de aplicación y prioridad en la interpretación en caso de discrepancias entre los diversos documentos que integran el presente contrato de arrendamiento será el siguiente:

1º.- PLIEGO DE CLÁUSULAS ESPECIALES.
2º.- PLIEGO DE CLÁUSULAS GENERALES.
3º.- Anexo nº 1 del PLIEGO DE CLÁUSULAS ESPECIALES (Plano de la finca arrendada).
4º.- El resto de Anexos correspondientes a uno y otro Pliego.

6.2.- Se hace constar que el ARRENDATARIO declara que conoce y ha leído los anexos que a continuación se listan y que se entregan en formato digital (pdf) en CD aparte.

ANEXOS CORRESPONDIENTES AL PLIEGO DE CLÁUSULAS GENERALES:

Anexo 1: REGLAMENTO DE RÉGIMEN INTERNO.
Anexo 2: PLAN DE AUTOPROTECCIÓN.
Anexo 3: PRESUPUESTO.
Anexo 4: GUIA TÉCNICA DE OBRAS PRIVATIVAS.

SÉPTIMA.- TRADUCCIONES.-

Se podrán realizar traducciones a otros idiomas del contenido de este contrato y sus anexos a efectos meramente informativos, por lo que, en cualquier caso, únicamente la versión española debidamente rubricada gozará de plena validez y eficacia entre las partes contratantes.

OCTAVA.- CERTIFICADO DE EFICIENCIA ENERGÉTICA

En cumplimiento de lo dispuesto en el Real Decreto 235/2013, de 5 de abril, por el que se aprueba el procedimiento básico para la certificación de la eficiencia energética de los edificios, se hace constar que se ha puesto a disposición del ARRENDATARIO el correspondiente certificado de eficiencia energética, emitido por técnico competente, del cual se acompaña copia como **anexo nº 3**.

Y en prueba de conformidad con cuanto antecede, las partes firman el presente contrato por duplicado y a un solo efecto, en el lugar y fecha del encabezamiento, formando parte inseparable del mismo sus anexos y, especialmente el PLIEGO DE CLÁUSULAS GENERALES de este contrato de arrendamiento, a las partes se remiten para evitar innecesarias repeticiones, en todo lo no expresamente recogido en este documento.

EL ARRENDADOR EL ARRENDATARIO

Exhibit 4.29

CONTRATO-MARCO DE TRANSACCIÓN Y ASUNCIÓN DE COMPROMISOS COMPLEMENTARIOS

entre

GRUPO FERROATLÁNTICA, S.A.U.,

SILICIO FERROSOLAR, S.L.U.,

FERROATLÁNTICA, S.A.U.,

FERROATLÁNTICA PARTICIPACIONES, S.L.U.

AURINKA PHOTOVOLTAIC GROUP, S.L.,

BLUE POWER CORPORATION, S.L.,

FERROSOLAR OPCO GROUP, S.L.

y

FERROSOLAR R&D, S.L.

En Madrid, a 11 de julio de 2019

CONTRATO-MARCO DE TRANSACCIÓN Y ASUNCIÓN DE COMPROMISOS COMPLEMENTARIOS

En Madrid, a 11 de julio de 2019.

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D-Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **Grupo FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 19 de octubre de 2007, bajo el número 3.838 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 24921, folio 24, , hoja M-448707, y con Código de Identificación Fiscal A-85255370 ("**Grupo FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura pública de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.699, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 34508, folio 177, sección 8, hoja M-448707.

Asimismo, interviene en nombre y representación de la sociedad **Silicio FerroSolar, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 10 de julio de 2.008, bajo el número 2.369 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 25905, folio 20, hoja M-466968, y con Código de Identificación Fiscal B-85504884 ("**SFS**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.700, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 25905, folio 215, sección 8, hoja M-466968.

Asimismo, interviene en nombre y representación de la sociedad **FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Raul Vall Vidardell, el día 29 de septiembre de 1992, bajo el número 3.016 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 3720, folio 188, hoja M-63610, y con Código de Identificación Fiscal A-80420516 ("**FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.695, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid, al tomo 29861, folio 175, sección 8, hoja M-63610.

Interviene, igualmente, en nombre y representación de la sociedad **FerroAtlántica Participaciones, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el

notario de Madrid, D. Jaime Recarte Casanova, el día 2 de abril de 2019, bajo el número 1898 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 29861, folio 189, hoja M-63610, y con Código de Identificación Fiscal B-88358619 (la "**Sociedad Beneficiaria**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento, según consta en la escritura otorgada el día 26 de junio 2019, ante el Notario de Madrid, D. Jaime Recarte Casanova, con el número 3.661 de orden de su protocolo.

En adelante, Grupo FAT, la Sociedad Beneficiaria SFS, y FAT serán conjuntamente denominadas "**GFAT**".

DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Blue Power Corporation, S.L.**, domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Madrid, D. Rafael Vallejo Zapatero, el día 20 de julio de 2015, bajo el número 1.257 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 33.763, folio 12, hoja M-607671, y con Código de Identificación Fiscal B-87339248 ("**Blue Power**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura otorgada, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 2031 de orden de su protocolo.

Asimismo, interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L.,** domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 , folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

Y DE OTRA PARTE

(3) **D. Benjamín Llaneza Caruana**, cuyos personales y de identificación constan más arriba.

Interviene en nombre y representación de la sociedad **Ferrosolar R&D, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.080 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34.796, folio 180, sección 8, hoja M-625891, y con Código de Identificación Fiscal B-87576740 (en adelante, "**R&DCo**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura otorgada el día 24 de febrero de

2017, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 527 de orden de su protocolo.

(4) **Dña. Clara Cerdán Molina**, cuyos personales y de identificación constan más arriba.

Interviene en nombre y representación de la sociedad **Ferrosolar OpCo Group, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796, folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (en adelante, "**Opco**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de apoderado, en virtud de poder otorgado a su favor por dicha sociedad, el cual ha sido elevado a público en el día de hoy, mediante escritura otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza.

En adelante, Grupo FAT, SFS, FAT, Blue Power, Aurinka, R&DCo y Opco serán conjuntamente denominadas las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes declaran tener capacidad legal suficiente para celebrar este acuerdo transaccional de resolución del "*Joint Venture Agreement*" y demás acuerdos derivados del mismo y asunción de compromisos complementarios, por lo que

EXPONEN

(A) Que con fecha 20 de diciembre de 2016, Grupo FAT, SFS, FAT, Blue Power y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo. Dicho acuerdo fue posteriormente novado mediante otro acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(B) Que en el marco del JVA, Grupo FAT, SFS, FAT, Blue Power y Aurinka acordaron poner en funcionamiento un nuevo establecimiento industrial para la producción de silicio de calidad solar sito en La Nava, Puertollano (Ciudad Real) (en adelante, la "**Planta**").

(C) Que las sociedades R&DCo y Opco fueron constituidas en virtud de lo establecido en el JVA.

(D) Que por razones de diversa índole, las Partes han acordado resolver y extinguir de mutuo acuerdo el JVA, con efectos desde el día de hoy, así como todos los acuerdos derivados del mismo, con efectos a partir de las fechas que se indican en la Cláusula 2.1 siguiente.

(E) Que las Partes y la Sociedad Beneficiaria han acordado, asimismo, llevar a cabo, en unidad de acto en el día de hoy, todas las actuaciones que se detallan en el presente Contrato.

(F) Que Grupo FAT, como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial FAT, con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FAT mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la tenencia de participaciones, acciones y/o cuotas sociales que confieren la

mayoría del capital social en otras sociedades, a favor de la Sociedad Beneficiaria, recibiendo el accionista único, esto es Grupo FAT, la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la Sociedad Beneficiaria incluye, entre otras, las participaciones sociales de OpCo que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y la Sociedad Beneficiaria quedó efectivamente constituida, a día de hoy es la Sociedad Beneficiaria la titular de todas las participaciones sociales de OpCo trasmitidas en virtud de dicha escisión.

(G) Que en el día de hoy, ha tenido lugar la transmisión por parte de Blue Power a favor de Aurinka de un número de participaciones sociales de R&DCo representativas del cuarenta y nueve (49%) del capital social de dicha sociedad, por el precio de un (1) euro, habiéndose otorgado ante notario la correspondiente escritura de transmisión de participaciones sociales. Al respecto, el notario interviniente ha procedido a la práctica del correspondiente rebaje, anotando la transmisión de las participaciones en las escrituras que constituyen los títulos de propiedad de Blue Power sobre las mismas.

(H) Que habiendo llegado las Partes y la Sociedad Beneficiaria a un acuerdo en relación a todo lo anteriormente expuesto, y siendo su intención recogerlo por escrito, reconociéndose la capacidad legal necesaria, acuerdan suscribir el presente CONTRATO-MARCO DE TRANSACCIÓN Y COMPROMISOS COMPLEMENTARIOS (el "**Contrato**"), en base a las siguientes

CLÁUSULAS

1. OBJETO; UNIDAD DE ACTO DE LAS DIFERENTES ACTUACIONES.

1.1 En virtud del presente Contrato y, conforme a lo dispuesto en el artículo 1.809 del Código Civil, las Partes acuerdan lo siguiente:

(i) solventar sus diferencias con respecto a la interpretación y ejecución del JVA y demás acuerdos derivados del mismo, poniendo fin a los mismos;

(ii) fijar los importes económicos de la indemnización a satisfacer a Aurinka como consecuencia de la finalización del *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka;

(iii) reorganizar la estructura accionarial de Opco, que pasará a ser de propiedad íntegramente de GFAT, como de R&DCo, cuya estructura accionarial será paritaria;

(iv) reorganizar la estructura del Consejo de Administración y de gobierno corporativo de (a) OpCo, en la forma que decida GFAT; y (ii) R&DCo, en la forma que, de común acuerdo, decidan sus socios;

(v) acordar un contrato de prestación de servicios para garantizar el adecuado mantenimiento de la Planta;

(vi) que, a partir de la presente fecha, GFAT sufrague los gastos corrientes (incluidos los gastos de personal) que tuviera R&DCo hasta el 30 de diciembre de 2020, inclusive, a través de los mecanismos y en la forma que, en cada momento, GFAT estime más apropiada y hasta una cantidad máxima por todos los conceptos, a excepción de los relativos al personal de R&DCo, de TRESCIENTOS MIL EUROS (300.000 €). Por tanto, dicho límite no será de aplicación en relación con los gastos de personal de R&DCo;

(vii) que SFS transmita a R&DCo las patentes correspondientes al proceso de purificación por medio de los llamados hornos de vacío, así como la concesión de una promesa de licencia de uso sobre ciertos secretos industriales, en los términos y condiciones acordados por las partes firmantes de dicho acuerdo;

(viii) que, en caso de que, llegado el día 30 de septiembre de 2020, no se hubiesen transmitido las participaciones de R&DCo y, en su caso, los activos de la Planta a un tercero, GFAT y Aurinka se comprometen, de buena fe, a analizar las diferentes posibilidades existentes en dicho momento al objeto de garantizar la viabilidad de R&DCo. Si, finalmente, se acordase la disolución y liquidación de R&DCo, GFAT y Aurinka se comprometen a acordar el proceso de liquidación correspondiente de tal forma que cada socio reciba los derechos de propiedad industrial, patentes, licencias y tecnología que cada uno de ellos aportó a R&DCo con motivo de la constitución del JVA y del contrato de compraventa de patentes señalado en la Cláusula 2.1(xiii) siguiente;

(ix) regular el otorgamiento por Opco a Aurinka de un derecho de opción de compra sobre determinados activos de la Planta y de un derecho de tanteo sobre ciertos activos de la Planta, distintos de aquéllos sobre los que recaiga el derecho de opción de compra, en caso de que acordase la venta de las mismas a un tercero; así como el otorgamiento por SFS de un derecho de tanteo sobre la totalidad de las participaciones sociales de R&DCo titularidad de SFS en caso de que acordase la venta de las mismas a un tercero;

(x) establecer la renuncia recíproca de acciones y reclamaciones entre las Partes, la Sociedad Beneficiaria y sus administradores y directivos;

(xi) reequilibrar la situación patrimonial de R&DCo con fecha de efectos 31 de diciembre de 2018 y garantizar dicho equilibrio a partir del 12 de julio de 2019 dentro del límite fijado en la cláusula 1.1 (vi); y

(xii) regular la exoneración de cualesquiera responsabilidades que se le pudieran reclamar por terceros a las Partes y a la Sociedad Beneficiaria, sus administradores y directivos por razón del JVA y/o de su participación como Consejeros y directivos de Opco y de R&DCo.

12.1 Las Partes y la Sociedad Beneficiaria acuerdan llevar a cabo las actuaciones previstas en el presente Contrato simultáneamente y en unidad de acto, reconociendo expresamente y

acordando que la ejecución de las mismas, de todas y cada una de ellas, en la fecha de firma del presente Contrato, es una condición esencial para la formalización del presente Contrato y para la perfección, validez, eficacia y entrada en vigor de la transacción acordada.

1. ACTUACIONES A REALIZAR EN UNIDAD DE ACTO CON LA FIRMA DEL CONTRATO Y OTRAS ACTUACIONES POSTERIORES

1.1 En unidad de acto con la firma del presente Contrato, las Partes y la Sociedad Beneficiaria acuerdan llevar a cabo las siguientes actuaciones (las "**Acciones de Firma**"):

(i) Elevar a público el presente Contrato.

(ii) Blue Power vende y transmite a Grupo FAT las participaciones de Opco de las que es titular, representativas, en conjunto, del 25% del capital social de Opco, por el precio de un (1) euro. A tales efectos, se otorga ante notario la correspondiente escritura de transmisión de participaciones sociales en los términos y condiciones acordados entre las partes firmantes de la misma. Asimismo, las Partes requieren al notario interviniente para que, mediante la práctica del correspondiente rebaje, anote la transmisión de las participaciones en las escrituras que constituyen los títulos de propiedad de Blue Power sobre las mismas.

(iii) Blue Power hace entrega a Grupo FAT de las cartas firmadas por D. Benjamín Llaneza Caruana y D. Javier Jiménez de Andrade, administradores de Opco, en virtud de las cuales renuncian todos ellos, con efectos desde la presente fecha, a sus respectivos cargos de administradores de la misma, así como de la carta firmada por D. Alejandro Fernández de Araoz Gómez-Acebo, Secretario no Consejero de Opco, en virtud de la cual renuncia a dicho cargo con efectos desde la presente fecha, manifestando todos ellos no tener nada que reclamar a Opco.

(iv) La Junta General de Opco, debidamente constituida al efecto, adopta, entre otros, los siguientes acuerdos:

a) Aceptación de la dimisión presentada por D. Benjamín Llaneza Caruana y D. Javier Jiménez de Andrade de sus respectivos cargos de administradores de Opco, agradeciéndoles los servicios prestados, aprobando su gestión y renunciando al ejercicio de cualesquiera acciones frente a ellos.

b) Fijación del número de miembros del órgano de administración de Opco en tres (3).

c) Otorgar a favor de Aurinka, en el marco de la resolución del *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka, un derecho de opción de compra sobre ciertos activos de la Planta, los cuales se detallarán de forma exhaustiva en el correspondiente contrato que regule el otorgamiento de dicho derecho (el "**Derecho de Opción de Compra**"), autorizando al órgano de administración de Opco para que, a través de su representante autorizado, pueda suscribir los contratos y documentos que sean preceptivos a dichos efectos.

d) Otorgar a favor de Aurinka un derecho de tanteo sobre ciertos activos de la Planta, distintos de aquéllos sobre los que recae el Derecho de Opción de Compra, los cuales se detallarán de forma exhaustiva en el correspondiente contrato que regule el otorgamiento de dicho derecho (el "**Derecho de Tanteo**"), autorizando al órgano de administración de Opco para que, a través de su representante autorizado, pueda suscribir los contratos y documentos que sean preceptivos a dichos efectos.

(v) El órgano de administración de Opco adopta, entre otros, los siguientes acuerdos:

a) Toma de razón de las dimisiones presentadas por los administradores señalados en el apartado (iv) a) anterior.

b) Aceptación de la dimisión presentada por el Secretario del Consejo de Administración de Opco.

c) Nombramiento de un nuevo Secretario del Consejo de Administración de Opco.

d) Revocación de los poderes conferidos por Opco a D. Benjamín Llaneza Caruana y a D. Javier Jimenez de Andrade.

e) Toma de razón del contrato que regula el Derecho de Opción de Compra y del contrato que regula el Derecho de Tanteo, autorizando a Dña. Clara Cerdán Molina para que proceda a la suscripción del mismo.

(vi) El nuevo Secretario del Consejo de Administración de Opco practica las inscripciones correspondientes en el Libro Registro de Socios al objeto de que éste refleje la transmisión de las participaciones descrita en el apartado (ii) anterior.

(vii) Opco otorga la escritura de elevación a público de los acuerdos sociales descritos en los apartados (iv) y (v) anteriores, a los efectos de su posterior inscripción en el Registro Mercantil.

(viii) Resolución y extinción de los contratos que se indican a continuación:

a) El JVA, el cual quedará resuelto con efectos a partir de la presente fecha.

b) El *consultancy services agreement* suscrito el 24 de febrero de 2017 entre Blue Power y R&DCo, el cual nunca ha sido aplicado por las Partes, puesto que fue sustituido por el contrato descrito en la letra d) siguiente y, por tanto, quedará resuelto con efectos a partir del 24 de febrero de 2017.

c) El *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y R&DCo, el cual nunca ha sido aplicado por las partes y que, por tanto, queda resuelto con efectos a partir del 28 de abril de 2017.

d) El *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka, el cual quedará resuelto con efectos a partir del 1 de enero de 2019.

e) El *technology licence agreement* suscrito el 24 de febrero de 2017 y modificado el 24 de febrero de 2018 entre OpCo y R&DCo, el cual quedará resuelto con efectos a partir del 1 de enero de 2019.

f) El *consultancy services agreement* suscrito el 24 de febrero de 2017 y modificado el 1 de enero de 2019 entre SFS y R&DCo. Este contrato, tal y como fue modificado, queda resuelto con efectos a partir del 1 de enero de 2019.

g) El *technology licence agreement* suscrito el 24 de febrero de 2017 y modificado el 1 de enero de 2019 entre SFS y R&DCo. Este contrato, tal y como fue modificado, queda resuelto con efectos a partir del 1 de enero de 2019.

h) El contrato de suministro de silicio suscrito el 24 de febrero de 2017 entre FAT y Opco, el cual quedará resuelto con efectos a partir de la presente fecha.

A tales efectos, se firman los correspondientes documentos de resolución de mutuo acuerdo en los términos y condiciones acordados por las Partes, con las correspondientes indemnizaciones a favor de Aurinka. Se adjunta al presente Contrato como **Anexo 1** modelo de contrato de resolución de mutuo acuerdo del *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka.

(ix) Suscripción por parte de Opco y Aurinka de un contrato de prestación de servicios de gestión, operación y mantenimiento de la Planta (*consultancy services agreement*).

(x) Suscripción por parte de Opco y Aurinka de un contrato regulando el otorgamiento del Derecho de Opción de Compra.

(xi) Suscripción por parte de Opco y Aurinka de un contrato regulando el otorgamiento del Derecho de Tanteo que se ajustará al modelo previsto por el **Anexo 2**.

(xii) Transmisión por parte de SFS a favor de Aurinka de un número de participaciones sociales de R&DCo representativas del uno por ciento (1%) del capital social de dicha sociedad, por el precio de un (1) euro. A tales efectos, se otorga ante notario la correspondiente escritura de transmisión de participaciones sociales en los términos y condiciones acordados por las partes firmantes de la misma. Asimismo, las Partes requieren al notario interviniente para que, mediante la práctica del correspondiente rebaje, anote la presente transmisión de las participaciones en las escrituras que constituyen los títulos de propiedad de SFS sobre las mismas. El Secretario del Consejo de Administración de R&DCo practica las inscripciones correspondientes en el Libro Registro de Socios al objeto de que éste refleje la transmisión de las participaciones descrita en el presente apartado.

(xiii) Transmisión por parte de SFS a R&DCo de las patentes correspondientes al proceso de purificación por medio de los llamados hornos de vacío, así como la concesión de una promesa de licencia de uso sobre ciertos secretos industriales, en los términos y condiciones acordados por las partes firmantes de dicho acuerdo.

(xiv) Suscripción por parte de SFS y Aurinka de un contrato en virtud del cual SFS otorgue a Aurinka un derecho de tanteo sobre la totalidad de las participaciones sociales de R&DCo de las que sea titular en caso de que SFS acordase la venta de las mismas a un tercero, todo ello en los términos y condiciones acordados en el modelo que se adjunta como **Anexo 3**.

(xv) Sin perjuicio del Derecho de Opción de Compra, del Derecho de Tanteo y del derecho de tanteo previstos en los apartados (x), (xi) y (xiv) respectivamente, suscripción, en los términos acordados, de un mandato de venta y acuerdo de colaboración entre

Opco, SFS, Aurinka, Blue Power y Grupo FAT, comprometiéndose Opco, SFS y Grupo FAT a realizar sus mejores esfuerzos para lograr la transmisión a uno o varios terceros de los activos titularidad de Opco y de la participación accionarial de SFS en R&DCo, y comprometiéndose Aurinka a asesorar y asistir a Opco, SFS y a Grupo FAT en la realización de dichas actuaciones, todo ello en los términos y condiciones acordados por las partes firmantes de dicho mandato de venta.

15.1 Las Partes y la Sociedad Beneficiaria llevarán a cabo las Acciones de Firma, sin perjuicio de las restantes actuaciones que las Partes, la Sociedad Beneficiaria y ciertas sociedades, algunas de ellas pertenecientes a sus respectivos grupos de sociedades, entendiendo como grupo de sociedades lo dispuesto en el artículo 42 del Código de Comercio (el "**Grupo**"), fuera necesarias o convenientes como consecuencia, de la decisión de las Partes de resolver y extinguir el JVA y demás acuerdos derivados del mismo.

15.2 Asimismo, adicionalmente a las Acciones de Firma, las Partes y la Sociedad Beneficiaria acuerdan que, el día 12 de julio de 2019, se lleve a cabo una novación modificativa y no extintiva del contrato de crédito en cuenta corriente suscrito entre SFS y R&DCo con fecha 23 de febrero de 2017 (el "**Contrato de Crédito**") y se suscriba un contrato de préstamo participativo entre dichas entidades por importe de DOSCIENTOS SESENTA Y NUEVE MIL DOSCIENTOS TRES EUROS CON CINCUENTA Y SEIS CÉNTIMOS DE EURO (269.203,56 €) a los efectos de reequilibrar la situación patrimonial de R&DCo. Adicionalmente, GFAT se compromete a llevar a cabo todas las actuaciones que sean necesarias a los efectos de garantizar, en todo momento, el equilibrio patrimonial de R&DCo a partir del 12 de julio de 2019, al objeto de evitar que dicha sociedad incurra en causa legal de disolución de conformidad con lo previsto en la Ley de Sociedades de Capital, todo ello dentro del límite fijado en la cláusula 1.1 (vi).

Las Partes y la Sociedad Beneficiaria acuerdan que cualquier disposición de fondos realizada en virtud del Contrato de Crédito se deberá reclasificar en préstamo participativo a fin de evitar en todo momento que R&DCo incurra en causa de disolución legal, comprometiéndose las Partes y la Sociedad Beneficiaria a llevar a cabo cualesquiera actuaciones que sean necesarias para dar cumplimiento a lo dispuesto anteriormente.

2. OBLIGACIONES ADICIONALES DE GFAT EN RELACIÓN CON OPCO

Mientras la Planta siga en operación, GFAT se compromete a realizar las actuaciones necesarias a fin de que Opco mantenga una estructura laboral suficiente para asegurar el mantenimiento adecuado de la maquinaria y las instalaciones ubicadas en dicha planta y a dotar a la misma de las medidas de seguridad necesarias para evitar cualquier tipo de robo o menoscabo.

4. RENUNCIA DE RECLAMACIONES

4.1 Las Partes y la Sociedad Beneficiaria declaran expresamente que no tienen nada que reclamarse entre ellas en virtud de lo dispuesto en el JVA ni en ninguno de los acuerdos derivados del

mismo, de los que todas o algunas de ellas son parte. Asimismo, las Partes y la Sociedad Beneficiaria declaran que, ni en relación con el JVA ni con ninguno de los acuerdos derivados del mismo, existen a día de hoy deudas, facturas pendientes de abono, reclamaciones, daños o contingencias pendientes (a salvo del abono de las indemnizaciones pactadas por las Partes en virtud del presente Contrato reguladas en los documentos descritos en la Cláusula 2) que puedan ser objeto de reclamación futura por parte de ninguna de ellas, renunciando las Partes y la Sociedad Beneficiaria a ejercitar entre sí o frente a cualesquiera terceros acciones judiciales o extrajudiciales derivadas de lo dispuesto en el JVA y/o en los acuerdos derivados del mismo.

4.2 La renuncia de acciones establecida en la Cláusula 4.1 anterior no comprende las derivadas de los contratos y acuerdos firmados en ejecución del presente Contrato, que se aplicarán y ejecutarán en sus propios términos.

5. **EXONERACIÓN DE RESPONSABILIDAD**

Salvo por las actuaciones derivadas de delito o de conducta dolosa, GFAT se obliga y compromete a exonerar y a mantener indemne a:

(i) Blue Power y a los Sres. B. Llaneza Caruana y Fco. J. Jiménez de Andrade Bilbao por cuantas acciones y reclamaciones de terceros derivadas exclusivamente de su condición de socios y/o administradores de Opco, incluyendo dentro de dichas acciones y reclamaciones, a título ejemplificativo, aquéllas de acreedores de Opco, trabajadores de Opco y/o de la Administración Pública en relación con cualesquiera de las obligaciones de OpCo frente a la misma y en relación con el Préstamo Reindus; y

(ii) Aurinka y a sus socios y empleados por cuantas acciones y reclamaciones de terceros derivadas del *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka que se refieran exclusivamente a dicho contrato y a los contratos firmados por OpCo con tales terceros, incluyendo dentro de dichas acciones y reclamaciones, a título ejemplificativo, aquéllas de acreedores de Opco, trabajadores de Opco y/o de la Administración Pública en relación con cualesquiera de las obligaciones de OpCo frente a la misma y en relación con el Préstamo Reindus.

5. **CONFIDENCIALIDAD**

Salvo exigencia legal en contrario, las Partes y la Sociedad Beneficiaria conservarán en la más estricta confidencialidad la existencia y los términos del presente Contrato y no utilizarán o expondrán su contenido en relación con ninguna otra finalidad distinta de la formalización entre las Partes y la Sociedad Beneficiaria y ejecución del presente Contrato.

Lo anteriormente indicado respecto de las Partes y la Sociedad Beneficiaria no será de aplicación en el supuesto en que concurra alguna de las siguientes circunstancias:

a) cuando la revelación de la información confidencial venga exigida por ley, por una Administración Pública o una autoridad judicial en el cumplimiento de sus funciones o por la normativa aplicable;
b) cuando la información sea de carácter notorio o de conocimiento público (por causa distinta a un incumplimiento de lo aquí dispuesto); o

c) en el supuesto en que alguna de las Partes o la Sociedad Beneficiaria deba dar a conocer la información confidencial para dar cumplimiento a las obligaciones asumidas en el presente Contrato.

7. NOTIFICACIONES

Cualesquiera notificaciones y comunicaciones que deban realizarse las Partes y la Sociedad Beneficiaria entre sí en relación con el presente Contrato se considerarán debidamente efectuadas si (i) se realizan por escrito; (ii) han sido remitidas por correo certificado con acuse de recibo, *burofax* o cualquier otro medio escrito que acredite su recepción, siempre que se remitan a las direcciones postales de cada una de las Partes y la Sociedad Beneficiaria que se indican a continuación:

Para: Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A.U., FerroAtlántica Participaciones, S.L.U., Ferrosolar OpCo Group, S.L. y Silicio FerroSolar, S.L.U.

A/A:	D. Pedro Larrea Paguaga
Dirección:	Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid
E-mail:	pedro.larrea@ferroglobe.com

Para: Ferrosolar R&D, S.L., Aurinka Photovoltaic Group, S.L. y Blue Power Corporation, S.L.

A/A:	D. Benjamín Llaneza Caruana
Dirección:	Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid
E-mail:	bllaneza@aurinkapv.com

7. GASTOS E IMPUESTOS

Cada una de las Partes y la Sociedad Beneficiaria asumirá los gastos e impuestos en que hubiera incurrido derivados de la negociación y suscripción de este Contrato.

7. VARIOS

9.1 Protección de Datos Personales

Los datos de carácter personal facilitados por las Partes y la Sociedad Beneficiaria al amparo del Contrato serán incorporados a uno o varios ficheros de datos de carácter personal. Las personas cuyos datos aparezcan en los citados ficheros podrán hacer ejercicio de los derechos de acceso, rectificación, cancelación y oposición mediante solicitud escrita, firmada y dirigida a la otra Parte, a la dirección que este determine en las notificaciones que deban realizarse de acuerdo con lo establecido en el Contrato. Las Partes y la Sociedad Beneficiaria informarán a las diferentes personas físicas afectadas de la cesión de sus datos de carácter personal en los

términos previstos en la normativa de protección de datos personales, con ocasión del envío de las notificaciones que deban realizar de conformidad con lo estipulado en el presente Contrato.

Una vez que los datos hayan sido obtenidos por alguna de las Partes o la Sociedad Beneficiaria, la parte en cuestión será responsable del cumplimiento de las obligaciones legales relativas al tratamiento de dichos datos desde su propia base de datos y de conformidad con la normativa de protección de datos personales.

9.2 Formalización en documento público

Las Partes y la Sociedad Beneficiaria acuerdan que, en unidad de acto con la suscripción del presente Contrato, éste se eleve a público ante el Notario que al efecto se designe de mutuo acuerdo. Los gastos e impuestos derivados de la elevación a público del presente Contrato se satisfarán íntegramente por GFAT.

9.3 Interpretación y modificación

Este Contrato constituye la totalidad del acuerdo alcanzado entre las Partes y la Sociedad Beneficiaria respecto del objeto del mismo, reemplazando y dejando sin efecto lo dispuesto en cualesquiera pactos anteriores entre las Partes y la Sociedad Beneficiaria en relación con la misma materia en tanto que sean contradictorios con lo aquí dispuesto.

Cualquier modificación de este Contrato habrá de realizarse por las Partes y la Sociedad Beneficiaria de mutuo acuerdo y formalizarse por escrito, cumpliendo, como mínimo, con las mismas formalidades con que se ha dotado a la suscripción del presente Contrato.

9.4 Renuncia

Cualquier renuncia de cualquiera de los derechos o facultades derivados del Contrato por cualquiera de las Partes o por la Sociedad Beneficiaria deberá realizarse por escrito. La omisión por cualquiera de las Partes o la Sociedad Beneficiaria a exigir el estricto cumplimiento de cualquier término contractual en una o más ocasiones no podrá ser considerada en ningún caso como renuncia, ni privará a esa Parte del derecho a exigir el estricto cumplimiento de la/s obligación/es contractual/es a posteriori.

9.5 Nulidad

La invalidez, ilegalidad o inejecutabilidad total o parcial de cualquiera de las Cláusulas de este Contrato no afectará o impedirá la vigencia y validez de aquella parte de la misma que no sea inválida, ilegal o inejecutable o de las restantes que permanecerán con plena validez y eficacia. No obstante lo anterior, la Cláusula o Cláusulas inválidas o inejecutables serán interpretadas y cumplidas (en la medida posible) de acuerdo con la intención inicial de las Partes y de la Sociedad Beneficiaria.

9.6 Cómputo de plazos

Salvo cuando expresamente se estableciera lo contrario en este Contrato: (i) los plazos expresados en “días” se refieren a días naturales, contados a partir del día natural inmediatamente siguiente al del inicio del cómputo, inclusive, hasta el último día natural del plazo, inclusive; (ii) los plazos expresados en “días hábiles” se refieren a días hábiles en la ciudad de Madrid. En este sentido, no computarán aquellos días que no fueran hábiles conforme al

calendario de Madrid; y, (iii) los plazos expresados en meses o años se contarán de fecha a fecha desde el día de inicio del cómputo hasta el mismo día del último del plazo (ambos incluidos), salvo que en el último mes o año del plazo no existiese tal fecha, en cuyo caso el plazo terminará el día inmediatamente anterior.

7. LEY APLICABLE; FUERO

10.1 El presente Contrato se rige y debe ser interpretado de acuerdo con las leyes españolas, con exclusión expresa de cualquier derecho foral.

3.2 Las Partes y la Sociedad Beneficiaria, con renuncia expresa de cualquier otra jurisdicción que pudiera corresponderles, aceptan de forma expresa el sometimiento de cualquier controversia o disputa derivada del cumplimiento, ejecución, interpretación o terminación del presente Contrato a los Juzgados y Tribunales de la ciudad de Madrid.

[Sigue hoja de firmas]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes y la Sociedad Beneficiaria firman este Contrato en un sólo ejemplar para su protocolización, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, renunciando a visar cada página.

GRUPO FERROATLÁNTICA, S.A.U.

Firmado: /s/ Clara Cerdán Molina
Nombre: Clara Cerdán Molina
Título: General Counsel

SILICIO FERROSOLAR, S.L.U.

Firmado: /s/ Clara Cerdán Molina
Nombre: Clara Cerdán Molina
Título: General Counsel

FERROATLÁNTICA, S.A.U.

Firmado: /s/ Clara Cerdán Molina
Nombre: Clara Cerdán Molina
Título: General Counsel

BLUE POWER CORPORATION, S.L.

Firmado: /s/ Benjamín Llaneza Caruana
Nombre: Benjamín Llaneza Caruana
Título: Administrador Único

AURINKA PHOTOVOLTAIC GROUP, S.L.

Firmado: /s/ Benjamín Llaneza Caruana
Nombre: Benjamín Llaneza Caruana
Título: Administrador Único

FERROSOLAR OPCO GROUP, S.L.

Firmado: /s/ Clara Cerdán Molina
Nombre: Clara Cerdán Molina
Título: General Counsel

FERROSOLAR R&D, S.L.

Firmado: /s/ Benjamín Llaneza Caruana
Nombre: Benjamín Llaneza Caruana
Título: Administrador Único

FERROATLÁNTICA PARTICIPACIONES, S.L.U.

Firmado: /s/ Clara Cerdán Molina
Nombre: Clara Cerdán Molina
Título: General Counsel

Listado de Anexos:

Anexo 1: Acuerdo de resolución del *Consultancy Services Agreement* suscrito entre FAT y Aurinka el 28 de abril de 2017

Anexo 2: Otorgamiento del derecho de tanteo sobre activos de la Planta entre Opco y Aurinka

Anexo 3: Otorgamiento de derecho de tanteo sobre la totalidad de las participaciones de R&DCo titularidad de SFS a favor de Aurinka

ANEXO 1

Acuerdo de resolución del *Consultancy Services Agreement* suscrito entre FAT y Aurinka el 28 de abril de 2017

ANEXO 2

Otorgamiento del derecho de tanteo sobre activos de la Planta entre Opco y Aurinka

ANEXO 3

Otorgamiento de derecho de tanteo sobre la totalidad de las participaciones de R&DCo titularidad de SFS a favor de Aurinka

IGNACIO MANRIQUE PLAZA Notario de Madrid

Ignacio Manrique Plaza
Notario
Calle Raimundo Fdez Villaverde N° 61 ¬
Tels.915538303 Fax. 915544947
28003 Madrid
email: notarios@raimundo61.es

Número: DOS MIL TRES.

ESCRITURA DE COMPRAVENTA DE PARTICIPACIONES DE LA SOCIEDAD "FERROSOLAR OPCO GROUP, S.L."

En Madrid, mi residencia, a once de julio de dos mil diecinueve.

Ante mí, IGNACIO MANRIQUE PLAZA, Notario del Ilustre Colegio Notarial de Madrid,

COMPARECEN

DON BENJAMÍN LLANEZA CARUANA, mayor de edad, casado, de nacionalidad española, con domicilio profesional a estos efectos en Madrid, calle Núñez de Balboa 120, Piso 6-D; con DNI-NIF número 50.446.574-F, en vigor.

DÑA. CLARA CERDÁN MOLINA, mayor de edad, de nacionalidad. española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D-Torre Espacio, planta 49, 28046, Madrid.

INTERVIENEN

1.- Don Benjamín Llaneza Caruana, en nombre y en representación de la Compañía Mercantil BLUE POWER CORPORATION, S.L., domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Madrid, D. Rafael Vallejo Zapatero, el día 20 de julio de 2015, bajo el número 1.257 de orden de su protocolo, inscrita en e Registro Mercantil de Madrid al tomo 33.763, folio 12,hoja M-607671, y con Código de Identificación Fiscal B-87339248 ("Blue Power" o el "Vendedor").

Identificación del TITULAR REAL: A los efectos de la obligación de identificación del titular real que impone el artículo 4 de la Ley 10/2010, de 28 de abril, de prevención del blanqueo de capitales, se ha cumplido con la obligación de identificación del titular real mediante la consulta a la Base de Datos del Consejo General del Notariado, manifestando la representación de la Sociedad que los datos coinciden con los que constan en dicha base.

Asegura la representación de la sociedad compareciente que subsiste la vida legal de la Sociedad, que continúa en el desempeño del cargo con que actúa, y que los datos de identificación de su representada, en especial en cuanto al objeto social y domicilio reseñados, no han variado respecto de los consignados en la documentación fehaciente presentada.

JUICIO NOTARIAL DE SUFICIENCIA DE LAS FACULTADES REPRESENTATIVAS.

Su legitimación para el otorgamiento de la presente escritura resulta de:

a) RESEÑA. - su condición de Administrador Único de la misma, en virtud de escritura otorgada, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 2031 de orden de su protocolo.

Me exhibe copia autorizada debidamente inscrita.

La representación orgánica aquí compareciente de la Sociedad, a los efectos de lo dispuesto en el vigente artículo 160 f) de la Ley de Sociedades de Capital, manifiesta que el activo objeto de la presente escritura tiene la condición de esencial de conformidad con lo dispuesto en el artículo 160 letra f) de la Ley de Sociedades de Capital, habiendo sido autorizada la presente transmisión por la Junta General en su reunión de fecha 19-06-2019.

b) JUICIO DE SUFICIENCIA.- Yo, el Notario, hago constar que a mi juicio son suficientes las facultades acreditadas para el otorgamiento de la presente escritura de compraventa de participaciones sociales. -

2 . - Doña Clara Cerdán Malina en nombre y representación de:

2.1-"GRUPO FERROATLÁNTICA, S.A.U.", domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 19 de octubre de 2007, bajo el número 3.838 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 24921, folio 24, hoja M-448707, y con Código de Identificación Fiscal A-85255370 ("Grupo FAT" o el "Comprador").

Identificación del TITULAR REAL: A los efectos de la obligación de identificación del titular real que impone el artículo 4 de la Ley 10/2010, de 28 de abril, de prevención del blanqueo de capitales, se ha cumplido con la obligación de identificación del titular real mediante la consulta a la Base de Datos del Consejo General del Notariado, manifestando la representación de la Sociedad que los datos coinciden con los que constan en dicha base.

Asegura la representación de la sociedad compareciente que subsiste la vida legal de la Sociedad, que continúa en el desempeño del cargo con que actúa, y que los datos de identificación de su representada, en especial en cuanto al objeto social y domicilio reseñados, no han variado respecto de los consignados en la documentación fehaciente presentada. -

JUICIO NOTARIAL DE SUFICIENCIA DE LAS FACULTADES REPRESENTATIVAS.

Su legitimación para el otorgamiento de la presente escritura resulta de:

a) RESEÑA. Escritura pública de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.699, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 34508, folio 177, sección 8, hoja M-448707.

Me exhibe copia autorizada debidamente inscrita.

La representación orgánica aquí compareciente de la Sociedad, a los efectos de lo dispuesto en el vigente artículo 160, f) de la Ley de Sociedades de Capital, manifiesta que el activo objeto de la presente escritura no tiene la condición de esencial de conformidad con lo dispuesto en el

artículo 160 letra f) de la Ley de Sociedades de Capital, y por lo tanto, no es necesaria la autorización de la Junta General.

b) JUICIO DE SUFICIENCIA. Yo, el Notario, hago constar que a mi juicio son suficientes las facultades acreditadas para el otorgamiento de la presente escritura de compraventa de participaciones sociales .

2.2. FERROATLÁNTICA PARTICIPACIONES, S.L.U., domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 2 de abril de 2019, bajo el número 1.898 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 29861, folio 189, hoja M-63610y con Código de Identificación Fiscal B-88358619 ("FERROATLÁNTICA PARTICIPACIONES") .

Identificación del TITULAR REAL: A los efectos de la obligación de identificación del titular real que impone el artículo 4 de la Ley 10/2010, de 28 de abril, de prevención del blanqueo de capitales, se ha cumplido con la obligación de identificación del titular real mediante la consulta a la Base de Datos del Consejo General del Notariado, manifestando la representación de la Sociedad que los datos coinciden con los que constan en dicha base.

Asegura la representación de la sociedad compareciente que subsiste la vida legal de la Sociedad, que continúa en el desempeño del cargo con que actúa, y que los datos de identificación de su representada, en especial en cuanto al objeto social y domicilio reseñados, no han variado respecto de los consignados en la documentación fehaciente presentada.

JUICIONOTARIAL DE SUFICIENCIA DE LAS FACULTADES REPRESENTATIVAS.

Su legitimación para el otorgamiento de la presente escritura resulta de:

a) RESEÑA. Poder otorgado a su favor según consta en la escritura otorgada el día 26 de junio 2019, ante el Notario de Madrid, D. Jaime Recarte Casanova, con el número 3.661 de orden de su protocolo, pendiente de inscripción por razón de su fecha, de cuya necesidad advierto.

b) JUICIO DE SUFICIENCIA. Yo, el Notario, hago constar que a mi juicio son suficientes las facultades acreditadas para el otorgamiento de la presente escritura de compraventa de participaciones sociales.

Tienen a mi juicio los señores comparecientes, según intervienen, capacidad legal bastante para formalizar la presente escritura de compraventa de participaciones sociales y al efecto,

EXPONEN -

I.- Que BLUE POWER CORPORATION, S.L. es titular, en virtud de la escritura de aumento de capital social, otorgada ante el notario de Madrid, D. Ignacio Manrique Plaza, el día 24 de febrero de 2017, bajo el número 531 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al torno 34796, folio 167, sección 8, hoja M-625889, inscripción 6 (en adelante, el "Título"), de 3.198.667 participaciones sociales de un euro de valor nominal cada una de ellas y numeradas de la 9.596.001 a la 12.794.667, ambas inclusive, representativas del 25% del capital social de "FERROSOLAR OPCO GROUP, S . L . ", domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de

mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796 , folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (en adelante, las "Participaciones") .

II.- Que con fecha 20 de diciembre de 2016, las GRUPO FERROATLÁNTICA, S.A.U., BLUE POWER CORPORATION, S.L., FerroAtlántica, S.A.U., Silicio Ferrosolar, S.L.U. y Aurinka Photovoltaic Group, S.L. ("Aurinka") suscribieron un acuerdo de Joint Venture, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de Joint Venture según resulta tras la novación del mismo, será denominado el "JVA") .

III.- Que GRUPO FERROATLÁNTICA, S.A.U., BLUE POWER CORPORATION, S.L., FERROATLÁNTICA PARTICIPACIONES, S.L.U., FerroAtlántica, S.A.U., Silicio Ferrosolar, S.L.U., Aurinka, FERROSOLAR OPCO GROUP, S.L. y Ferrosolar R&D, S.L., han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "Contrato de Transacción"), que ha sido elevado a público en escritura por mí autorizada en el día de hoy.

IV.- Que Grupo FAT, como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial "FERROATLÁNTICA, S.A.U." ("FAT"), con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FAT mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la tenencia de participaciones, acciones y/o cuotas sociales que confieren la mayoría del capital social en otras sociedades, a favor de la Sociedad Beneficiaria, recibiendo el accionista único, esto es Grupo FAT, la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la FERROATLÁNTICA PARTICIPACIONES incluye, entre otras, las participaciones sociales de FERROSOLAR OPCO GROUP, S.L. que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y FERROATLÁNTICA PARTICIPACIONES quedó efectivamente constituida, a día de hoy es la FERROATLÁNTICA PARTICIPACIONES la titular de todas las participaciones sociales de FERROSOLAR OPCO GROUP, S.L. trasmitidas en virtud de dicha escisión.

V. - Que, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra la decisión de transmitir las Participaciones.

VI. - Que, a la vista de todo lo expuesto anteriormente, el Vendedor está interesado en vender y transmitir las Participaciones, y el Comprador en comprarlas y adquirirlas, en los términos y condiciones establecidos en la presente escritura, lo que llevan a efecto en virtud de la presente.

VII. - Que FERROATLÁNTICA PARTICIPACIONES, dando a este acto, junto con "BLUE POWER CORPORATION, S.L., el carácter de Junta General Extraordinaria y Universal de FERROSOLAR OPCO GROUP, S.L., consienten expresamente en la transmisión de las Participaciones a favor de Grupo FAT en los términos establecidos en el Contrato de Transacción, renunciando en este acto al ejercicio de su derecho de adquisición preferente sobre dichas Participaciones y dando por cumplidos todos los trámites y demás requisitos legal y estatuariamente previstos en relación

con la Junta General Universal mencionada y con la transmisión de las Participaciones a favor de Grupo FAT.

Asimismo, siempre que ello sea necesario, el Vendedor, el Comprador y FERROATLÁNTICA PARTICIPACIONES se comprometen expresamente a realizar las actuaciones que fueran precisas a los efectos de adaptar los estatutos sociales de FERROSOLAR OPCO GROUP, S.L. a la nueva situación accionarial de la misma surgida a consecuencia de la presente transmisión.

VIII. - Y que, teniendo convenido el presente contrato, lo llevan a efecto con sujeción a las siguientes,

CLAUSULAS

PRIMERA. BLUE POWER CORPORATION, S.L. vende a "GRUPO FERROATLÁNTICA, S.A.U., que compra y adquiere, las participaciones sociales de la Compañía Mercantil "FERROSOLAR OPCO GROUP, S.L." expresadas en el exponendo I de esta escritura, con cuantos derechos les son inherentes y en concepto de libres de cargas y gravámenes.

SEGUNDA. La venta se realiza por el precio de UN EURO (€ 1). Dicha suma declara el Vendedor haberla recibido antes de este acto de manos del Comprador, a cuyo favor formaliza plena carta de pago.

TERCERA. El Comprador queda subrogado en cuantos derechos y obligaciones sean inherentes a las participaciones que adquiere, manifestando que conoce la situación patrimonial y financiera de la Sociedad, asi como el balance que arroja su contabilidad.

Asimismo, el Vendedor manifiesta y garantiza al Comprador lo siguiente:

Que el Vendedor tienen plena capacidad para formalizar y cumplir este Contrato, cuya suscripción o ejecución no infringe ninguna ley, disposición administrativa, acuerdo, contrato o compromiso por el que cualquiera de ellos esté vinculado, ni tampoco otorga el derecho a terceros a suspender, modificar, revocar, resolver, extinguir o rescindir cualesquiera contratos o acuerdos haya suscrito FERROSOLAR OPCO GROUP, S.L. con cualquier tercero o hayan suscrito cualesquiera terceros en favor de FERROSOLAR OPCO GROUP, S.L.

Que las Participaciones se encuentran, y así se transmiten, en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda carga, afección, gravamen, opción, restricción, limitación o derecho en favor de persona alguna y responsabilidad, y con todos los derechos económicos y políticos inherentes a las mismas.

CUARTA. Los gastos e impuestos que origine la presente escritura, serán satisfechos en su integridad por la parte compradora.

QUINTA. El Comprador manifiesta que realizará cuantas actuaciones resulten necesarias para que su titularidad sobre las Participaciones, resultante de la presente transmisión, se inscriba en el Libro Registro de Socios de la Sociedad, comprometiéndose el Vendedor a colaborar a tal efecto en todo lo que, en su caso, esté en sus manos, para conseguir dicha inscripción y el efectivo reconocimiento de la plena titularidad adquirida por el Comprador.

SEXTA. A los efectos traslativos de la posesión a que se refieren los artículos 1.462 y 1.464 del Código Civil, y de acuerdo con lo establecido en el párrafo segundo del referido artículo 1.462 del citado cuerpo legal, el otorgamiento de la presente escritura tendrá el efecto del traslado.

Posesorio de las participaciones del Vendedor al Comprador.

El Vendedor me exhibe en este acto copia autorizada del título de propiedad de las Participaciones, instruyéndome para que proceda a hacer constar en el mismo la compraventa operada en virtud de la presente escritura. Yo, el Notario, acepto el requerimiento, haciendo constar la correspondiente diligencia de venta en la copia autorizada de la misma.

Así lo dicen y otorgan los señores comparecientes a los que de palabra hago las reservas y advertencias legales y en especial las de naturaleza fiscal, derivadas del otorgamiento de la presente escritura.

RESERVAS Y ADVERTENCIAS.

Hago a los señores comparecientes las reservas y advertencias legales, tanto las de carácter fiscal

En relación con el Impuesto sobre Transmisiones Patrimoniales y Actos Jurídicos Documentados, regulado por el Texto Refundido aprobado por R.D. 1/1993, de 24 de Septiembre, y su Reglamento de 29 de Mayo de 1995, advierto a los otorgantes que deberán presentar impreso de autoliquidación (en su caso), copia auténtica y copia simple de esta escritura en la oficina fiscal competente en el plazo de treinta días hábiles a partir de la fecha de esta escritura, e ingresar dentro de dicho plazo la cuota devengada.

Y que, en caso de no realizarse la presentación de esta escritura o no efectuarse el pago del Impuesto dentro de plazo, se incurrirá en las responsabilidades establecidas en la Ley General Tributaria.

Hacen constar los comparecientes que la transmisión objeto de esta escritura está exenta del Impuesto sobre Transmisiones Patrimoniales Onerosas y Actos Jurídicos Documentados y del Impuesto sobre el Valor Añadido, al amparo de lo dispuesto en el artículo 314 del Real Decreto Legislativo 4/2015 de 23 de octubre por el que se aprueba el texto refundido de la Ley del Mercado de Valores.

OTORGAMIENTO Y AUTORIZACION

Arancel números 2, 4,7 y Norma 8 ª . R.D. 1.426/89. BASES DECLARADAS:

Honorarios y suplidos: 194,60 euros.

CLÁUSULA DE PROTECCIÓN DE DATOS: Los comparecientes quedan informados de lo siguiente:

Sus datos personales serán objeto de tratamiento en esta Notaría, los cuales son necesarios para el cumplimiento de las obligaciones legales del ejercicio de la función pública notarial, conforme a lo previsto en la normativa prevista en la legislación notarial, de prevención del blanqueo de capitales, tributaria y, en su caso, sustantiva que resulte aplicable al acto o negocio jurídico documentado. La comunicación de los datos personales es un requisito legal, encontrándose el otorgante obligado a facilitar los datos personales, y estando informado de que la consecuencia de no facilitar tales datos es que no sería posible autorizar o intervenir el presente documento público. Sus datos se conservarán con carácter confidencial.

La finalidad del tratamiento de los datos es cumplir la normativa para autorizar/intervenir el presente documento, su facturación, seguimiento posterior y las funciones propias de la

actividad notarial de obligado cumplimiento, de las que pueden derivarse la existencia de decisiones automatizadas, autorizadas por la Ley, adoptadas por las Administraciones Públicas y entidades cesionarias autorizadas por Ley, incluida la elaboración de perfiles precisos para la prevención e investigación por las autoridades competentes del blanqueo de capitales y la financiación del terrorismo.

El notario realizará las cesiones de dichos datos que sean de obligado cumplimiento a las Administraciones Públicas, a las entidades y sujetos que estipule la Ley y, en su caso, al Notario que suceda o sustituya al actual en esta notaría.

Los datos proporcionados se conservarán durante los años necesarios para cumplir con las obligaciones legales del Notario o quien le sustituya o suceda.

Puede ejercitar sus derechos de acceso, rectificación, supresión, limitación, portabilidad y oposición al tratamiento por correo postal ante la Notaría autorizante, sita en Madrid, Calle Raimundo Fernández Villaverde, 61.

Asimismo, tiene el derecho a presentar una reclamación ante una autoridad de control.

Los datos serán tratados y protegidos según la Legislación Notarial, la Ley Orgánica 15/1999 de 13 de diciembre de Protección de Datos de Carácter Personal (o la Ley que la sustituya) y su normativa de desarrollo, y el Reglamento (UE) 2016/679 del Parlamento europeo y del Consejo de 27 de abril de 2016 relativo a la protección de las personas físicas en lo que respecta al tratamiento de datos personales y a la libre circulación de estos datos y por el que se deroga la Directiva 95/46/CE.

Leída por mi esta escritura a los señores comparecientes, a su elección, advirtiéndoles del derecho que tiene de hacerlo por sí, enterado la encuentran conforme, la otorgan y firman.

Y yo, el Notario, DOY FE:

a) De haber identificado a los señores comparecientes por medio de sus documentos identificativos, reseñados en la comparecencia, que me han sido exhibidos.

b) De que los señores comparecientes, a mi juicio, tienen capacidad y está legitimado para el presente otorgamiento.

c) De que, después de la lectura, los señores comparecientes han hecho constar haber quedado debidamente informados del contenido de este instrumento.

d) De que el consentimiento de los otorgantes ha sido libremente prestado.

e) De que el otorgamiento se adecua a la legalidad y a la voluntad libre y debidamente informada de los comparecientes.

f) De todo lo consignado en este instrumento público que queda extendido en doce folios de papel timbrado, exclusivo para documentos notariales, serie EX, números el del presente y los once anteriores en orden correlativo.

Están las firmas de los comparecientes y la del Notario Autorizante. Signado, Rubricado y sellado.

DOY FE: QUE ES PRIMERA COPIA FIEL DE SU MATRIZ, CON LA QUE CONCUERDA Y EN DONDE QUEDA ANOTADA. Y A INSTANCIA DE LA PARTE COMPRADORA LA LIBRO SOBRE DOCE FOLIOS

IGNACIO MANRIQUE PLAZA Notario de Madrid

DE PAPEL TIMBRADO, EXCLUSIVO PARA DOCUMENTOS NOTARIALES, SERIE ET, NUMERADOS CORRELATIVAMENTE EN ORDEN INVERSO AL DEL PRESENTE, A LOS QUE SE AÑADE OTRO FOLIO SÓLO PARA LA CONSTANCIA DE INSCRIPCIONES Y NOTAS. MADRID, EL MISMO DÍA DE SU OTORGAMIENTO.

Fe Pública Notarial, Notariado Europa, Consejo General del Notariado Español 0247420322

IGNACIO MANRIQUE PLAZA Notario de Madrid

Ignacio Manrique Plaza
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Número: DOS MIL CINCO.

ESCRITURA DE COMPRAVENTA DE PARTICIPACIONES DE LA SOCIEDAD "FERROSOLAR R&D, S.L."

En Madrid, mi residencia, a once de julio de dos mil diecinueve. Ante mí, IGNACIO MANRIQUE PLAZA, Notario del Ilustre Colegio Notarial de Madrid,

COMPARECEN

DÑA. CLARA CERDÁN MOLINA, mayor de edad, de nacionalidad. española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D-Torre Espacio, planta 49, 28046, Madrid.

DON BENJAMÍN LLANEZA CARUANA, mayor de edad, casado, de nacionalidad española, con domicilio profesional a estos efectos en Madrid, calle Núñez de Balboa 120, Piso 6-D; con DNI-NIF número 50.446.574-F, en vigor.

INTERVIENEN

1. -Doña Clara Cerdán Malina en nombre y representación de "SILICIO FERROSOLAR, S.L.U." , domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 10 de julio de 2.008, bajo el número 2.369 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 25905 , folio 20 , hoja M- 466968 y con Código de Identificación Fiscal B-85504884 ("SFS" o el "Vendedor").

Identificación del TITULAR REAL: A los efectos de la obligación de identificación del titular real que impone el artículo 4 de la Ley 10/2010, de 28 de abril, de prevención del blanqueo de capitales, se ha cumplido con la obligación de identificación del titular real mediante la consulta a la Base de Datos del Consejo General del Notariado, manifestando la representación de la Sociedad que los datos coinciden con los que constan en dicha base.

Asegura la representación de la sociedad compareciente que subsiste la vida legal de la Sociedad, que continúa en el desempeño del cargo con que actúa, y que los datos de identificación de su representada, en especial en cuanto al objeto social y domicilio reseñados, no han variado respecto de los consignados en la documentación fehaciente presentada.

JUICIO NOTARIAL DE SUFICIENCIA DE LAS FACULTADES REPRESENTATIVAS.

Su legitimación para el otorgamiento de la presente escritura resulta de:

a) RESEÑA.- Escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.700, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 25905, folio 215, sección 8, hoja M-466968.

Me exhibe copia autorizada debidamente inscrita.

La representación orgánica aquí compareciente de la Sociedad, a los efectos de lo dispuesto en el vigente artículo 160 f) de la Ley de Sociedades de Capital, manifiesta que el activo objeto de la presente escritura no tiene la condición de esencial de conformidad con lo dispuesto en el artículo 160 letra f) de la Ley de Sociedades de Capital, y por lo tanto, no es necesaria la autorización de la Junta General.

b) JUICIO DE SUFICIENCIA.- Yo, el Notario, hago constar que a mi juicio son suficientes las facultades acreditadas para el otorgamiento de la presente escritura de compraventa de participaciones sociales.

2.- Don Benjamín Llaneza Caruana, en nombre y en representación de "AURINKA PHOTOVOLTAIC GROUP, S . L . ", domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 - Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("Aurinka" o el "Comprador") .

Identificación del TITULAR REAL: A los efectos de la obligación de identificación del titular real que impone el artículo 4 de la Ley 10/2010, de 28 de abril, de prevención del blanqueo de capitales, se ha cumplido con la obligación de identificación del titular real mediante la consulta a la Base de Datos del Consejo General del Notariado, manifestando la representación de la Sociedad que los datos coinciden con los que constan en dicha base.

Asegura la representación de la sociedad compareciente que subsiste la vida legal de la Sociedad, que continúa en el desempeño del cargo con que actúa, y que los datos de identificación de su representada, en especial en cuanto al objeto social y domicilio reseñados, no han variado respecto de los consignados en la 6 documentación fehaciente presentada.

JUICIO NOTARIAL DE SUFICIENCIA DE LAS FACULTADES REPRESENTATIVAS. -

Su legitimación para el otorgamiento de la presente escritura resulta de:

a) RESEÑA.- de su condición de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

Me exhibe copia autorizada debidamente inscrita.

La representación orgánica aquí compareciente de la Sociedad, a los efectos de lo dispuesto en el vigente artículo 160 f) de la Ley de Sociedades de Capital, manifiesta que el activo objeto de la presente escritura no tiene la condición de esencial de conformidad con lo dispuesto en el artículo 160 letra f) de la Ley de Sociedades de Capital, y por lo tanto, no es necesaria la autorización de la Junta General.

b) JUICIO DE SUFICIENCIA. - Yo, el Notario, hago constar que a mi juicio son suficientes las facultades acreditadas para el otorgamiento de la presente escritura de compraventa de participaciones sociales.

Tienen a mi juicio, según intervienen, capacidad legal bastante para formalizar la presente escritura de compraventa de participaciones sociales y al efecto,

EXPONEN

I.-Que "SILICIO FERROSOLAR, S.L.U." es titular, en virtud de escritura de aumento de capital social, otorgada ante el notario de Madrid, D. Ignacio Manrique Plaza, el dia 24 de febrero de 2017, bajo el número 526 de orden de su protocolo, inscrita en el Registro Mercantil de Madridal tomo 34.796, folio 185, hoja M- 625891, inscripción 6 (el "Título") de, entre otras, 1.000 participaciones sociales de un euro (1 €)de valor nominal cada una de ellas y numeradas dela 49.001 ala 50.000, ambas inclusive (las "Participaciones"), representativas del 1% del capital social de "FERROSOLAR R&D, S.L." , domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.080 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al torno 34.796, folio 180, sección 8, hoja M-625891, y con Código de Identificación Fiscal B-87576740.

II.- Que, con fecha 20 de diciembre de 2016, Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A.U., SILICIO FERROSOLAR, S.L.U., BLUE POWER CORPORATION, S.L. y Aurinka suscribieron un acuerdo de Joint Venture, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de Joint Venture según resulta tras la novación del mismo, será denominado el "JVA").

III.- Que Aurinka es titular de 49.000 participaciones sociales de "FERROSOLAR R&D, S.L. ", numeradas de la 1 a la 49.000, ambas inclusive, en virtud de escritura de compraventa de participaciones sociales otorgada ante mi en el día de hoy.

IV .- Que Grupo FerroAtlántica, S.A.U . , FerroAtlántica, S.A.U., SILICIO FERROSOLAR, S.L.U., Aurinka, Blue Power Corporation, S.L., FerroAtlántica Participaciones, S.L.U., FERROSOLAR OPCO GROUP, S.L. y FERROSOLAR R&D, S.L. han suscrito, en el día de hoy, un contrato marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "Contrato de Transacción"), que ha sido elevado a público en escritura por mí autorizada en el día

V. - Que, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones 10 en unidad de acto, entre las que se encuentra la decisión de transmitir las Participaciones.

VI. - Hacen constar expresamente que la transmisión de participaciones que por esta escritura se formaliza no está sujeta a ningún tipo de restricción o limitación, habida cuenta de que el adquirente tiene la condición de socio, y los Estatutos de la sociedad no contienen cláusulas restrictivas o prohibitivas de la libre transmisibilidad entre socios.-

VII.- Y que, teniendo convenido el presente contrato, lo llevan a efecto con sujeción a las siguientes,

CLAUSULAS-

PRIMERA.- "SILICIO FERROSOLAR, S.L.U." vende a "AURINKA PHOTOVOLTAIC GROUP, S.L.", que compra y adquiere, las participaciones sociales de la Compañía Mercantil "FERROSOLAR R&D, S.L. " expresadas en el exponendo I de esta escritura, con cuantos derechos les son inherentes y en concepto de libres de cargas y gravámenes.

SEGUNDA.- La venta se realiza por precio de UN EURO (€ 1). Dicha suma declara el Vendedor haberla recibido antes de este acto de manos del Comprador, a cuyo favor formaliza plena carta de pago.

TERCERA . - El Comprador queda subrogado en cuantos derechos y obligaciones sean inherentes a las Participaciones que adquiere, manifestando que conoce la situación patrimonial y financiera de la Sociedad, así como el balance que arroja su contabilidad.

Asimismo, el Vendedor manifiesta y garantiza al Comprador lo siguiente:

Que el Vendedor tienen plena capacidad para formalizar y cumplir este Contrato, cuya suscripción o ejecución no infringe ninguna ley, disposición administrativa, acuerdo, contrato o compromiso por el que cualquiera de ellos esté vinculado, ni tampoco otorga el derecho a terceros a suspender, modificar, revocar, resolver, extinguir o rescindir cualesquiera contratos o acuerdos haya suscrito FERROSOLAR OPCO GROUP, S.L. con cualquier tercero o hayan 12 suscrito cualesquiera terceros en favor de FERROSOLAR OPCO GROUP, S.L.

Que las Participaciones se encuentran, y así se transmiten, en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda carga, afección, gravamen, opción, restricción, limitación o derecho en favor de persona alguna y responsabilidad, y con todos los derechos económicos y políticos inherentes a las mismas ..

CUARTA.- Los gastos e impuestos que origine la presente escritura, serán satisfechos en su integridad por FERROSOLAR R&D, S.L.

QUINTA. El Comprador manifiesta que realizará cuantas actuaciones resulten necesarias para que su titularidad sobre las Participaciones, resultante de la presente transmisión, se inscriba en el Libro Registro de Socios de la Sociedad, comprometiéndose la Vendedora a colaborar a tal efecto en todo lo que, en su caso, esté en sus manos, para conseguir dicha inscripción y el efectivo reconocimiento de la plena titularidad adquirida por el Comprador.

SEXTA.- A los efectos traslativos de la posesión a que se refieren los articulas 1.462 y 1.464 del Código Civil, y de acuerdo con lo establecido en el párrafo segundo del referido artículo 1.462 del citado cuerpo legal, el otorgamiento de la presente escritura tendrá el efecto del traslado posesorio de las participaciones del Vendedor al Comprador.

El Vendedor me exhibe en este acto copia autorizada del título de propiedad de las Participaciones, instruyéndome para que proceda a hacer constar en el mismo la compraventa operada en virtud de la presente escritura. Yo, el Notario, acepto el requerimiento, haciendo constar la correspondiente diligencia de venta en la copia autorizada de la misma.

IGNACIO MANRIQUE PLAZA Notario de Madrid

Así lo dicen y otorgan los señores comparecientes a los que de palabra hago las reservas y advertencias legales y en especial las de naturaleza fiscal, derivadas del otorgamiento de la presente escritura.

RESERVAS Y ADVERTENCIAS.

Hago a los señores comparecientes las reservas y advertencias legales, tanto las de carácter fiscal

En relación con el Impuesto sobre Transmisiones Patrimoniales y Actos Jurídicos Documentados, regulado por el Texto Refundido aprobado por R.O. 1/1993, de 24 de Septiembre, y su Reglamento de 29 de Mayo de 1995, advierto a los otorgantes que deberán presentar impreso de autoliquidación (en su caso), copia auténtica y copia simple de esta escritura en la oficina fiscal competente en el plazo de treinta días hábiles a partir de la fecha de esta escritura, e ingresar dentro de dicho plazo la cuota devengada.

Y que, en caso de no realizarse la presentación de esta escritura o no efectuarse el pago del Impuesto dentro de plazo, se incurrirá en las responsabilidades establecidas en la Ley General Tributaria.

Hacen constar los comparecientes que la transmisión objeto de esta escritura está exenta del Impuesto sobre Transmisiones Patrimoniales Onerosas y Actos Jurídicos Documentados y del Impuesto sobre el Valor Añadido, al amparo de lo dispuesto en el artículo 314 del Real Decreto Legislativo 4/2015 de 23 de octubre por el que se aprueba el texto refundido de la Ley del Mercado de Valores.

OTORGAMIENTO Y AUTORIZACION

Arancel números 2, 4, 7 y Norma 8ª. R.D. 1.426/89. BASES DECLARADAS

Honorarios y suplidos: 173,68 euros. -

CLÁUSULA DE PROTECCIÓN DE DATOS:

Los comparecientes siguiente: quedan informados de lo Sus datos personales serán objeto de tratamiento en esta Notaría, los cuales son necesarios para el cumplimiento de las obligaciones legales del ejercicio de la función pública notarial, conforme a lo previsto en la normativa prevista en la legislación notarial, de prevención del blanqueo de capitales, tributaria 16 y, en su caso, sustantiva que resulte aplicable al acto o negocio jurídico documentado. La comunicación de los datos personales es un requisito legal, encontrándose el otorgante obligado a facilitar los datos personales, y estando informado de que la consecuencia de no facilitar tales datos es que no sería posible autorizar o intervenir el presente documento público. Sus datos se conservarán con carácter confidencial. La finalidad del tratamiento de los datos es cumplir la normativa para autorizar/intervenir el presente documento, su facturación, seguimiento posterior y las funciones propias de la actividad notarial de obligado cumplimiento, de las que pueden derivarse la existencia de decisiones automatizadas, autorizadas por la Ley, adoptadas por las Administraciones Públicas y entidades cesionarias autorizadas por Ley, incluida la elaboración de perfiles precisos para la prevención e investigación por las autoridades competentes del blanqueo de capitales y la financiación del terrorismo.

IGNACIO MANRIQUE PLAZA Notario de Madrid

El notario realizará las cesiones de dichos datos que sean de obligado cumplimiento a las Administraciones Públicas, a las entidades y sujetos que estipule la Ley y, en su caso, al Notario que suceda o sustituya al actual en esta notaria.

Los datos proporcionados se conservarán durante los años necesarios para cumplir con las obligaciones legales del Notario o quien le sustituya o suceda.

Puede ejercitar sus derechos de acceso, rectificación, supresión, limitación, portabilidad y oposición al tratamiento por correo postal ante la Notaría autorizante, sita en Madrid, Calle Raimundo Fernández Villaverde, 61. Asimismo, tiene el derecho a presentar una reclamación ante una autoridad de control.

Los datos serán tratados y protegidos según la Legislación Notarial, la Ley Orgánica 15/1999 de 13 de diciembre de Protección de Datos de Carácter Personal (o la Ley que la sustituya) y su normativa de desarrollo, y el Reglamento (UE) 2016/679 del Parlamento europeo y del Consejo de 27 de abril de 2016 relativo a la protección de las personas físicas en lo que respecta al tratamiento de datos personales y a la libre circulación de estos datos y por el que se deroga la Directiva 95/46/CE. -

Leída por mi esta escritura a los señores comparecientes, a su elección, advirtiéndoles del derecho que tiene de hacerlo por sí, enterado la encuentran conforme, la otorgan y firman.

Y yo, el Notario, DOY FE:

a) De haber identificado a los señores comparecientes por medio de sus documentos identificativos, reseñados en la comparecencia, que me han sido exhibidos.

b) De que los señores comparecientes, a mi juicio, tienen capacidad y está legitimado para el presente otorgamiento.

c) De que, después de la lectura, los señores comparecientes han hecho constar haber quedado debidamente informados del contenido de este instrumento.

d) De que el consentimiento de los otorgantes ha sido libremente prestado.

e) De que el otorgamiento se adecua a la legalidad y a la voluntad libre y debidamente informada de los comparecientes. -

f) De todo lo consignado en este instrumento público que queda extendido en diez folios de papel timbrado, exclusivo para documentos notariales, serie EX, números el del presente y los nueve anteriores en orden correlativo.

Están las firmas de los comparecientes y la del Notario Autorizante. Signado, Rubricado y

DOY FE: QUE ES PRIMERA COPIA FIEL DE SU MATRIZ, CON LA QUE CONCUERDA Y EN DONDE QUEDA ANOTADA. Y A INSTANCIA DE LA PARTE COMPRADORA LA LIBRO SOBRE DIEZ FOLIOS DE PAPEL TIMBRADO, EXCLUSIVO PARA DOCUMENTOS NOTARIALES, SERIE ET, NUMERADOS CORRELATIVAMENTE EN ORDEN INVERSO AL DEL PRESENTE. MADRID, EL MISMO DÍA DE SU OTORGAMIENTO.

Fe Pública Notarial, Notariado Europa, Consejo General del Notariado Español 0247420321

Exhibit 4.32

CONTRATO DE RESOLUCIÓN DE MUTUO ACUERDO DEL

***CONSULTANCY SERVICES AGREEMENT* SUSCRITO ENTRE FERROATLÁNTICA, S.A.U.**

Y AURINKA PHOTOVOLTAIC GROUP, S.L. EL 28 DE ABRIL DE 2017

celebrado entre

FERROATLÁNTICA, S.A.U.,

(“**FAT**”)

AURINKA PHOTOVOLTAIC GROUP, S.L.

(“**Aurinka**”)

GRUPO FERROATLÁNTICA, S.A.U.

(“**GFAT**”)

Y

FERROSOLAR OPCO GROUP, S.L.

(“**OpCo**”)

En Madrid, a 11 de julio de 2019

CONTRATO DE RESOLUCIÓN DE MUTUO ACUERDO DEL *CONSULTANCY SERVICES AGREEMENT* SUSCRITO ENTRE FERROATLÁNTICA, S.A.U.Y AURINKA PHOTOVOLTAIC GROUP, S.L. EL 28 DE ABRIL DE 2017

En Madrid, a 11 de julio de 2019

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Raul Vall Vidardell, el día 29 de septiembre de 1992, bajo el número 3.016 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 3720, folio 188, hoja M-63610, y con Código de Identificación Fiscal A-80420516 ("**FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.695, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid, al tomo 29861, folio 175, sección 8, hoja M-63610.

Interviene, asimismo, en nombre y representación de la sociedad **Ferrosolar OpCo Group, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796, folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (en adelante, "**Opco**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de apoderado, en virtud de poder otorgado a su favor por dicha sociedad, el cual ha sido elevado a público en el día de hoy, mediante escritura otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza.

Interviene, igualmente, en nombre y representación de la sociedad **Grupo FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 19 de octubre de 2007, bajo el número 3.838 de orden de su protocolo, inscrita en

el Registro Mercantil de Madrid al tomo 24921, folio 24, , hoja M-448707, y con Código de Identificación Fiscal A-85255370 ("**GFAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura pública de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.699, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 34508, folio 177, sección 8, hoja M-448707.

Y DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L**., domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 , folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

En adelante, FAT y Aurinka serán conjuntamente denominadas las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes, OpCo y GFAT declaran tener capacidad legal suficiente para celebrar este contrato, por lo que

EXPONEN

(A) Que, con fecha 20 de diciembre de 2016, GFAT, Silicio Ferrosolar, S.L.U., FAT, Blue Power Corporation, S.L. ("**Blue Power**") y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(B) Que las Partes, Silicio Ferrosolar, S.L.U., GFAT, FerroAtlántica Participaciones, S.L.U. (la "**Sociedad Beneficiaria**"), Blue Power, OpCo y Ferrosolar R&D, S.L., han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(C) Que, como consecuencia de la decisión de resolver y extinguir el JVA, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra la suscripción de un contrato de resolución y extinción de mutuo acuerdo del *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka (el "**Contrato de Consultoría**").

(D) Que, OpCo es propietaria de un conjunto de activos sitos en c/ Ucrania nº6 y 8, Puertollano, Ciudad Real entre los que se incluyen activos provenientes de la antigua fábrica de una empresa denominada Silicio Solar.

(E) Que GFAT, como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial FAT, con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FAT mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la tenencia de participaciones, acciones y/o cuotas sociales que confieren la mayoría del capital social en otras sociedades, a favor de una sociedad de la Sociedad Beneficiaria, recibiendo el accionista único, esto es GFAT, la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la Sociedad Beneficiaria incluye, entre otras, las participaciones sociales de OpCo que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y la Sociedad Beneficiaria quedó efectivamente constituida, a día de hoy es la Sociedad Beneficiaria la titular de todas las participaciones sociales de OpCo trasmitidas en virtud de dicha escisión.

En virtud de lo anterior, las Partes, reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente acuerdo (el "**Acuerdo de Resolución**") con sujeción a las siguientes

CLÁUSULAS

1. RESOLUCIÓN DE MUTUO ACUERDO

Las Partes acuerdan libremente resolver de mutuo acuerdo el Contrato de Consultoría con efectos a partir del 1 de enero de 2019.

Como consecuencia de lo expuesto anteriormente, el Contrato de Consultoría queda resuelto y extinguido con efectos a partir del 1 de enero de 2019.

2. INDEMNIZACIÓN POR RESOLUCIÓN ANTICIPADA

Las Partes acuerdan que Aurinka reciba una indemnización en concepto daños y perjuicios, incluyendo el lucro cesante, por resolución anticipada del Contrato de Consultoría en compensación de los perjuicios que ello le ocasione (la "**Indemnización**"). Dicha Indemnización consistirá en:

a) Una cantidad de DOS MILLONES QUINIENTOS MIL EUROS (2.500.000 €), de conformidad con los siguientes términos:

(i) La cantidad de DOSCIENTOS CINCUENTA MIL EUROS (250.000 €), que fue transferida en concepto de anticipo el 21 de junio de 2019 a la cuenta bancaria número ES3421006076540200074761 abierta a nombre de Aurinka en La Caixa, y sobre la que Aurinka otorga en este acto la más amplia y firme carta de pago.

(ii) La cantidad de UN MILLÓN CIENTO VEINTICINCO MIL EUROS (1.125.000 €) se transferirá a la cuenta bancaria señalada en el apartado (i) anterior no más tarde del 12 de julio de 2019.

(iii) La cantidad restante de UN MILLÓN CIENTO VEINTICINCO MIL EUROS (1.125.000 €) se transferirá a la cuenta bancaria señalada en el apartado (i) anterior no más tarde del 27 de julio de 2019.

b) Un derecho de opción de compra a favor de Aurinka sobre la maquinaria de la antigua fábrica de Silicio Solar que no sea necesaria para el desarrollo del negocio de OpCo, en los términos y condiciones que se regulan en el borrador del contrato de opción de compra de la referida maquinaria adjunto al presente Acuerdo de Resolución como **Anexo 1**, el cual será firmado por OpCo y Aurinka en unidad de acto con la firma de este Acuerdo de Resolución.

En virtud del presente Acuerdo de Resolución, las Partes, OpCo y GFAT acuerdan que el justificante de las transferencias indicadas en el apartado a) anterior supondrá el otorgamiento de la más amplia y firme carta de pago por parte de Aurinka por los importes transferidos, salvo buen fin de las transferencias indicadas.

Aurinka declara expresamente su conformidad a todos los efectos legales oportunos con la Indemnización aquí pactada.

Asimismo, las Partes hacen constar que la cantidad acordada en concepto de Indemnización por importe de DOS MILLONES QUINIENTOS MIL EUROS (2.500.000 €) mencionada en el apartado a) anterior, no es contraprestación de prestaciones de servicios, ni entregas de bienes, realizadas o pendientes de realizar en el marco del Contrato de Consultoría que es objeto de resolución en virtud del presente Acuerdo de Resolución.

Del mismo modo, tampoco supone la contraprestación de una obligación de no hacer. Al contrario, se trata de una cantidad que compensa los daños y perjuicios correspondientes, incluyendo el lucro cesante, ocasionado a Aurinka por la resolución anticipada del Contrato de Consultoría.

3. AUSENCIA DE RECLAMACIONES Y RENUNCIA DE LAS PARTES

3.1 Las Partes expresamente declaran que no tienen nada que reclamarse la una a la otra ni a la Sociedad Beneficiaria en virtud de lo dispuesto en el Contrato de Consultoría y que no existen a día de hoy deudas pendientes (a salvo del abono de la Indemnización), facturas pendientes de abono, reclamaciones, daños o contingencias pendientes derivadas del Contrato de Consultoría, que puedan ser objeto de reclamación por parte de ninguna de ellas ni en relación con terceros, renunciando las Partes a ejercitar entre sí y/o frente a la Sociedad Beneficiaria acciones judiciales o extrajudiciales derivadas de lo dispuesto en el

Contrato de Consultoría y declarando no tener nada que reclamar contra ningún tercero en virtud de lo dispuesto Contrato de Consultoría ni en relación con los servicios objeto del mismo.

3.2 Asimismo, Aurinka se compromete expresamente frente a GFAT, FAT, OpCo y R&D, así como frente a la Sociedad Beneficiaria, a:

a) mantenerlas a todas ellas indemnes de cualesquiera reclamaciones de cualquier naturaleza, incluyendo, a título enunciativo y no limitativo, reclamaciones de carácter laboral, de la Seguridad Social, fiscales y tributarias, administrativas, regulatorias, civiles, contractuales y/o extracontractuales que, a consecuencia de la cancelación del Contrato de Consultoría y de las consecuencias que de ello se deriven, pudieran dirigir contra cualquiera de dichas entidades cualesquiera terceros, incluyendo, a título enunciativo y no limitativo, los siguientes: Blue Power, los socios y/o administradores de Aurinka y/o de Blue Power, entidades pertenecientes al mismo grupo de sociedades al que pertenecen Aurinka y/o Blue Power (en el sentido establecido en el artículo 42 del Código de Comercio), cualquier persona o entidad vinculada con Aurinka y/o Blue Power (según lo establecido en el artículo 18 de la Ley 27/2014, de 27 de noviembre, del Impuesto sobre Sociedades), cualquier contratista, proveedor y subcontratista de OpCo, R&D, Aurinka y/o Blue Power y/o cualquier persona que sea empleada de, o trabaje para, OpCo, R&D, Aurinka y/o Blue Power; y

b) indemnizarlas de cualquier daño o perjuicio que pudiera sufrir cualquiera de ellas a consecuencia de cualquier reclamación de tercero que pudiera traer causa de la cancelación del Contrato de Consultoría y de las consecuencias que de ello se deriven, sin limitación, incluyendo cualquier pérdida o daño, incluido el daño emergente y el lucro cesante, perjuicio, carga, garantía, fianza, responsabilidad, pasivo, minusvalía, sanción, recargo, interés o gasto (incluidos costas y honorarios de abogados, procuradores, fedatarios, auditores, contables, expertos, peritos u otros profesionales en los que hubiese incurrido razonablemente).

4. CESIÓN

Las Partes acuerdan que Aurinka no podrá ceder su posición contractual, ni ninguno de sus derechos y obligaciones bajo el presente Acuerdo de Resolución sin el consentimiento previo, expreso y por escrito de OpCo.

5. LEY APLICABLE Y JURISDICCIÓN

Las obligaciones y derechos de las Partes, en lo no previsto expresamente en este Acuerdo de Resolución, se regirán por lo dispuesto en legislación española común y quedan sometidas a la jurisdicción de los Juzgados y Tribunales de Madrid capital.

[*Sigue hoja de firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Acuerdo de Resolución por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

AURINKA PHOTOVOLTAIC GROUP, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROSOLAR OPCO GROUP, S.L.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

GRUPO FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

CARTA DE COMPROMISO

DE: **Grupo FerroAtlántica, S.A.U.** (“**GFAT**”), **FerroAtlántica, S.A.U.** (“**FAT**”) **y Ferrosolar Opco Group, S.L** (“**Opco**”)

A: **Aurinka Photovoltaic Group, S.L.** (“**Aurinka**”)

GFAT, FAT, Opco, y Aurinka, en adelante, será conjuntamente denominados las “**Partes**”.

En Madrid, a 11 de julio de 2019.

Ref.: Acuerdo de resolución de mutuo acuerdo del *consultancy services agreement* que fue suscrito entre FerroAtlántica, S.A.U. y Aurinka Photovoltaic Group, S.L. el 28 de abril de 2017, celebrado entre FerroAtlántica, S.A.U., Ferrosolar OpCo Group, S.L., Grupo FerroAtlántica, S.A.U. y Aurinka Photovoltaic Group, S.L. con fecha 11 de julio de 2019.

Estimados Sres.:

Hacemos referencia al contrato de resolución de mutuo acuerdo del *consultancy services agreement* que fue suscrito entre FerroAtlántica, S.A.U. y Aurinka Photovoltaic Group, S.L. el 28 de abril de 2017, celebrado entre FerroAtlántica, S.A.U., Ferrosolar OpCo Group, S.L., Grupo FerroAtlántica, S.A.U. y Aurinka Photovoltaic Group, S.L. con fecha el 11 de julio de 2019 (en adelante, el “**Acuerdo de Resolución**”).

Los términos en mayúscula en la presente carta de compromiso (en adelante, la “**Carta**”) que no estén expresamente definidos en la misma tendrán el significado que se les atribuye en el Acuerdo de Resolución.

En caso de discrepancia entre el contenido del Acuerdo de Resolución y el de esta Carta, prevalecerá lo indicado en esta última.

Por medio de la presente Carta, las Partes desean establecer obligaciones adicionales en relación con el Acuerdo de Resolución, las cuales no han sido incluidas en el mismo por motivos de confidencialidad. La presente Carta será considerada como un complemento y modificación del Acuerdo de Resolución y, por tanto, parte integrante del mismo.

Dado que la Indemnización pactada en el Acuerdo de Resolución es en concepto daños y perjuicios, incluyendo el lucro cesante, y no constituye en ningún caso retribución por prestación de servicios, las GFAT, FAT y Opco entienden que la Indemnización no está sujeta a IVA.

No obstante lo anterior, en caso de que la Agencia Tributaria entendiese que dicha Indemnización está sujeta a IVA, GFAT se compromete a mantener indemne a Aurinka frente a cualesquiera posibles reclamaciones, de cualquier tipo, que, en relación con dicho IVA exclusivamente, provengan de la Agencia Tributaria, incluyendo, a título ejemplificativo, cuota, intereses, recargos, sanciones y

cualesquiera gastos que pudieran derivarse de dichas reclamaciones, debiendo GFAT asumir la defensa frente a las mismas, de conformidad con lo previsto a continuación.

Asimismo, en caso de que Aurinka recibiera una reclamación o solicitud de información de la Agencia Tributaria en relación con el pago del IVA (la "**Reclamación**") derivado de la Indemnización, Aurinka se compromete expresamente a lo siguiente:

- En el plazo de diez (10) días naturales desde la recepción de la Reclamación, y en todo caso no más tarde de quince (15) días naturales antes de la fecha en que expire el plazo legal para contestar a dicha Reclamación, Aurinka informará por escrito a GFAT de la recepción de la Reclamación.
- Aurinka acompañará a la notificación la información y documentación que tuviera en relación con la Reclamación para permitir a GFAT: (a) evaluar la conveniencia de transigir o alcanzar un acuerdo en relación con la misma; o (b) preparar la defensa frente a la Reclamación, en el caso de que la estimen improcedente, de conformidad con lo previsto a continuación.
- Aurinka otorgará a GFAT y a los asesores que ésta contrate los poderes que sean necesarios a fin de que GFAT asuma la defensa frente a la Reclamación.
- GFAT deberá mantener puntualmente informada a Aurinka del desarrollo de la Reclamación y la defensa de la misma.

Las Partes reconocen que la presente Carta tiene carácter confidencial y se comprometen a no desvelar la misma o su contenido a ninguna otra persona sin el previo consentimiento de las restantes partes firmantes del Acuerdo de Resolución, excepto (i) que sea requerido por disposición legal o por una autoridad gubernamental o regulatoria; (ii) que se produzca un incumplimiento de la misma por cualquiera de una de las Partes, en cuyo caso, la Parte cumplidora tendrá derecho a desvelar la existencia de la misma.

La presente Carta será interpretada y cumplida en sus propios términos, y se regirá por la legislación común española.

Para la solución de cuantas controversias puedan surgir en relación con el cumplimiento, ejecución e interpretación de la presente Carta, queda convenida la sumisión de las Partes a la jurisdicción de los Juzgados y Tribunales de Madrid capital.

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Acuerdo de Resolución por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

[Sigue hoja de firmas]

AURINKA PHOTOVOLTAIC GROUP, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

GRUPO FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROSOLAR OPCO GROUP, S.L.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

Exhibit 4.34

CONTRATO DE RESOLUCIÓN DE MUTUO ACUERDO DEL

***JOINT VENTURE AGREEMENT* Y DEMÁS ACUERDOS DERIVADOS DEL MISMO**

celebrado entre

GRUPO FERROATLÁNTICA, S.A.U.,

FERROATLÁNTICA PARTICIPACIONES, S.L.U.,

SILICIO FERROSOLAR, S.L.U.,

FERROATLÁNTICA, S.A.U.,

AURINKA PHOTOVOLTAIC GROUP, S.L.,

BLUE POWER CORPORATION, S.L.,

FERROSOLAR OPCO GROUP, S.L.

Y

FERROSOLAR R&D, S.L.

En Madrid, a 11 de julio de 2019

CONTRATO DE RESOLUCIÓN DE MUTUO ACUERDO DEL

***JOINT VENTURE AGREEMENT* Y DEMÁS ACUERDOS DERIVADOS DEL MISMO**

En Madrid, a 11 de julio de 2019

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **Grupo FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 19 de octubre de 2007, bajo el número 3.838 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 24921, folio 24, , hoja M-448707, y con Código de Identificación Fiscal A-85255370 ("**Grupo FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura pública de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.699, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 34508, folio 177, sección 8, hoja M-448707.

Asimismo, interviene en nombre y representación de la sociedad **Silicio FerroSolar, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 10 de julio de 2.008, bajo el número 2.369 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 25905, folio 20, hoja M- 466968, y con Código de Identificación Fiscal B-85504884 ("**SFS**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.700, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 25905, folio 215, sección 8, hoja M-466968.

Asimismo, interviene en nombre y representación de la sociedad **FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Raul Vall Vidardell, el día 29 de septiembre de 1992, bajo el número 3.016 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 3720, folio 188, hoja M-63610, y con Código de Identificación

Fiscal A-80420516 ("**FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.695, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid, al tomo 29861, folio 175, sección 8, hoja M-63610.

Interviene, igualmente, en nombre y representación de la sociedad **FerroAtlántica Participaciones, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 2 de abril de 2019, bajo el número 1898 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 29861, folio 189 , hoja M-63610, y con Código de Identificación Fiscal B-88358619 (la "**Sociedad Beneficiaria**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada, según consta en la escritura otorgada el día 26 de junio 2019, ante el Notario de Madrid, D. Jaime Recarte Casanova, con el número 3.661 de orden de su protocolo.

DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid , y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Blue Power Corporation, S.L.**, domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Madrid, D. Rafael Vallejo Zapatero, el día 20 de julio de 2015, bajo el número 1.257 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 33.763, folio 12,hoja M-607671, y con Código de Identificación Fiscal B-87339248 ("**Blue Power**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura otorgada, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 2031 de orden de su protocolo.

Asimismo, interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L.,** domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 , folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

Y DE OTRA PARTE

(3) **D. Benjamín Llaneza Caruana**, cuyos datos personales y de identificación constan más arriba.

Interviene en nombre y representación de la sociedad **Ferrosolar R&D, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.080 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34.796, folio 180, sección 8, hoja M-625891, y con Código de Identificación Fiscal B-87576740 ("**R&DCo**"). Ostenta dicha representación, que asegura vigente, en virtud escritura otorgada el día 24 de febrero de 2017, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 527 de orden de su protocolo.

(4) **Dña. Clara Cerdán Molina,** cuyos datos personales y de identificación constan más arriba.

Interviene en nombre y representación de la sociedad **Ferrosolar OpCo Group, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796, folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (en adelante, "**Opco**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de apoderado, en virtud de poder otorgado a su favor por dicha sociedad, el cual ha sido elevado a público en el día de hoy, mediante escritura otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza.

En adelante, Grupo FAT, SFS, FAT, Blue Power y Aurinka serán conjuntamente denominadas las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes y la Sociedad Beneficiaria declaran tener capacidad legal suficiente para celebrar este acuerdo de resolución del *Joint Venture Agreement* y demás acuerdos derivados del mismo, por lo que

EXPONEN

(A) Que, con fecha 20 de diciembre de 2016, las Partes suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(B) Que, en el marco del JVA, las Partes acordaron ejecutar un nuevo establecimiento industrial para la producción de silicio calidad solar en La Nava, Puertollano.

(C) Que las sociedades R&DCo y Opco fueron constituidas en virtud de lo establecido en el JVA.

(D) Que las Partes, la Sociedad Beneficiaria, OpCo y R&DCo han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución de mutuo acuerdo del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(E) Que, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes y la Sociedad Beneficiaria llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra la

resolución del JVA y de los contratos que se relacionan en la Cláusula 1.2 siguiente (los "**Contratos del Proyecto**").

(F) Que Grupo FAT, como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial FAT, con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FAT mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la tenencia de participaciones, acciones y/o cuotas sociales que confieren la mayoría del capital social en otras sociedades, a favor de la Sociedad Beneficiaria, recibiendo el accionista único, esto es Grupo FAT, la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la Sociedad Beneficiaria incluye, entre otras, las participaciones sociales de OpCo que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y la Sociedad Beneficiaria quedó efectivamente constituida, a día de hoy es la Sociedad Beneficiaria la titular de todas las participaciones sociales de OpCo trasmitidas en virtud de dicha escisión.

En virtud de lo anterior, las Partes, la Sociedad Beneficiaria, R&DCo y OpCo reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente acuerdo ("**Acuerdo de Resolución**") con sujeción a las siguientes

CLÁUSULAS

1. RESOLUCIÓN DE MUTUO ACUERDO

1.1. Las Partes acuerdan libremente resolver de mutuo acuerdo el JVA y con efectos a partir de esta misma fecha.

1.2. Las Partes, R&DCo y OpCo acuerdan libremente resolver de mutuo acuerdo los Contratos del Proyecto de los que cada una de ellas es parte que se relacionan a seguidamente, con efectos a partir de las fechas que se indican a continuación:

a) El *consultancy services agreement* suscrito el 24 de febrero de 2017 entre Blue Power y R&DCo, el cual nunca ha sido aplicado, pues las Partes decidieron sustituirlo por el *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y Aurinka, y, por tanto, queda resuelto con efectos a partir del 24 de febrero de 2017.

b) El *consultancy services agreement* suscrito el 28 de abril de 2017 entre FAT y R&DCo el cual nunca ha sido aplicado por las partes y que, por tanto, queda resuelto con efectos a partir del 28 de abril de 2017.

c) El *technology licence agreement* suscrito el 24 de febrero de 2017 y modificado el 24 de febrero de 2018 entre OpCo y R&DCo, el cual queda resuelto con efectos a partir del 1 de enero de 2019.

d) El *consultancy services agreement* suscrito el 24 de febrero de 2017 y modificado el 1 de enero de 2019 entre SFS y R&DCo. Este contrato, tal y como fue modificado, queda resuelto con efectos a partir del 1 de enero de 2019.

e) El *technology licence agreement* suscrito el 24 de febrero de 2017 y modificado el 1 de enero de 2019 entre SFS y R&DCo. Este contrato, tal y como fue modificado, queda resuelto con efectos a partir del 1 de enero de 2019.

f) El contrato de suministro de silicio suscrito el 24 de febrero de 2017 entre FAT y OpCo, el cual queda resuelto con efectos a partir de la presente fecha.

g) Como consecuencia de lo expuesto anteriormente, el JVA y los Contratos del Proyecto quedan resueltos y extinguidos con efectos a partir de las fechas indicadas anteriormente.

1.1. Obligaciones de confidencialidad

No obstante la resolución del JVA y de los Contratos del Proyecto, las Partes acuerdan expresamente que las únicas obligaciones previstas en dichos acuerdos que sobrevivirán a la terminación de los mismos son las obligaciones de confidencialidad, así como cualesquiera otras que por su naturaleza debieran sobrevivir, las cuales continuarán vigentes y serán de obligado cumplimiento para las Partes.

2. AUSENCIA DE RECLAMACIONES Y RENUNCIA

Las Partes, la Sociedad Beneficiaria, R&DCo y OpCo declaran expresamente que no tienen nada que reclamarse entre ellas en virtud de lo dispuesto en el JVA ni en ninguno de los Contratos del Proyecto de los que todas o algunas de ellas son parte. Asimismo, las Partes declaran que, ni en relación con el JVA ni con ninguno de los Contratos del Proyecto, existen a día de hoy deudas, facturas pendientes de abono, reclamaciones, daños o contingencias pendientes que puedan ser objeto de reclamación futura por parte de ninguna de ellas, renunciando las Partes, la Sociedad Beneficiaria, R&DCo y OpCo a ejercitar entre sí o frente a cualesquiera terceros acciones judiciales o extrajudiciales derivadas de lo dispuesto en el JVA y/o en los Contratos el Proyecto.

3. LEY APLICABLE Y JURISDICCIÓN

Las obligaciones y derechos de las Partes, de la Sociedad Beneficiaria, de R&DCo y de OpCo, en lo no previsto expresamente en este Acuerdo de Resolución, se regirán por lo dispuesto en legislación española común y quedan sometidas a la jurisdicción de los Juzgados y Tribunales de Madrid capital.

[*Sigue hoja de firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Acuerdo de Resolución por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

GRUPO FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

SILICIO FERROSOLAR, S.L.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

BLUE POWER CORPORATION, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

AURINKA PHOTOVOLTAIC GROUP, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

FERROSOLAR OPCO GROUP, S.L.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROSOLAR R&D, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

FERROATLÁNTICA PARTICIPACIONES, S.L.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

Exhibit 4.35

CONSULTANCY SERVICES AGREEMENT

by and between

AURINKA PHOTOVOLTAIC GROUP, S.L.

("Aurinka" or the "Consultant")

And

FERROSOLAR OPCO GROUP, S.L.

("OpCo")

Madrid, on 11 July 2019

INDEX

CONSULTANCY SERVICES AGREEMENT

This Agreement is made in Madrid, on 11 July 2019.

BETWEEN

I. On the one hand, **Mr. Benjamín Llaneza Caruana**, of legal age, a Spanish national, with professional address at 28521 Rivas-Vaciamadrid (Madrid, Spain), Calle Marie Curie, 19, Ed. Autocampo, holder of Spanish Identity Document number 50.446.574-F, in force, acting on behalf of the Spanish corporation "**AURINKA PHOTOVOLTAIC GROUP, S.L.**" (hereinafter indistinctly referred to as the "**Consultant**" or "**Aurinka**"), a company incorporated under the Laws of Spain. It is duly recorded at the Madrid Commercial Register. Its official tax number (C.I.F.) is B86070547. Mr. Llaneza Caruana is duly empowered.

II. On the other hand, **Ms. Clara Cerdán Molina**, of legal age, a Spanish national, with professional address at 28046 Madrid (Spain), Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, holder of Spanish Identity Document number 48498082-Y, in force, acting on behalf of the Spanish corporation **Ferrosolar OpCo Group, S.L.** (hereinafter, "**OpCo**"), a company incorporated under the Laws of Spain. It is duly recorded at Volume 34796, Sheet 167, Page M-625889, of the Madrid Commercial Register. Its official tax number (C.I.F.) is B-87576567.

Each OpCo and Aurinka PV shall be hereinafter individually referred to as a "**Party**", and all of them shall be jointly referred to as the "**Parties**".

The Parties hereby acknowledge each other's full legal capacity for the execution and delivery of this Agreement and make the following

RECITALS

I.- Whereas Aurinka is a specialized energy-related technology venture engaged in activities related to the development and manufacturing solar-grade silicon, including but not limited to (i) the process for the production of solar-grade silicon (SoGSi) via UMG and (ii) its know-how for the production of UMG SoGSi and photovoltaic (PV) wafers from such UMG SoGSi.

II.- Whereas on 20 December 2016, Aurinka, Blue Power Corporation, S.L., Grupo Ferroatlántica, S.A.U, Ferroatlántica S.A.U. and Silicio FerroSolar, S.L.U. entered into a joint venture agreement for the purpose of developing and manufacturing UMG through a joint venture (the "**Joint Venture Agreement**"), which was subsequently novated and amended on 24 February 2017.

III.- Whereas on 28 April 2017 Aurinka and FAT entered into a consultancy services agreement for the provision of certain services in connection to the operation of the solar quality silicon production project developed by OpCo at the Puertollano Facility (the "**Project**"), which has been terminated with effects as from 1 January 2019.

IV.- Whereas the Joint Venture Agreement and all the remaining agreements in connection thereto have been terminated with effects as from today.

V.- Whereas Aurinka will provide OpCo certain consultancy services in relation to the Puertollano facility, in accordance to the provisions of this agreement.

VI.- Whereas Grupo FerroAtlántica. S.A.U., as sole shareholder of FerroAtlántica. S.A.U., is currently under a corporate reorganization process in order to promote and facilitate the separate and independent management of each of its business' branches. In this context, on 2 April 2019, the partial spinoff without extinction of FerroAtlántica. S.A.U. was signed before a Public Notary by means of the transfer by the universal succession of its financial branch of the business, consisting of shares, quotas and/or shareholding interests that confer the majority of the share capital in other companies, in favour of a newly created limited liability company so-called FerroAtlántica Participaciones, S.L.U. (the "**Beneficiary**"), receiving Grupo FerroAtlántica, S.A.U. 100% of the Beneficiary share capital once the execution of the spinoff is registered at the Commercial Register. The financial assets transferred to the Beneficiary include, among others, all OpCo's shares held by FerroAtlántica, S.A.U. at the time the spinoff was executed. Therefore, once the spinoff registration takes place, and therefore, the Beneficiary is effectively incorporated, the latter will hold all OpCo's shares transferred by FerroAtlántica, S.A.U. following the registration of the spinoff, becoming the Beneficiary effectively a shareholder of OpCo.

VII.- Whereas the Parties' intention, through this agreement, is to formalise the rendering of services to OpCo by Aurinka with effects as from 1 January 2019 (the "**Agreement**").

THEREFORE, in consideration of the mutual undertakings and representations and warranties herein contained, the Parties, intending to be legally bound, hereby agree as follows:

CLAUSES

1. DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement, the following words and expressions shall have the following meanings:

"Agreement" means this Agreement and any relevant Statements of Work ("SOW"), Work Authorizations ("WA"), and other attachments or appendices specifically referenced in this Agreement.

"Confidential Information" means any and all proprietary and confidential information respecting the business, commercial, legal, financial and technical interests and operations of OpCo, including but not limited to, any and all data, records, reports, calculations, opinions, maps, charts, documents, information and materials (including documents, interpretations, plans, maps, sections,

drawings, writings, papers, materials and all other things related thereto), policies, services, processes, procedures, methods, formulations, trade secrets, intellectual property, facilities, products, plans, affairs, transactions, organizations, supplier and client lists, and analyses, interpretations, studies and opinions in any way derived from any of the Confidential Information, all summaries, extracts or copies therefrom and all notes, memoranda, or analysis based thereon, regardless of the format (e.g., electronic, paper, film, or oral) in which the Confidential Information is conveyed, stored, or presented. Confidential Information shall not include information which (i) is part of the public domain at the time it is disclosed to Aurinka; (ii) is made known to Aurinka without an obligation of confidentiality by a third party who did not acquire the information, either directly or indirectly, under an obligation of confidentiality; (iii) after it is made known to Aurinka becomes part of the public domain through no fault of Aurinka or of any person to whom Aurinka has disclosed the Confidential Information; or (iv) Aurinka can establish was in its possession prior to the disclosure of such Confidential Information by OpCo without breach of any obligation of confidentiality and not obtained by any illegal or improper means.

“Consultant Know-How” shall mean any previous proprietary know-how which Aurinka has.

“Deliverables” means items that Aurinka prepares for or provides to OpCo or Customer as described in a SOW and/or WA. Deliverables include Developed Works, Preexisting Materials, and Tools.

“Developed Works” means all work product (including software and its Externals) developed in the performance of this Agreement as described in a SOW and/or WA. Developed Works do not include Preexisting Materials, Tools, or items specifically excluded in a SOW and/or WA.

"Externals" shall mean any physical medium in any format, either analogical or digital, that contains data, software, information or any other content.

“Intellectual Property Rights” means all intellectual and industrial property rights of OpCo which include rights to inventions and patents for inventions, including reissues thereof and continuations in part, copyright, designs and industrial designs, trademarks, know-how, trade secrets and confidential information, and other proprietary rights.

“Inventions” means ideas, designs, concepts, techniques, inventions, utility models, discoveries or improvements, whether or not patentable, conceived or reduced to practice by the Personnel in performance of this Agreement.

“Joint Inventions” means Inventions made by Aurinka’s Personnel jointly with OpCo’s personnel.

“Personnel” means agents, employees, contractors or subcontractors engaged or appointed by Aurinka.

“Plant” means the industrial facility located at Puertollano (Ciudad Real, Spain).

“Preexisting Materials” means items including their Externals, contained within a Deliverable, in which the copyrights are owned by a third party or that supplier prepared or had prepared outside the scope of this Agreement. Preexisting Materials exclude Tools but may include material that is created by the use of Tools.

“R&DCo” means “Ferrosolar R&D, S.L.”, a Spanish corporation duly incorporated and in valid legal existence in accordance with the laws of Spain, having its registered address in 28046 Madrid (Spain), Torre Espacio, Paseo de la Castellana, 259-D, Planta 49. It was duly incorporated on May 31, 2016, before the Notary Public of Madrid, Mr. Antonio de la Esperanza Rodríguez, with the number 2.080 of his official record. It is duly registered with the Commercial Registry of Madrid, under, Volume 34.796, Section 8, Sheet 180, Page M-625891. Its Tax Number is CIF B-87576740.

“Services” shall mean the services to be provided by the Consultant to OpCo and described at Annex 1 hereto and the work that Aurinka performs for OpCo as described in a SOW and/or WA.

“Statement of Work” or “SOW” means any document that: (i) identifies itself as a statement of work; (ii) is signed by both parties; and (iii) incorporates by reference the terms and conditions of this Agreement.

"Tools” shall mean any devices, instruments and/or any other means used by Aurinka to perform the Services

1.2 Interpretation

2.2.1. References in this Agreement to any statutory provision shall be deemed to include references to any statutory provision which updates, consolidates or replaces the same, provided that such updating, consolidating or replacing legislation does not alter the substance of the existing provision and shall be deemed to refer to any other regulation, instrument or other subordinate legislation made under such updating provision.

2.2.2. Reference to a clause or sub-clause shall be a reference to a clause or sub-clause of this Agreement.

2.2.3. The clause or sub-clause headings in this Agreement are inserted for convenience only and shall not be deemed to affect the construction or interpretation hereof.

2.2.4. Where the context so admits words importing the singular shall include the plural (and vice versa), words importing masculine shall include the feminine and neuter (and vice versa) and words importing persons shall include corporate bodies, partnerships, companies and other business or governmental entities or instrumentalities, whether registered or not, as well as individuals.

2. SERVICES

2.1 Description

Subject to the terms and conditions of this Agreement, OpCo hereby retains Aurinka as a consultant and technical advisor to perform the consulting Services, as said Services may be amended in writing from time to time by mutual agreement between the Parties, and Aurinka agrees, subject to the terms and conditions of this Agreement, to render such Services during the term of this Agreement. Aurinka shall render the Services hereunder at the Plant at such times specified by OpCo.

2.2 Staff

The staff to be employed at all times by Aurinka is described at **Annex 2** attached to this Agreement.

2.3 Standard of Performance

Aurinka shall perform all Services required of it under this Agreement (i) with the degree of skill, care and diligence normally shown by a professional corporation performing services of a scope, purpose and magnitude comparable with the nature of the Services to be provided under this Agreement; (ii) in a manner consistent with OpCo's directions; (iii) a reasonable and prudent operator; and (iv) all applicable laws. Aurinka shall at all times assure timely and satisfactory rendering and completion of its Services. Aurinka shall assure that all Services which require the exercise of professional skills or judgment shall be accomplished by professionals qualified and competent in the applicable discipline and appropriately licensed, if required by law. Aurinka shall remain responsible for the professional and technical accuracy of all Services or Deliverables furnished, whether by Aurinka or its subcontractors (the "**Subcontractors**"), or others on its behalf. All Deliverables shall be prepared in a form and content satisfactory to OpCo and shall be delivered in a timely manner consistent with the requirements of this Agreement.

If Aurinka fails to comply with the foregoing standards, Aurinka shall perform again, at its own expense, any and all Services required to be performed again as a direct or indirect result of such failure. Any review, approval, acceptance or payment for any and all of the Services by OpCo shall not relieve Aurinka of its responsibility for the professional and technical accuracy of its Services and Deliverables.

2.4 Records and Audit

Aurinka shall be responsible for maintaining proper, accurate and complete accounting records of all expenditures for Services and Deliverables, including records demonstrating the eligibility of expenditures for payment out of this Agreement in accordance to Clause 5 below.

3. KEY PERSONNEL

In addition to the general obligation to provide qualified and competent Personnel, Aurinka shall assign and maintain during the term of this Agreement and any extension of it an adequate staff of

competent Personnel that is fully equipped, licensed as appropriate, available as needed, and qualified to perform the Services, including among its staff the Key Personnel identified in Schedule 2 to this Agreement, who shall be fully assigned and maintained, at least, until 10 October 2019.

Without prejudice to Aurinka's general obligation to provide qualified and competent Personnel, from 11 October 2019 onwards, Aurinka undertakes to maintain and assign, at least, one third of the Key Personnel for the purpose of rendering the Services.

4. FEES, PAYMENT AND INVOICING

4.1 Fees for Services

4.1.1 As consideration for the Services effectively rendered by Aurinka to OpCo, the latter shall pay Aurinka a monthly fee of Euro THIRTY THOUSAND (€ 30,000), plus VAT and any other applicable taxes (the "**Monthly Fee**").

4.1.2 The Parties agree that the Services rendered by Aurinka to OpCo from 1 January 2019 to 30 June 2019 amounting to ONE HUNDRED AND EIGHTY THOUSAND EUROS (€180,000.00). On this regard, the Parties expressly acknowledge that a payment on account of such amount was made to Aurinka on 26 March 2019 in the amount of EIGHTY THOUSAND EUROS (€80,000.00). Therefore, OpCo will pay Aurinka the outstanding amount of ONE HUNDRED THOUSAND EUROS (€100.000) no later than ten (10) calendar from the date hereof, provided that Aurinka issues the relevant invoice for an amount of ONE HUNDRED AND EIGHTY THOUSAND EUROS (€180,000.00) within such ten (10) days period.

4.1.3 For the payment, Aurinka shall issue monthly invoices for an amount equal to the Monthly Fee each, and OpCo shall pay them within a thirty-day period from the date of issuance of the relevant invoice.

4.1.4 In case the Agreement is early terminated in accordance with its terms and conditions, the payment corresponding to the Services rendered during the last calendar month on which the Agreement was in force shall be proportional to the number of days during which the Agreement was in force during that relevant month and shall be calculated by dividing the Monthly Fee into said number of days. The same principle will apply in case the Services are discontinued at any moment during the life of this Agreement.

4.2 Method of payment and invoicing

As long as this Agreement is in full force and effect, Aurinka shall issue monthly invoices to OpCo for an amount equal to the Monthly Fee. OpCo shall pay such invoices within the thirty (30) days period following the date on which it receives each invoice, without prejudice to the provisions under Clause 7. All amounts due under this Agreement shall be paid via wire transfer to the bank account number of Aurinka indicated in **Annex 3**.

5. REIMBURSABLE EXPENSES

5.1 OpCo shall reimburse Aurinka for travel expenses and sustenance directly related to the maintenance of the Plant provided that any such expenses are previously approved by OpCo.

5.2 Aurinka shall not be entitled to compensation under this Clause for the services of Subconsultants hired to perform the Services under this Agreement.

6. REPRESENTATIONS AND WARRANTIES

6.1 Aurinka represents and warrants to OpCo that the Services provided under this Agreement shall be performed in a good, workmanlike and efficient manner, in accordance with the generally accepted industry standards for consultants providing similar services and all applicable laws, regulations, labour agreements and working conditions to which Aurinka, the Services and the Project are subject.

6.2 In addition, Aurinka represents and warrants to OpCo that the provision of the Services under this Agreement does not infringe any intellectual property rights, copyright, constitute unfair competition and/or violate any third party rights.

7. NON-CONFORMING SERVICES

In the event OpCo's rejects non-conforming Services, Aurinka shall immediately correct the non-conformance, which in any event shall not exceed thirty (30) days or such shorter period specified by OpCo as will not impede its operations, provided that any resulting delay in its receipt of conforming Services is not likely to impede OpCo's operations, as determined by OpCo, in its sole discretion, of which OpCo shall give Aurinka notice. Should Aurinka fail to correct the non-conformance within the period specified above, in additional to all other rights and remedies available to it, OpCo may recover the reasonable costs incurred in correcting the non-conforming Services and will be entitled to withhold any fees to be paid to Aurinka until the relevant Services are properly performed according to the Agreement.

8. INSURANCE. LIMITATION OF LIABILITY

8.1 Insurance coverage for Aurinka Personnel

Aurinka hereby undertakes to ensure that all the Personnel, all of its employees, supervisors, subcontractors and their employees and/or representatives will be fully covered under applicable laws and which costs will be the sole responsibility of Aurinka. At OpCo's written request, it shall provide written evidence that such obligations have been complied with.

8.2 General liability insurance policy

Throughout the Term of this Agreement and for a period of one (1) year thereafter, Aurinka

shall maintain at its own expense, and with a leading insurance company authorized to do business in Spain, a comprehensive general liability insurance policy (including professional negligence) with a limit of not less than 500.000 euros. Such policy shall name OpCo as an additional or co-insured and shall contain a cross liability clause. Upon request from OpCo, Aurinka shall deliver to OpCo a certified copy of an insurance policy or a certificate of insurance stating that the insurance required under this Agreement is in good standing.

8.3 Limitation of Liability

To the fullest extent permitted by law, and not withstanding any other provision of this Agreement, the total liability, in the aggregate, of Aurinka and Aurinka's officers, directors, partners, employees and subcontractors, and any of them, to OpCo for any and all claims, losses, costs or damages, including attorneys' fees and costs and expert-witness fees and costs of any nature whatsoever or claims expenses resulting from or in any way related to the Services or the Agreement from any cause or causes shall not exceed the total amount of 500,000 euros. It is intended that this limitation apply to any and all liability or cause of action however alleged or asserted, with the exception of (i) negligence and/or willful deceit (*dolo*); and (ii) any claim made by any third party, which shall not be subject to any limitation whatsoever.

9. COMPLIANCE WITH LAWS

In the performance of its obligations under this Agreement, Aurinka shall comply with all applicable laws. In addition, Aurinka and its Personnel shall comply with the Beneficiary, Grupo Ferroatlántica, S.A.U., FerroAtlántica, S.A.U., OpCo, Silicio FerroSolar, S.L.U. and R&DCo general policies and guidelines, including, but not limited to the following: (i) Health & Safety Regulations, and (ii) Code of Business Conduct and Ethics.

10. INDEMNIFICATION

Aurinka shall, at its own expense, hold harmless and defend OpCo against any claim, suit or proceeding brought against OpCo and/or against any company belonging to the same group of companies to which it belongs (as the term "group" is defined under article 42 of the Spanish Code of Commerce), which is based upon a claim, whether rightful or otherwise, in connection to the Service, including, but not limited to, that the Services or any part thereof furnished under this Agreement constitutes unfair competition and/or an infringement of any patent, trade-mark or other intellectual property rights or other third party rights, and Aurinka shall pay all damages and costs awarded against OpCo and/or its relevant group company. In case any Services, or any part thereof, is in such suit held to constitute infringement and the use of such Services or part is enjoined, Aurinka shall, at its own expense and at its option, either procure for OpCo the right to continue using such Services or part thereof; or modify the Services or part thereof so it becomes non-infringing.

11. INDEPENDENT CONTRACTOR

Nothing in this Agreement shall be construed to create an employment, partnership, fiduciary relationship or other relationship between the Parties, other than the relationship of buyer and seller. Aurinka is an independent contractor and will be solely responsible for the supply of competent manpower and adequate supervision, wages, bonuses, personal tools, transportation, supplies, and materials as are required to perform its obligations under the Agreement. Aurinka hereby confirms that all of its Personnel will be fully covered under all applicable Workers' Compensation Laws and Social Security regulations.

12. BREACH OF CONTRACT AND REMEDIES

12.1 Breach by Aurinka; remedies

12.1.1 The occurrence of any one or more of the following shall constitute a "breach of contract" by Aurinka:

(A) Material breach (*incumplimiento esencial*) to perform its obligations under this Agreement; or

(B) Failure of the Consultant to perform, keep or observe any other covenants, conditions, promises, agreements or obligations of Aurinka under this Agreement.

12.1.2 A written notification of the breach shall be provided by OpCo to Aurinka, with a specific description of the breach. Aurinka will have a period of thirty (30) days from the date of receipt of the written notice to cure such breach.

12.1.3 In addition to the remedies provided under Clause 7 above, the remedies for a material breach contemplated by Clause 12.1.1(A) above will be (i) termination of the Agreement as envisaged at Clause 15.3 below and/or (ii) damages, at OpCo's option. Upon the giving of such notice as provided herein, Aurinka must discontinue any Services, unless otherwise directed in the notice, within the next ten (10) days.

12.1.4 In addition to the remedies provided under Clause 7 above, the remedies for any other breach contemplated by Clause 12.1.1(B) above will entitle OpCo, at its option, to (i) request specific performance, (ii) the right to money damages and (iii) any other right or remedy as provided in the Agreement or available at law.

12.2 Breach by OpCo; remedies

12.2.1 The occurrence of any one or more of the following shall constitute a "breach of contract" by OpCo:

(A) Failure to pay the fees, unless otherwise provided under the Agreement; and

(B) Any action or omission limiting, hindering or precluding Aurinka's ability to provide the

Services.

12.2.2 A written notification of the breach shall be provided by Aurinka to OpCo, with a specific description of the breach. OpCo will have a period of thirty (30) days from the date of receipt of the written notice to cure such breach.

12.2.3 The remedies for a material breach contemplated by Clause 12.2.1(A) above will be (i) termination of the Agreement as envisaged at Clause 15.3 and/or (ii) damages, at OpCo's option. Upon the giving of such notice as provided herein, Aurinka will be entitled to discontinue any Services and claim the full amount of fees for the pending Term of this Agreement.

12.2.4 The remedies for any other breach contemplated by Clause 12.2.1(B) above will entitle Aurinka, at its option, to (i) the right to money damages, (ii) suspend performance and (iii) any other right or remedy as provided herein, or available at law.

12.2.4 The total liability of OpCo to Aurinka under this Agreement will be limited to the amount of the fees lawfully accrued by Aurinka from time to time, in accordance with the Agreement.

13. CONFIDENTIALITY

13.1 Aurinka acknowledges that it will have access to Confidential Information of OpCo. Aurinka covenants and agrees that during the Term of this Agreement and for a period of three (3) years following the termination of the Agreement it shall receive, protect and maintain the Confidential Information in the strictest confidence and shall not to disclose the Confidential Information to any person for any reason whatsoever other than to Aurinka's Personnel who have a need to know the Confidential Information for the purposes of this Agreement.

13.2 On written request, Aurinka shall notify OpCo of the identity of each of Aurinka's Personnel to whom any Confidential Information has been delivered or disclosed. Aurinka agrees that prior to disclosure of Confidential Information to any such Personnel it will inform each such Personnel of the confidential nature of the Confidential Information and require each such Personnel to treat the Confidential Information as confidential.

13.3 Aurinka shall use the Confidential Information, directly or indirectly, solely for the purpose of performing its obligations under this Agreement.

13.4 Aurinka agrees that upon written request by OpCo it will: (i) promptly return, within five (5) Business Days of receipt of OpCo's request, all Confidential Information and any and all copies thereof to OpCo and shall require each of its Personnel to do likewise; and (ii) certify in writing that it and its Personnel have permanently deleted any Confidential Information stored by it in a computer or electronic retrieval system so that it is incapable of retrieval. Aurinka acknowledges that the Confidential Information is proprietary and confidential and that OpCo will be irreparably damaged if any of the provisions contained in this Clause are not performed by the Aurinka or its Personnel in accordance with the terms set out herein.

13.5 Aurinka undertakes to ensure that its Subcontractors will fulfill the confidentiality obligations provided in this Agreement.

14. FORCE MAJEURE

14.1 Aurinka shall not be liable for delays in delivery or failure to deliver Services, and OpCo shall not be liable for delays or failure in the purchase, acceptance or consumption of Services, due to causes (except financial) beyond such Party's reasonable control, including, without limitation, acts of God, acts of civil or military authority, fires, floods, demonstrations or protests, epidemics, wars or riots.

14.2 The Party declaring force majeure shall provide written notice to the other Party describing the cause and the period of expected delay. If, under these circumstances, the Party not declaring force majeure decides that any such delay is not likely to impede its operations, the date of delivery, purchase or consumption, as the case may be, shall be extended for the period equal to the time actually lost by reason of the delay. However, if such Party decides that such delay is likely to impede its operations, both Parties hereto shall immediately consult with one another for the purpose of determining and agreeing upon a basis on which the delivery, purchase or consumption of Services shall resume prior to the end of the delay period. If the Parties do not, within fifteen (15) days of their initial consultation, agree upon a solution of the problems involved, then both Parties agree to submit such dispute as envisaged by Clause 20 below.

15. TERM AND TERMINATION

15.1 Date of effect and duration of the Agreement

This Agreement shall take effect on the date hereof and shall be in full force and affect until the earlier of (i) 30 December 2020, inclusive, or (ii) the date on which the existing assets owned by OpCo and located at the Plant are transferred to a third party; or (iii) the date on which a number of shares representing more than 50% of OpCo's share capital are transferred, directly or indirectly, by its current shareholders (i.e. FerroAtlántica. S.A.U. and Grupo FerroAtlántica. S.A.U.) to a third party, other than to a company belonging to the same group of companies to which they belong (the "Term").

Notwithstanding the foregoing, the Parties acknowledge and agree that Services have been rendered with effects as from 1 January 2019.

Other than as set forth in Clause 15.3 below, the Parties will not be entitled to the early terminate this Agreement, and therefore, it will be in force during the Term.

15.2 Survival of obligations and liabilities assumed under this Agreement and of damages incurred

Notwithstanding the termination of this Agreement, the obligations and liabilities arising hereof, as

well as the liability for damages caused to any of the Parties by breach of this Agreement by the other Party shall survive.

15.3 Early termination

Provided that the non-defaulting Party notifies such default to the defaulting Party and this defaulting Party fails to remedy the breach within thirty (30) calendar days following receipt of the notice, notwithstanding the non-defaulting Party right to claim damages, the Parties agree that the breach of "essential obligations" shall be a cause of early termination of this Agreement.

16. INTELLECTUAL PROPERTY

16.1 Subject to the limitations and provisions of Spanish Patent laws, the Parties agree that title to all Inventions, Developed Works and Joint Inventions developed under this Agreement shall be (i) notified in writing by Aurinka to OpCo and (ii) shall be considered to be the property of OpCo, and therefore, are, and shall be, automatically assigned to it.

16.2 Aurinka agrees that OpCo shall be the exclusive owner of all intellectual property rights howsoever created or developed by Aurinka, whether by it alone or jointly or with the contribution or assistance of others arising out of its engagement with OpCo. Aurinka further agrees that it has no rights in any such intellectual property rights and hereby assigns and/or licenses to OpCo, to the maximum extent permitted by law, all rights, title and interest that may accrue to Aurinka as a result of its engagement with OpCo. Aurinka hereby undertakes and agrees, and to cause the Personnel, to waive all moral rights and droits de suite that either Aurinka and/or the Personnel now or in the future may have to the such intellectual property right.

16.3 Aurinka undertakes to execute all necessary agreements with its Subcontractors so that all Intellectual Property created or developed by Aurinka with the participation of said Subcontractors, as the case may be, is assigned and/or licensed, to the maximum extent permitted by law, to OpCo.

16.4 OpCo acknowledges that Aurinka possesses knowledge and expertise relating to the subject matter (the "**Consultant Know-How**"), which may include intellectual property rights in certain Tools and Pre-existing Materials used by Aurinka in performing the Services. Nothing in this Agreement is intended to transfer to OpCo any rights in the Consultant Know-How, which shall remain the property of Aurinka. To the extent that any Consultant Know-How is included in any Deliverables, Aurinka (i) shall notify OpCo such Consultant Know-How included in the Deliverables, clearly detailing and specifying such Consultant Know-How included in the Deliverables; and (ii) hereby grants to OpCo a perpetual non-exclusive right and license to use and reproduce the Consultant Know-How to the extent necessary, in OpCo's reasonable opinion, to exercise OpCo's rights in the Deliverables.

17. CONFIDENTIAL INFORMATION

17.1 Aurinka acknowledges and agrees that OpCo is the custodian and owner of confidential, customer and proprietary information, as well as personal information, all of which OpCo is required to protect. Aurinka agrees to maintain at all times strictly confidential the corporate, customer and personal information it may have access to in providing the Services.

17.2 The terms and conditions described in this Agreement and its Annexes, any information and documentation delivered by one Party to any other Party in connection herewith (hereinafter, the "**Confidential Information**") shall be kept strictly confidential by the Parties. Each Party agrees to limit the distribution of this Agreement and the Confidential Information received only to those responsible officers, employees, agents or professional advisors (all of whom shall be informed of the confidentiality thereof and shall agree to keep it confidential to the same extent the distributing Party is bound) as far as necessary for the completion of this Agreement.

17.3 The undertakings set forth in this Clause shall decline only as required by any applicable regulations or by the rules or regulations of any stock exchange or other regulatory body to which either of the Parties (or any ultimate holding company or group company of such Party) is subject or as required for the implementation of the transactions set forth hereunder.

17.4 Should any Party determine that it is required by applicable regulations or by any regulatory authorities (including securities and stock exchange regulators) or bodies to disclose information regarding this Agreement or to file this document with any governmental authority, it shall, within a reasonable time and to the extent applicable before making any such disclosure or filing, consult with the other Party regarding such disclosure or filing or seek confidential treatment for such portion of the disclosure or filing as may be requested by the other Party. The previous confidentiality obligations will not apply to any Confidential Information which may properly come into the public domain through no fault of the Party.

17.5 Any press releases which any Party wishes to make shall be agreed between the Parties and shall not contain any reference to the amount of the investments made by the Parties.

18. NOTICES

All notices and other communications required or permitted by this Agreement to be given to a Party by another Party shall be served in writing and be deemed duly served, given and received (i) at the time of receipt in the case of the notice being delivered by hand; (ii) at the time of transmission (with appropriate confirmation of receipt), in the case of the notice being served by facsimile or telex; and (iii) three days after posting, in the case of the notice being served by registered post or by an internationally recognized courier and if there is evidence of receipt to the following addresses:

- If to Aurinka:

Mr. Benjamin Llaneza Caruana
AURINKA PHOTOVOLTAIC GROUP, S.L.

Calle Marie Curie, 19, Ed. Autocampo
228521 Rivas-Vaciamadrid
Madrid (Spain)
Phone: + 34 914 99 41 97
Email: bllaneza@Aurinkapv.com

with copy to:

Mr. Alejandro Fernández de Araoz
Partner
ARAOZ Y RUEDA ABOGADOS
Paseo de la Castellana, nº 246
28046 Madrid (Spain)
Phone: +34 91 319 02 33
Email: araoz@araozyrueda.com

- If to FERROSOLAR OPCO GROUP, S.L.:

Mr. Pedro Larrea Paguaga
CEO
GRUPO FERROATLÁNTICA, S.A.U.
Torre Espacio
Paseo de la Castellana, nº 259 D – planta 49
28046 Madrid (Spain)
email: pedro.larrea@ferroglobe.com

with copy to:

Ms. Clara Cerdán Molina
General Counsel
GRUPO FERROATLÁNTICA.S.A.U.
Torre Espacio
Paseo de la Castellana, nº 259-D – planta 49
28046 Madrid, Spain
Phone: +34 91 590 32 45
email: ccerdanmolina@ferroatlantica.es

Each notice and communication made or delivered by one Party to another pursuant to this Agreement shall be in English.

19. MISCELLANEOUS

19.1 Execution

This Agreement may be executed in any number of counterparts and by the different Parties on separate counterparts, each of which, when so executed and delivered, shall be an original, but all such counterparts shall together constitute but one and the same instrument.

19.2 Amendments and Supplements

Except as otherwise provided in this Agreement, neither this Agreement nor any of the terms hereof may be amended, supplemented or modified orally, but only by an instrument in writing signed by all Parties.

19.3 Headings

The headings of the clauses and sub-clauses of this Agreement have been inserted for convenience of reference only and shall not modify, define or limit any of the terms or provisions hereof.

19.4 Successors and Assigns

This Agreement may not be assigned without the approval of all the Parties. Any transfer of Shares in accordance with this Agreement (unless by means of a public offering) will require the prior express written acceptance by the acquiring third party to be bound by the terms and conditions of this Agreement.

19.5 Waiver

No provision of this Agreement may be waived except in writing by the waiving party. The waiver of any breach of any term or condition hereof shall not be deemed a waiver of any other or subsequent breach, whether like or different nature.

19.6 Cost and expenses

Except as otherwise provided for in this Agreement, each Party shall bear the expenses on which it may incur in the preparation, execution, and implementation of this Agreement, including, without limitation, fees and expenses of experts and legal counsel and notarial costs in case the Parties wish to formalize this Agreement into a public deed once executed.

19.7 Severability

If any provision of this Agreement is declared by a court of competent jurisdiction to be illegal, unenforceable, void or voidable, that provision shall be modified so as to be enforceable and as nearly as possible reflect the original intention of the Parties hereto, it being agreed and understood by the Parties hereto that (i) this Agreement and all the provisions hereof shall be enforceable in accordance with their respective terms to the fullest extent possible permitted by law, and (ii) the remainder of this Agreement shall remain in full force and effect.

19.8 Entire Agreement

Except for the Investment Agreement which remains fully valid and applicable, this Agreement and the Annexes attached hereto constitute the entire contract between the

Parties hereto with respect to the subject matter hereof. Nothing in this Agreement, express or implied, is intended to confer upon any person other than the Parties hereto any rights, remedies, obligations or liabilities under or by reason of this Agreement. In particular, the Term Sheet dated 9 May 2016 is expressly superseded.

19.9 Languages

This Agreement shall be only executed in the English version, which shall at all times prevail. The Parties agree that, for information purposes, a Spanish translation of this Agreement may be requested.

20. GOVERNING LAW; jurisdiction

20.1 This Agreement shall be governed by and shall be construed in accordance with the laws of Spain.

20.2 All disputes arising out of or in connection with the present contract shall be finally settled by the Courts of the city of Madrid.

IN WITNESS THEREOF, the duly authorized officers of the Parties have executed this Agreement in two original counterparts, at the place and as of the date set forth above.

AURINKA PHOTOVOLTAIC GROUP, S.L.FERROSOLAR OPCO GROUP, S.L.

By:	/s/ Benjamín Llaneza Caruana	By:	/s/ Clara Cerdán Molina
Name:	Benjamín Llaneza Caruana	Name:	Clara Cerdán Molina
Title:	Managing Director	Title:	General Counsel

PROJECT MANAGEMENT IN STAND-BY PERIOD

- Keep in custody any documents connected with the Project;
- Keep up-to-date engineering works developed;
- Keep up-to date specifications of machinery and equipment;
- Engineering support over existing contracts (reception of equipment, accomplishment of contracts, guarantees, …);
- Support Ferrosolar OpCo in any negotiation with suppliers over signed contracts;
- Control and monitoring of suppliers and procurement process (specially with suppliers of civil works, equipment, installations and consumables contracted);
- Coordination with Architects and project managers (*Dirección Facultativa*)
- Coordination of maintenance annual plan for Puertollano site
- Management and control of construction works (if any);
- Management and control of installation works (if any);
- Management of permits and licenses: especially municipal permits and Environmental Issues in coordination with Ferrosolar OpCo and Ferroglobe management;
- Management of workplace occupational health and risks in coordination with Ferrosolar OpCo and Ferroglobe management;
- Supporting of HHRR in coordination with Ferrosolar OpCo and Ferroglobe management;
- Cooperation in management and follow-up of REINDUS loan;
- Advisory and Support for redefinition of operating costs in Puertollano site (energy, personnel, water, insurance, …);
- Support in any sales to be made from Ferrosolar OpCo;
- Support in any technological issue related to buildings, installation and equipment of Puertollano site;
- Attend any meetings related to the Project.

* * * * * * * * * * *

- Mr. Benjamín Llaneza Caruana
- Mr. Eduardo Forniés García
- Ms. Marta Tojeiro Llorente
- Mr. Fernando Ruiz Casas
- Mr. Emilio Bautista Ruadas
- Mr. Javier Serrano Martín
- Ms. Laura Méndez Giménez
- Mr. Óscar Sánchez Segura
- Ms. Ana Llorente de Frutos

ANNEX 3
AURINKA'S BANK ACCOUNT

- **Financial entity:** **Caixabank, S.A.**
- **Bank account number:** **ES34 2100 6076 5402 0007 4761**
- **Bank account holder:** **AURINKA PHOTOVOLTAIC GROUP, S.L.**

CONTRATO DE OTORGAMIENTO DE UN DERECHO DE OPCIÓN DE COMPRA SOBRE CIERTOS ACTIVOS TITULARIDAD DE FERROSOLAR OPCO GROUP, S.L.

celebrado entre

FERROSOLAR OPCO GROUP, S.L.

(el "**Concedente**" u "**OpCo**")

Y

AURINKA PHOTOVOLTAIC GROUP, S.L.

(el "**Optante**" o "**Aurinka**")

En Madrid, a 11 de julio de 2019

Índice

En Madrid, a 11 de julio de 2019.

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina,** mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **Ferrosolar OpCo Group, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796 , folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (indistintamente denominada el "**Concedente**" u "**OpCo**"). Ostenta dicha representación, que asegura vigente, en virtud de poder otorgado a su favor por dicha sociedad, el cual ha sido elevado a público en el día de hoy, mediante escritura otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza.

Y DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L.,** domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 , folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 (indistintamente denominada el "**Optante**" o "**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

En adelante, el Concedente y el Optante serán conjuntamente denominados las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes declaran tener capacidad legal suficiente para celebrar este contrato de opción de compra de activos, por lo que

EXPONEN

(A) Que, con fecha 20 de diciembre de 2016, Grupo FerroAtlántica, S.A.U., Silicio Ferrosolar, S.L.U., FerroAtlántica, S.A.U., Blue Power Corporation, S.L. y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(B) Que OpCo es propietaria y titular en pleno dominio de los activos que se detallan en el **Anexo 1** al presente contrato (en adelante, los "**Activos**"), los cuales fueron adquiridos por OpCo en ejecución de los acuerdos alcanzados bajo el JVA.

(C) Que en el **Anexo 2** al presente Contrato se detallan los valores de referencia de las distintas unidades de control en las que se agrupan los Activos, correspondiendo dichos valores al valor neto contable de los mismos a 31 de diciembre de 2018, (en adelante, la suma de todos esos valores de referencia, será denominada el "**Total**").

(D) Que las Partes, Silicio Ferrosolar, S.L.U., Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A.U., FerroAtlántica Participaciones, S.L.U. (la "**Sociedad Beneficiaria**"), Blue PowerCorporation, S.L., y Ferrosolar R&D, S.L. han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(E) Que, como consecuencia de la decisión de resolver y extinguir el JVA, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra el otorgamiento por parte del Concedente de un derecho de opción de compra sobre los Activos a favor del Optante (el "**Derecho de Opción de Compra**").

En virtud de lo anterior, las Partes, reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente contrato que regule el otorgamiento del Derecho de Opción de Compra a favor del Optante (en adelante, el "**Contrato**"), con sujeción a las siguientes

CLÁUSULAS

1 Objeto

En virtud del presente Contrato, el Concedente otorga al Optante el Derecho de Opción de Compra, que el Optante acepta.

2 Duración

Con sujeción a lo dispuesto en el Contrato, el Derecho de Opción de Compra estará en vigor hasta el 30 de diciembre de 2020, inclusive.

3 Precio

3.1 Precio del Derecho de Opción de Compra

El Derecho de Opción de Compra se otorga con carácter gratuito.

3.2 Precio de transmisión de los Activos en caso de ejercitarse el Derecho de Opción de Compra

El precio de adquisición de los Activos, en caso de ejercitarse el Derecho de Opción de Compra, será de un Euro (1,00 €) (el "**Precio de la Opción**") por cada vez que se ejercite el Derecho de Opción de Compra, es decir, cada vez que el Optante ejercite el Derecho de Opción de Compra sobre alguno de los elementos integrantes de los Activos deberá abonar al Concedente la cantidad de un Euro (1,00 €).

3.3 Impuestos

El Precio de la Opción establecido en la presente Cláusula no incluye los impuestos indirectos que según la legislación fueren aplicables, que deberán ser abonados por el Optante.

4 Ejercicio del Derecho de Opción de Compra y transmisión de los Activos a favor del Optante

4.1 Ejercicio del Derecho de Opción de Compra

El Optante podrá ejercitar su Derecho de Opción de Compra, de forma parcial o total y en una o varias veces, en cualquier momento dentro del plazo de duración del mismo establecido al efecto en el Contrato.

Cada vez que el Optante ejercite el Derecho de Opción de Compra, el Optante deberá notificar al Concedente el ejercicio de dicho derecho mediante el envío de una comunicación sustancialmente idéntica al borrador de notificación que se adjunta al presente Contrato como **Anexo 3** (la "**Notificación**"), en la forma establecida en la Cláusula 10 siguiente.

El Concedente quedará obligado en virtud del presente Contrato a transmitir al Optante aquellos Activos identificados en la Notificación en el momento en que el Optante ejercite su derecho, todo ello en las condiciones y términos regulados en el presente Contrato.

4.2 Límite máximo en el ejercicio del Derecho de Opción de Compra

Cada vez que se ejercite el Derecho de Opción de Compra, con independencia de que posteriormente se verifique o no el cumplimiento de la Condición Suspensiva señalada en la Cláusula 6 siguiente, se deducirá del Total el valor de referencia de los Activos sobre los que se hubiera ejercitado el referido derecho. Asimismo, cuando el valor de referencia agregado de las distintas unidades de control que conforman los Activos sobre las cuales el Optante hubiese ejercitado su Derecho de Opción de Compra alcance la cifra de cinco millones setecientos mil Euros (5.700.00 €), el Derecho de Opción de Compra quedará automáticamente extinguido y resuelto sin necesidad de realizar ulteriores actuaciones entre las Partes.

4.3 Transmisión de los Activos a favor del Optante

4.3.1 Ejercitado el Derecho de Opción de Compra, y una vez cumplida la Condición Suspensiva señalada en la Cláusula 6 siguiente, el Concedente se obliga a comparecer en la notaría de Madrid capital que al efecto designe el Optante, el día y a la hora que le hubiera indicado en la Notificación, que no podrá ser anterior a los veinte (20) días naturales siguientes a la fecha en que el Concedente reciba la Notificación, ni posterior a los treinta (30) días naturales siguientes a la fecha de recepción de la Notificación por parte del Concedente, debiendo formalizarse el contrato de compraventa de los Activos sobre los que se hubiera ejercitado el Derecho de Opción de Compra ante notario dentro del plazo señalado anteriormente. Dichos Activos se transmitirán como cuerpo cierto, en el estado en el que se encuentren en el momento de su transmisión al Optante, y el Concedente no otorgará ningún tipo de manifestaciones y garantías en relación con los mismos, incluyendo aquéllas relativas al estado, mantenimiento y funcionamiento de los mismos, a excepción de las relativas a la titularidad de los Activos por parte del Concedente.

4.3.2 Una vez recibida la Notificación por el Concedente, el Optante deberá desmantelar, retirar y trasladar de su ubicación actual todos los Activos sobre los que hubiese ejercitado su Derecho de Opción de Compra, no más tarde de la primera de las siguientes fechas: (i) noventa (90) días naturales a contar desde la fecha de recepción de la Notificación por parte del Concedente; o (ii) el 30 de diciembre de 2020. En caso de que el Concedente recibiera la Notificación entre el 2 de diciembre de 2020 y el 30 de diciembre de 2020, inclusive, el plazo para desmantelar, retirar y trasladar de su ubicación actual todos los Activos sobre los que hubiese ejercitado su Derecho de Opción de Compra identificados en dicha Notificación será de noventa (90) días

naturales a contar desde la fecha de recepción de la referida Notificación por parte del Concedente.

4.3.3 En caso de que, una vez ejercitado el Derecho de Opción de Compra por parte del Optante sobre todos o algunos de los Activos, según sea de aplicación, no se verificase el cumplimiento de la Condición Suspensiva por causa imputable al Optante, será de aplicación lo previsto en las Cláusulas 7.3 y 8a) siguientes, sin perjuicio de la responsabilidad en que el Optante hubiese incurrido y de su obligación de abonar al Concedente los daños y perjuicios que éste hubiese sufrido a consecuencia de ello.

4.3.4 El Optante será responsable del riesgo y ventura de los Activos sobre los que hubiera ejercitado su Derecho de Opción de Compra desde el momento en que el Concedente reciba la Notificación correspondiente a los mismos, exonerando expresa e íntegramente al Concedente de cualquier obligación de custodia, conservación, mantenimiento y de cualquier responsabilidad derivada de ello en relación con los Activos. Asimismo, en el marco de las actuaciones a llevar a cabo por el Optante o sus contratistas y subcontratistas en relación con el desmantelamiento, desalojo y traslado de los Activos sobre los que hubiera ejercido su Derecho de Opción de Compra, el Optante será plenamente responsable frente al Concedente de cualquier daño, perjuicio o menoscabo que pudiera causar a la planta de Puertollano, a cualquiera de los elementos integrantes de la misma y/o a cualquiera de los equipos e instalaciones ubicados en dicha planta, debiendo indemnizar al Concedente en el plazo de treinta (30) días a contar desde aquél en que el Concedente le notifique la existencia del daño, perjuicio o menoscabo sufrido.

4.3.5 Cualesquiera costes, gastos, trámites legales o administrativos que deban realizarse a los efectos de retirar, desmantelar, desalojar y modificar la titularidad de los Activos tras la transmisión de los mismos al Optante, incluidos aquéllos en que pueda incurrir el Concedente, serán por cuenta y a cargo del Optante, comprometiéndose el Concedente a colaborar de buena fe con el Optante en la realización de las actuaciones que razonablemente éste le solicite.

5 Enajenación de los Activos

5.1 Enajenación de los Activos a una sociedad del Grupo del Concedente

El Derecho de Opción de Compra no impedirá ni restringirá en modo alguno el derecho y la facultad del Concedente de enajenar, de forma individual o conjunta y en una o más veces, a una sociedad perteneciente a su mismo grupo de sociedades (entendiendo como grupo de sociedades lo dispuesto en el artículo 42 del Código de Comercio (el "**Grupo**")) todos o alguno de los elementos que conforman los Activos, siempre que, con carácter previo a la transmisión de los mismos a dicho tercero, el Concedente no hubiera recibido

una Notificación en la que se haga constar el ejercicio del Derecho de Opción de Compra sobre esos mismos Activos.

En todo caso, la sociedad del Grupo del Concedente que eventualmente adquiera todos o alguno de los Activos, con carácter anterior o simultáneo a dicha adquisición, deberá comprometerse por escrito a respetar el Derecho de Opción de Compra sobre los Activos que hubiese adquirido, en los mismos términos y condiciones que dicho derecho ha sido otorgado al Optante en virtud del presente Contrato.

6 Condición suspensiva

No obstante lo dispuesto en el presente Contrato, la validez, efectividad, entrada en vigor y perfeccionamiento (i) del Derecho de Opción de Compra; y (ii) de la transmisión de cualquiera de los Activos a favor del Optante, queda condicionada de manera expresa al desmantelamiento, traslado y desalojo de la planta de Puertollano en la que se ubican los Activos incluidos en cada Notificación al lugar que el Optante designe dentro del plazo señalado al efecto en la Cláusula 4.3.2 (la "**Condición Suspensiva**").

En virtud de lo dispuesto en el párrafo anterior, en tanto la Condición Suspensiva no se haya cumplido, el Derecho de Opción de Compra no desplegará sus efectos y la transmisión de la propiedad de los Activos en cuestión no se entenderá perfeccionada.

7 Extinción del Derecho de Opción de Compra

7.1 El Derecho de Opción de Compra quedará automáticamente extinguido en el supuesto señalado en la Cláusula 4.2 anterior.

7.2 Asimismo, el Derecho de Opción de Compra quedará automáticamente extinguido llegado el 31 de diciembre de 2020.

7.3 Si, una vez ejercitado el Derecho de Opción de Compra sobre todos o alguno de los Activos, no se hubiese verificado el cumplimiento de la Condición Suspensiva en relación con dichos Activos dentro del plazo señalado en la Cláusula 4.3.2, el Derecho de Opción de Compra sobre dichos Activos quedará extinguido íntegra y automáticamente y la transmisión de los Activos en cuestión a favor del Optante no se entenderá perfeccionada, sin necesidad de que ninguna de las Partes realice comunicación alguna a la otra.

8 Resolución del Contrato

El Contrato podrá resolverse por las siguientes causas:

a) En relación con alguna de las Partes, cuando medie incumplimiento grave de las obligaciones de dicha Parte, incluido el supuesto previsto en la Cláusula 4.3.3

anterior, sin perjuicio de la facultad de la Parte cumplidora de optar entre exigir el cumplimiento o la resolución del Contrato, con el resarcimiento de daños y abono de intereses en ambos casos. La Parte cumplidora también podrán pedir la resolución, aun después de haber optado por el cumplimiento, cuando éste resulte imposible.

b) Por acuerdo unánime de las Partes por escrito.

Asimismo, el Contrato se entenderá resuelto cuando el Derecho de Opción de Compra quede íntegramente extinguido, de conformidad con lo dispuesto en el presente Contrato, sin perjuicio de las responsabilidades en las que las Partes hubieran podido incurrir, que serán plenamente exigibles aún después de la resolución del Contrato.

9 Confidencialidad

Salvo exigencia legal en contrario, las Partes conservarán en la más estricta confidencialidad la existencia y los términos del presente Contrato y no utilizarán o expondrán su contenido en relación con ninguna otra finalidad distinta de la formalización entre las Partes y ejecución del Derecho de Opción de Compra.

Lo anteriormente indicado respecto de las Partes no será de aplicación en el supuesto en que concurra alguna de las siguientes circunstancias:

(a) cuando la revelación de la información confidencial venga exigida por ley, por una Administración Pública o una autoridad judicial en el cumplimiento de sus funciones o por la normativa aplicable;

(b) cuando la información sea de carácter notorio o de conocimiento público (por causa distinta a un incumplimiento de lo aquí dispuesto); o

(c) en el supuesto en que alguna de las Partes deba dar a conocer la información confidencial para dar cumplimiento a las obligaciones asumidas en el presente Contrato.

10 Notificaciones

Cualesquiera notificaciones y comunicaciones que deban realizarse las Partes entre sí en relación con el presente Contrato se considerarán debidamente efectuadas si (i) se realizan por escrito; (ii) han sido remitidas por correo certificado con acuse de recibo, *burofax* o cualquier otro medio escrito que acredite fehacientemente su recepción, siempre que se remitan a las direcciones postales de cada una de las Partes que se indican a continuación:

Para Aurinka Photovoltaic Group, S.L.

A/A:	D. Benjamín Llaneza Caruana
Dirección:	E-mail: Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid
E-mail:	bllaneza@aurinkapv.com

Para Ferrosolar OpCo Group, S.L.

A/A:	D. Pedro Larrea Paguaga
Dirección:	Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid
E-mail:	pedro.larrea@ferroglobe.com

11 Gastos e impuestos

Cada una de las Partes asumirá los gastos en que hubiera incurrido derivados de la suscripción y formalización en escritura pública de este Contrato y los impuestos que sean de aplicación serán sufragados por la Parte que solicite dicha formalización en escritura pública.

12 Miscelánea

12.1 Protección de Datos Personales

Los datos de carácter personal facilitados por las Partes al amparo del Contrato serán incorporados a uno o varios ficheros de datos de carácter personal. Las personas cuyos datos aparezcan en los citados ficheros podrán hacer ejercicio de los derechos de acceso, rectificación, cancelación y oposición mediante solicitud escrita, firmada y dirigida a la otra Parte, a la dirección que este determine en las notificaciones que deban realizarse de acuerdo con lo establecido en el Contrato. Las Partes informarán a las diferentes personas físicas afectadas de la cesión de sus datos de carácter personal en los términos previstos en la Normativa de Protección de Datos Personales, con ocasión del envío de las notificaciones que deban realizar de conformidad con lo estipulado en el presente Contrato.

Una vez que los datos hayan sido obtenidos por alguna de las Partes, la misma será responsable del cumplimiento de las obligaciones legales relativas al tratamiento de dichos datos desde su propia base de datos y de conformidad con la Normativa de Protección de Datos Personales.

12.2 Formalización en documento público

Cualquiera de las Partes podrá solicitar que el presente Contrato se eleve a público ante el Notario que al efecto designe la Parte solicitante. Los gastos e impuestos derivados de la elevación a público del presente Contrato se satisfarán por la Parte solicitante.

12.3 Interpretación y modificación

Este Contrato constituye la totalidad del acuerdo alcanzado entre las Partes respecto del objeto del mismo, reemplazando y dejando sin efecto lo dispuesto en cualesquiera pactos anteriores entre las Partes en relación con la misma materia en tanto que sean contradictorios con lo aquí dispuesto.

Cualquier modificación de este Contrato habrá de realizarse por las Partes de mutuo acuerdo y formalizarse por escrito, cumpliendo, como mínimo, con las mismas formalidades con que se ha dotado a la suscripción del presente Contrato.

12.4 Renuncia

Cualquier renuncia de cualquiera de los derechos o facultades derivados del Contrato por cualquiera de las Partes deberá realizarse por escrito. La omisión por cualquiera de las Partes a exigir el estricto cumplimiento de cualquier término contractual en una o más ocasiones no podrá ser considerada en ningún caso como renuncia, ni privará a esa Parte del derecho a exigir el estricto cumplimiento de la/s obligación/es contractual/es a posteriori.

12.5 Nulidad

La invalidez, ilegalidad o inejecutabilidad total o parcial de cualquiera de las Cláusulas de este Contrato no afectará o impedirá la vigencia y validez de aquella parte de la misma que no sea inválida, ilegal o inejecutable o de las restantes que permanecerán con plena validez y eficacia. No obstante lo anterior, la Cláusula o Cláusulas inválidas o inejecutables serán interpretadas y cumplidas (en la medida posible) de acuerdo con la intención inicial de las Partes.

12.6 Computo de plazos

Salvo cuando expresamente se estableciera lo contrario en este Contrato: (i) los plazos expresados en “días” se refieren a días naturales, contados a partir del día natural inmediatamente siguiente al del inicio del cómputo, inclusive, hasta el último día natural del plazo, inclusive; (ii) los plazos expresados en “días hábiles” se refieren a días hábiles en la ciudad de Madrid. En este sentido, no computarán aquellos días que no fueran hábiles conforme al calendario de Madrid; y, (iii) los plazos expresados en meses o años se contarán de fecha a fecha desde el día de inicio del cómputo hasta el mismo día del último del plazo (ambos incluidos), salvo que en el último mes o año del plazo no existiese tal fecha, en cuyo caso el plazo terminará el día inmediatamente anterior.

13 Cesión

Las Partes acuerdan que ambas únicamente podrán ceder libremente su posición contractual, así como la totalidad o parte de sus derechos y/u obligaciones asumidos en virtud del presente Contrato, sin modificación ni excepción de clase alguna, a cualquier sociedad que forme parte de su Grupo, mediante notificación a la otra Parte realizada de conformidad con lo establecido en la Cláusula 10.

Las Partes acuerdan que no será necesario un contrato por separado para la formalización de la cesión descrita en el apartado anterior y que la misma no requerirá, para su operatividad, acciones posteriores ni la ejecución de ningún otro documento ni autorización de cualquier clase.

En cualquier otro supuesto de cesión, se requerirá aprobación expresa y por escrito de la otra Parte.

14 Ley aplicable y jurisdicción

14.1 Ley aplicable

El presente Contrato se regirá e interpretará de conformidad con lo dispuesto por la ley española común.

14.2 Jurisdicción

Las Partes se someten expresamente a los Juzgados y Tribunales de la ciudad de Madrid (Capital) para dirimir cualquier litigio que se derive de la interpretación y ejecución de este Contrato.

[*Sigue Hoja de Firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Contrato por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

Aurinka Photovoltaic Group, S.L.		**Ferrosolar OpCo Group, S.L.**	
Firmado:	/s/ Benjamín Llaneza Caruana	Firmado:	/s/ Clara Cerdán Molina
Nombre:	Benjamín Llaneza Caruana	Nombre:	Clara Cerdán Molina
Título:	Administrador Único	Título:	General Counsel

Listado de Anexos

Anexo 1:	Listado de Activos
Anexo 2:	Valores de referencia
Anexo 3:	Borrador de la notificación comunicando el ejercicio del Derecho de Opción de Compra

Anexo 1 – Listado de Activos

Descripción	Fecha Adquisición	Unidad de Control
Maquina troceadora de polisilicio SS1	31/10/2008	QUÍMICA
Maquina troceadora de polisilicio SS2	01/09/2009	QUÍMICA
Línea clasificación automática MP	21/03/2011	COMPOSICIÓN
HORNO MONO KS22 UNIDAD #54	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #58	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #52	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #53	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #63	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #72	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #66	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #55	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #59	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #61	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #65	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #73	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #51	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #68	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #70	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #64	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #56	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #57	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #60	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #62	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #67	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #69	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #71	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #74	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #86	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #76	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #78	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #75	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #77	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #79	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #82	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #81	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #90	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #89	22/12/2009	HORNOS MONO

HORNO MONO KS22 UNIDAD #84	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #85	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #88	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #80	01/08/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #83	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #98	04/01/2010	HORNOS MONO
HORNO MONO KS22 UNIDAD #94	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #93	22/12/2009	HORNOS MONO
HORNO MONO KS22 UNIDAD #92	04/01/2010	HORNOS MONO
HORNO MONO KS22 UNIDAD #97	04/01/2010	HORNOS MONO
Instalación hornos de vacío	31/12/2010	HORNOS MONO
HORNO MULTI UNIDAD SS2 #11	01/04/2009	HORNOS MULTI
HORNO MULTI 34 GT Solar 303118	11/08/2010	HORNOS MULTI
HORNO MULTI 33 GT Solar 303117	11/08/2010	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #14	01/04/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #15	01/04/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #12	01/04/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #16	01/07/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #17	01/07/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #18	01/07/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #21	01/07/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #20	01/07/2009	HORNOS MULTI
HORNO MULTI UNIDAD SS2 #19	01/07/2009	HORNOS MULTI
Horno Multi 22 GTS-302489	09/06/2010	HORNOS MULTI
Horno Multi 32 GTS-302486	09/07/2010	HORNOS MULTI
Horno Multi 28 GTS-302487	30/07/2010	HORNOS MULTI
Horno Multi 31 GTS-302485	09/07/2010	HORNOS MULTI
Horno Multi 23 GTS-302491	09/06/2010	HORNOS MULTI
Horno Multi 27 GTS-302484	30/07/2010	HORNOS MULTI
Horno Multi 25 GTS-302483	01/09/2010	HORNOS MULTI
Horno Multi 26 GTS-302481	01/09/2010	HORNOS MULTI
Horno Multi 30 GTS-0302482	31/07/2010	HORNOS MULTI
Horno Multi 29 GTS-301221	31/07/2010	HORNOS MULTI
Horno Multi 24 GT Solar KW33	31/07/2010	HORNOS MULTI
Máquina Arnold Línea Mono	31/07/2010	MECANIZADO
Maquina Arnold Multi	04/01/2010	MECANIZADO
Squarer HCT KV15	04/01/2010	MECANIZADO
Squarer QCW KW07-04/08	23/07/2010	MECANIZADO
Squarer briquetera HCT KV17	04/01/2010	MECANIZADO

CROPPER KV-18	31/12/2008	MECANIZADO
CROPPER J001	23/11/2006	MECANIZADO
Máquina de corte NV-012	29/12/2010	CORTE
Máquina de corte NV-013	29/12/2010	CORTE
Máquina de corte NV-011	27/12/2010	CORTE
Máquina de corte NV-045 WS-40	17/01/2011	CORTE
Máquina de corte NV-044 WS-39	17/01/2011	CORTE
Máquina de corte WS19 LV250	04/01/2010	CORTE
Máquina de corte WS 17 LV254	04/01/2010	CORTE
Máquina de corte WS18 KM56	04/01/2010	CORTE
Máquina de corte WS_34 NO052	01/06/2010	CORTE
Máquina de corte WS-25 MZ013	24/05/2010	CORTE
Máquina de corte WS-27 NO050	24/05/2010	CORTE
Máquina de corte WS-28 NO051	24/05/2010	CORTE
Máquina de corte WS-26 MZ012	24/05/2010	CORTE
Máquina de corte WS-29 NO049	24/05/2010	CORTE
Máquina de corte WS-22 KX07	28/07/2010	CORTE
Máquina de corte WS-21 KP01	28/07/2010	CORTE
Máquina de corte WS20 KX06	28/07/2010	CORTE
Máquina de corte WS-23 NO046	03/05/2010	CORTE
Máquina de corte WS-24NO045	03/05/2010	CORTE
Línea de Lavado Previo Rena 1	31/10/2008	LAVADO
Línea de Lavado Previo Rena 2	01/07/2009	LAVADO
Línea de Lavado Previo Rena 3	03/07/2009	LAVADO
Línea de lavado previo Rena 4	17/05/2010	LAVADO
LINEA LIMPIEZA OBLEA1 (SCHMID)	12/03/2008	LAVADO
LINEA LIMPIEZA OBLEA2 (SCHMID)	08/05/2009	LAVADO
LINEA LIMPIEZA OBLEA4 (SCHMID)	29/04/2010	LAVADO
LINEA LIMPIEZA OBLEA3 (SCHMID)	28/07/2009	LAVADO
Línea Ecosplit 3i3600	30/04/2010	LAVADO
Máquina Flex PiquerNº1 Schimid	31/03/2009	CLASIFICACIÓN
Flexpicker 2 dispensadora obleas	08/12/2008	CLASIFICACIÓN
Máquina Flex PiquerNº3 Schimid	01/07/2009	CLASIFICACIÓN
Máquina Flex-Picker nº4	29/04/2010	CLASIFICACIÓN
Máquina clasificadora de obleas	01/04/2009	CLASIFICACIÓN
Máquina clasificadora de obleas	29/04/2010	CLASIFICACIÓN
Máquina clasificadora de obleas	01/03/2010	CLASIFICACIÓN
Máquina clasificadora de obleas	15/10/2007	CLASIFICACIÓN

Descripción	Fecha Adquisición	Unidad de Control
INSTALACIÓN CLIMA (ELECSA)	31/12/2010	CLIMA
Instalación red baja tensión	31/12/2010	INSTALACIONES
INSTALACIÓN MECÁNICA PLANTA UTILITIES	01/07/2010	UTILITIES
Línea subterránea 45Kv	01/07/2010	INSTALACIONES
Planta depuradora SS2	31/12/2010	INSTALACIONES
Planta de agua aporte pantano	09/03/2011	INSTALACIONES
Instalación agua de refrigeración	31/12/2010	INSTALACIONES
Planta de reciclaje Hager+Erase	01/02/2010	INSTALACIONES
Instalación sistema de filtración polvo	31/12/2010	INSTALACIONES
Planta descalcificadora-desionizadora	31/12/2010	INSTALACIONES
Inst. electrónica Mod.Utilities	01/07/2010	INSTALACIONES
Sistema abastecimiento agua	31/12/2010	INSTALACIONES
Cableado control producción Planta	31/12/2010	INSTALACIONES
Instalación tubería agua de refrigeración	31/12/2010	INSTALACIONES
Instalación Argón Praxair	01/06/2010	INSTALACIONES
Instalación aire comprimido	31/12/2010	INSTALACIONES
Línea de media tensión	31/12/2010	INSTALACIONES
Sistema distribución químicos	31/12/2010	INSTALACIONES
Instalación hornos de vacío	31/12/2010	INSTALACIONES
Sistema de neutralización	01/12/2006	INSTALACIONES
Sistema refrigeración agua emergencia	31/12/2010	INSTALACIONES
Planta depuradora SS1	01/04/2006	INSTALACIONES
Sistema de voz y datos	31/12/2010	INSTALACIONES
Sistema de megafonía	31/12/2010	INSTALACIONES

Descripción	Fecha Adquisición	Unidad de Control
PLANTA DE COGENERACIÓN	01/01/2006	COGENERACIÓN

Anexo 2 – Valores de Referencia

Descripción	Unidad de Control	Valor de referencia
HORNO MONO KS22 UNIDAD #54	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #58	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #52	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #53	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #63	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #72	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #66	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #55	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #59	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #61	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #65	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #73	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #51	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #68	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #70	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #64	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #56	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #57	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #60	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #62	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #67	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #69	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #71	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #74	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #86	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #76	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #78	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #75	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #77	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #79	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #82	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #81	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #90	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #89	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #84	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #85	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #88	HORNOS MONO	24.000 €

HORNO MONO KS22 UNIDAD #80	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #83	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #98	HORNOS MONO	48.000 €
HORNO MONO KS22 UNIDAD #94	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #93	HORNOS MONO	24.000 €
HORNO MONO KS22 UNIDAD #92	HORNOS MONO	48.000 €
HORNO MONO KS22 UNIDAD #97	HORNOS MONO	48.000 €
Instalación hornos de vacío	HORNOS MONO	17.500 €
HORNO MULTI UNIDAD SS2 #11	HORNOS MULTI	124.000 €
HORNO MULTI 34 GT Solar 303118	HORNOS MULTI	155.000 €
HORNO MULTI 33 GT Solar 303117	HORNOS MULTI	155.000 €
HORNO MULTI UNIDAD SS2 #14	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #15	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #12	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #16	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #17	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #18	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #21	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #20	HORNOS MULTI	124.000 €
HORNO MULTI UNIDAD SS2 #19	HORNOS MULTI	124.000 €
Horno Multi 22 GTS-302489	HORNOS MULTI	155.000 €
Horno Multi 32 GTS-302486	HORNOS MULTI	186.000 €
Horno Multi 28 GTS-302487	HORNOS MULTI	155.000 €
Horno Multi 31 GTS-302485	HORNOS MULTI	155.000 €
Horno Multi 23 GTS-302491	HORNOS MULTI	155.000 €
Horno Multi 27 GTS-302484	HORNOS MULTI	155.000 €
Horno Multi 25 GTS-302483	HORNOS MULTI	155.000 €
Horno Multi 26 GTS-302481	HORNOS MULTI	155.000 €
Horno Multi 30 GTS-0302482	HORNOS MULTI	155.000 €
Horno Multi 29 GTS-301221	HORNOS MULTI	155.000 €
Horno Multi 24 GT Solar KW33	HORNOS MULTI	155.000 €
INSTALACIÓN CLIMA (ELECSA)	CLIMA	1.620.000 €
INSTALACIÓN MECÁNICA PLANTA UTILITIES	UTILITIES	1.425.000 €
PLANTA DE COGENERACIÓN	COGENERACIÓN	1.310.000 €

[*Razón social del destinatario*]

[*Nombre del representante del destinatario*]

[*Dirección*]

Referencia: Contrato de otorgamiento de Derecho de Opción de Compra, de fecha [*], suscrito entre Aurinka Photovoltaic Group, S.L. y Ferrosolar OpCo Group, S.L. (el "**Acuerdo**") – Comunicación ejercicio del Derecho de Opción de Compra sobre los Activos

Estimado Sr. [*]

Me dirijo a usted en referencia al Acuerdo.

De acuerdo con los términos de la Cláusula [*] del Acuerdo, por la presente le notifico el ejercicio del Derecho de Opción de Compra sobre los Activos que se relacionan **Anexo I** a la presente y le convoco para acudir el día [*] en la notaría de D. [*], sita en [*], a las [*] horas.

Por la presente solicito que Ferrosolar OpCo Group, S.L. proceda a adoptar y llevar a cabo cuantas medidas y acciones sean necesarias para cumplir con las reglas de transmisión de los Activos sean de aplicación.

Cualquier término que aparezca en mayúsculas en la presente comunicación y que no esté expresamente definido en la misma tendrá el significado que se le atribuye en el Acuerdo.

Reciba un cordial saludo,

_____

D. [*]

- [*]

CONTRATO DE COMPRAVENTA DE DERECHOS DE PROPIEDAD INDUSTRIAL TITULARIDAD DE SILICIO FERROSOLAR, S.L.U., DE OTORGAMIENTO DE LICENCIA DE USO Y DE PROMESA DE LICENCIA

celebrado entre

SILICIO FERROSOLAR, S.L.U.

(el "**Vendedor**" o "**SFS**")

FERROSOLAR R&D, S.L.

(el "**Comprador**" o "**R&DCo**")

GRUPO FERROATLÁNTICA, S.A.U.,

("**GFAT**")

AURINKA PHOTOVOLTAIC GROUP, S.L.,

("**Aurinka**")

BLUE POWER CORPORATION, S.L.,

("**Blue Power**")

En Madrid, a 11 de julio de 2019

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En Madrid, a 11 de julio de 2019.

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **Silicio FerroSolar, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 10 de julio de 2.008, bajo el número 2.369 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 25905, folio 20, hoja M- 466968, y con Código de Identificación Fiscal B-85504884 (en adelante, indistintamente denominada el "**Vendedor**" o "**SFS**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.700, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 25905, folio 215, sección 8, hoja M-466968.

Asimismo, interviene en nombre y representación de la sociedad **Grupo FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 19 de octubre de 2007, bajo el número 3.838 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 24921, folio 24, , hoja M-448707, y con Código de Identificación Fiscal A-85255370 ("**GFAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura pública de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.699, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 34508, folio 177, sección 8, hoja M-448707.

Y DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 –

Rivas Vaciamadrid, Madrid, y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Ferrosolar R&D, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.080 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34.796, folio 180, sección 8, hoja M-625891, y con Código de Identificación Fiscal B-87576740 (en adelante, dicha sociedad será indistintamente denominada el "**Comprador**" o "**R&DCo**"). Ostenta dicha representación, que asegura vigente, en virtud escritura otorgada el día 24 de febrero de 2017, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 527 de orden de su protocolo.

Interviene, asimismo, en nombre y representación de la sociedad **Blue Power Corporation, S.L.**, domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Madrid, D. Rafael Vallejo Zapatero, el día 20 de julio de 2015, bajo el número 1.257 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 33.763, folio 12, hoja M-607671, y con Código de Identificación Fiscal B-87339248 ("**Blue Power**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura otorgada, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 2031 de orden de su protocolo.

Asimismo, interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L.**, domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 , folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

En adelante, el Vendedor, el Comprador, GFAT, Aurinka y Blue Power serán conjuntamente denominados las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes declaran tener capacidad legal suficiente para celebrar este contrato de compraventa de derechos de propiedad industrial, por lo que

EXPONEN

(A) Que el Vendedor es titular de las patentes que se detallan en el **Anexo 1** al presente contrato (en adelante, las "**Patentes**").

(B) Que el Comprador es titular de la información confidencial y del *knowhow* que se describe en el **Anexo 3** al presente contrato (la "**Tecnología de R&DCo**"), el cual se definía en el JVA (según este término se define en el Expositivo (D) siguiente) como "*Aurinka Technology*" y fue transmitido a su favor por Blue Power en virtud de escritura de compraventa de tecnología y cesión contractual otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza el 23 de febrero de 2017 con el número 517 de su protocolo.

(C) Que el Vendedor y GFAT son poseedores de un conjunto de conocimientos e informaciones técnicas (*know-how)* valiosas sobre productos, procedimientos de fabricación, útiles, equipos, consumibles, que no son de dominio público y que el Vendedor y GFAT necesitan seguir manteniendo como confidenciales, los cuales se detallan en el **Anexo 2** al presente contrato (en adelante, dichos conocimientos e informaciones técnicas, serán conjuntamente denominadas el "**Secreto Industrial del Vendedor y GFAT**").

(D) Que, con fecha 20 de diciembre de 2016, Grupo FerroAtlántica, S.A.U., SFS, FerroAtlántica, S.A.U., Blue Power Corporation, S.L. y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(E) Que Grupo FerroAtlántica, S.A.U., SFS, FerroAtlántica, S.A.U., Blue Power Corporation, S.L., Aurinka, FerroAtlántica Participaciones, S.L.U., R&DCo, S.L. y Ferrosolar OpCo Group, S.L. ("**OpCo**") han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(F) Que, como consecuencia de la decisión de resolver y extinguir el JVA, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra la transmisión a favor del Comprador de las Patentes descritas en el **Anexo 1** y, siempre que se cumplan una serie de condiciones, el otorgamiento de una licencia de uso sobre la Tecnología de R&DCo descrita en el **Anexo 3** y el Secreto Industrial del Vendedor y GFAT descrito en el **Anexo 2**.

(G) Que, para el caso de que se transmitan, de forma individual o conjunta, los activos de la Planta de Puertollano titularidad de OpCo a favor de un tercero distinto de una sociedad perteneciente al grupo de sociedades al que pertenece SFS (entendiendo como grupo de sociedades lo dispuesto en el artículo 42 del Código de Comercio (el "**Grupo**")), (i) el Comprador tiene la intención de asumir ciertos compromisos en relación con las Patentes y la Tecnología de R&DCo, y (ii) GFAT y SFS tienen la intención de asumir ciertos compromisos en relación con el Secreto Industrial del Vendedor y GFAT, todo ello según lo dispuesto en el presente contrato.

(H) Que, con fecha de hoy, las Partes y OpCo han suscrito un mandato de venta y acuerdo de colaboración para la venta de la totalidad de los activos de la Planta de Puertollano titularidad de OpCo y de las participaciones sociales de R&DCo titularidad de SFS (el "**Mandato de Venta**").

(I) Que, con fecha de hoy, OpCo ha otorgado a favor de Aurinka un derecho de tanteo sobre los activos de la Planta de Puertollano identificados en el Anexo 1 al Mandato de Venta (los "**Activos**") y SFS ha otorgado a favor de Aurinka un derecho de tanteo sobre las participaciones sociales de R&DCo (las "**Participaciones**") de las que es titular (los derechos de tanteo sobre los Activos y las Participaciones señalados anteriormente, en adelante, serán conjuntamente denominados los "**Derechos de Tanteo**").

En virtud de lo anterior, las Partes, reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente contrato de compraventa de las Patentes a favor del Comprador y de promesa de licencia de uso de las Patentes, la Tecnología de R&DCo y el Secreto Industrial del Vendedor y GFAT (en adelante, el "**Contrato**"), con sujeción a las siguientes

CLÁUSULAS

1 Compraventa de las Patentes

1.1 Venta y transmisión de las Patentes

En los términos y condiciones establecidos en el presente Contrato, el Vendedor vende y transmite al Comprador, que compra y adquiere, las Patentes de las que es titular y que se detallan en el **Anexo 1** del presente Contrato.

1.2 Título de compraventa

La presente transmisión y venta de las Patentes resulta por este acto.

1.3 Actuaciones adicionales

El Comprador y el Vendedor se comprometen a realizar las actuaciones que sean necesarias frente a cualquier organismo público o privado competente, incluyendo las oficinas de patentes de los países (o regiones) en las que las Patentes están registradas, y a firmar los documentos públicos y privados pertinentes a los efectos de asegurar (i) la plena transmisión de las Patentes a favor del Comprador, y (ii) de dar cumplimiento a lo previsto en este Contrato.

2 Precio y forma de pago

El precio total acordado entre las Partes para la compraventa de los Derechos de PI asciende a UN EURO (1 €) (el "**Precio de Compra**") que se satisface en este momento en efectivo metálico, otorgando el Vendedor en este acto la más formal y firme carta de pago.

3 Otorgamiento de licencia sobre las Patentes a favor de SFS

En caso de que, en cualquier momento, SFS desee que se otorgue una licencia de uso y explotación sobre las Patentes, lo deberá solicitar al Comprador, quien decidirá en ese momento acerca de la concesión de la referida licencia.

4 Otorgamiento de licencias de uso y explotación sobre las Patentes, la Tecnología de R&DCo y el Secreto Industrial del Vendedor y GFAT

4.1 Licencia sobre las Patentes y la Tecnología de R&DCo

4.1.1 En caso de que un tercero distinto de una sociedad del Grupo del Vendedor adquiera los Activos y, en su caso, las Participaciones, el Comprador se compromete a otorgar al adquiriente de los Activos (el "**Licenciatario**") una licencia de uso sobre las Patentes que se describen en el **Anexo 1** y sobre la Tecnología de R&DCo que se describe en el **Anexo 3** del presente Contrato (las "**Licencias de Uso de las Patentes y la Tecnología de R&DCo**").

4.2 Licencia sobre el Secreto Industrial del Vendedor y GFAT

4.2.1 GFAT y SFS (en adelante, conjuntamente denominadas los "**Licenciantes**") se comprometen a otorgar al Licenciatario, siempre que previamente haya adquirido los Activos, una licencia de uso sobre el Secreto Industrial del Vendedor y GFAT que se describe en el **Anexo 2** del presente Contrato (la "**Licencia de Uso de los Secretos Industriales a favor del Licenciatario**").

En adelante, las Licencias de Uso de las Patentes y la Tecnología de R&DCo y la Licencia de Uso de los Secretos Industriales serán conjuntamente denominadas las "**Licencias**".

4.3 Condiciones, duración y ámbito territorial de las Licencias

Las Licencias se concederán a largo plazo, en exclusiva, limitadas a su uso para la producción de silicio de calidad solar por la vía metalúrgica, se extenderán a todo el territorio mundial y no podrán ser sublicenciadas sin el permiso expreso y por escrito de los licenciantes titulares de las mismas.

4.4 Duración del compromiso de otorgamiento de promesa de Licencias

Los compromisos asumidos por las Partes en relación con el otorgamiento de las Licencias al adquirente de los Activos estarán en vigor hasta el 30 de diciembre de 2020, inclusive. Por tanto, si llegado el 31 de diciembre de 2020 no se hubieran transmitido los Activos a un tercero, la obligación de las Partes de otorgar las Licencias quedará extinguida a todos los efectos legales oportunos.

5 Compromisos adicionales asumidos por las Partes

5.1 El Comprador, con efectos a partir de la presente fecha, se compromete expresa e irrevocablemente a:

(i) mantener la plena propiedad y titularidad de las Patentes;

(ii) mantener las Patentes en perfecto estado y libres de toda carga, gravamen, opción o restricción de cualquier clase o naturaleza;

(iii) no otorgar ninguna licencia ni ningún derecho de uso de ninguna naturaleza en relación con las Patentes a favor de ningún tercero, a excepción de lo dispuesto en el apartado (iv) siguiente;

(iv) otorgar a favor del Licenciatario, con efectos a partir del día en que el Licenciatario adquiera los Activos y, en su caso, las Participaciones, las Licencias de Uso de las Patentes y la Tecnología de R&DCo en términos y condiciones de mercado; y

(v) suscribir con el Licenciatario el correspondiente acuerdo de licencia sobre las Patentes simultáneamente o con anterioridad al momento en el que el Licenciatario adquiera los Activos y, en su caso, las Participaciones,

todo ello a fin de permitirle a dicho Licenciatario en todo momento el pacífico uso y explotación de las Patentes.

5.2 GFAT y SFS se comprometen expresa e irrevocablemente a:

(i) mantener la plena propiedad y titularidad del Secreto Industrial del Vendedor y GFAT titularidad de cada una de ellas;

(ii) otorgar a favor del Licenciatario, con efectos a partir del día en que el Licenciatario adquiera los Activos y, en su caso, las Participaciones, las Licencias de Uso de los Secretos Industriales en términos y condiciones de mercado; y

(iii) suscribir con el Licenciatario el correspondiente acuerdo de licencia sobre el Secreto Industrial del Vendedor y GFAT simultáneamente o con anterioridad al momento en el que el Licenciatario adquiera los Activos y, en su caso, las Participaciones,

todo ello a fin de permitirle a dicho Licenciatario en todo momento el pacífico uso y explotación del Secreto Industrial del Vendedor y GFAT.

5.3 Determinación de los términos y condiciones de mercado para la transmisión de las Licencias

En caso de que las Partes, o alguna de ellas, dentro de los veinte (20) días hábiles siguientes a aquél en que reciban una oferta vinculante de adquisición de los Activos por parte de un tercero (la "**Oferta**"), no alcanzasen un acuerdo en relación con el precio y demás términos y condiciones de mercado de las Licencias, Aurinka y Blue Power deberán designar a un experto independiente (ambas entidades designarán al mismo experto independiente) y GFAT y SFS designarán a otro experto independiente (ambas entidades designarán al mismo experto independiente) para que ambos expertos fijen el precio y demás términos y condiciones de

mercado en los que se deberán otorgar dichas Licencias, teniendo en cuenta, entre otros aspectos, las condiciones bajo las cuales se otorgarán las Licencias de conformidad con lo establecido en la Cláusula 4.3 del Contrato.

Los expertos independientes designados deberán fijar el valor de mercado y los términos y condiciones de mercado de las Licencias a otorgar en el plazo de veinte (20) días hábiles a contar desde aquél en que se hubiera recibido la Oferta. GFAT, SFS, Aurinka y Blue Power serán responsables de que el experto independiente designado por cada una de ellas cumpla con el plazo señalado anteriormente.

Una vez ambos expertos independientes determinen, de conformidad con lo señalado anteriormente, (i) el valor de mercado de las Licencias a otorgar, se entenderá a todos los efectos previstos en este Contrato que el valor de mercado de las Licencias será la media aritmética de los valores establecidos por ambos expertos, siempre que las valoraciones dadas por ambos expertos no difieran al alza o a la baja en más de un veinte por ciento (20%); y (ii) los términos y condiciones de mercado bajo los cuales deban otorgarse las Licencias, aquéllos que sean más favorables para todos los licenciantes se entenderán que son los términos y condiciones de mercado bajo los cuales deban otorgarse las Licencias.

Si por cualquier causa alguno de los expertos independientes designados se retrasase en la evacuación de su informe más allá del plazo señalado anteriormente, únicamente se tomará en cuenta, a los efectos de lo previsto en esta Cláusula, el informe del experto independiente que hubiera llegado dentro del plazo fijado.

En caso de los valores de mercado de las Licencias ofrecidos por los expertos independientes difieran en más de un treinta y cinco por ciento (35%) y/o no se alcance un acuerdo acerca de cuáles son los términos y condiciones de mercado en los que se deberán otorgar las Licencias, los expertos independientes nombrados según lo dispuesto anteriormente deberán, a su vez, nombrar a un tercer experto independiente, el cual fijará tanto el valor de mercado de las Licencias como los términos y condiciones de mercado bajo los cuales habrán de otorgarse dichas Licencias, siendo la opinión emitida en su informe vinculante para los Licenciantes, Aurinka, Blue Power y el Comprador.

Todo lo previsto anteriormente será vinculante para los Licenciantes, Aurinka, Blue Power y el Comprador.

6 Manifestaciones y garantías de las Partes

Las Partes manifiestan, garantizan y responden de la veracidad, exactitud, completitud e integridad de todas y cada una de las declaraciones, manifestaciones y garantías realizadas en este Contrato y que las mismas no contienen ni omiten ninguna mención que pudiera hacer que su contenido resulte en modo alguno incierto, incorrecto, incompleto o inexacto.

Todas y cada una de las manifestaciones y garantías de las Partes son veraces, exactas, íntegras y completas en la fecha de suscripción del Contrato.

6.1 Manifestaciones y garantías del Vendedor

El Vendedor manifiesta y garantiza al Comprador lo siguiente:

6.1.1 El Vendedor es una persona jurídica debidamente constituida e inscrita en el Registro Mercantil de Madrid y con capacidad legal con arreglo a la legislación española.

6.1.2 El Vendedor tiene plena capacidad para formalizar y cumplir este Contrato, cuya suscripción o ejecución no infringe ninguna ley, disposición administrativa, acuerdo, contrato o compromiso por el que cualquiera de ellos esté vinculado, ni tampoco otorga el derecho a terceros a suspender, modificar, revocar, resolver, extinguir o rescindir cualesquiera contratos o acuerdos haya suscrito con cualquier tercero o hayan suscrito cualesquiera terceros en su favor.

6.1.3 El Vendedor es titular de las Patentes.

6.1.4 Las Patentes se encuentran, y así se transmiten, en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda carga, afección, gravamen, opción, restricción, limitación o derecho en favor de persona alguna y responsabilidad, y con todos los derechos inherentes a los mismos.

6.2 Manifestaciones y garantías del Comprador

El Comprador manifiesta y garantiza al Vendedor los siguientes extremos:

6.2.1 El Comprador es una compañía debidamente constituida y con capacidad legal con arreglo a la legislación de su lugar de constitución.

6.2.2 El Comprador tiene plena capacidad para formalizar y cumplir este Contrato, cuya suscripción o ejecución no infringe ninguna ley, disposición administrativa, acuerdo, contrato o compromiso por el que cualquiera de ellos esté vinculado, ni tampoco otorga el derecho a terceros a suspender, modificar, revocar, resolver, extinguir o rescindir cualesquiera contratos o acuerdos haya suscrito con cualquier tercero o hayan suscrito cualesquiera terceros en su favor.

6.2.3 Que la Tecnología R&DCo y todos los elementos que la integran, se encuentran, y así se licenciarán, en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda limitación y responsabilidad, y con todos los derechos inherentes a los mismos.

6.2.4 Con efectos a partir del momento en que el Comprador devenga titular de las Patentes, el Comprador manifiesta que las Patentes se encuentran, y así se licencian, en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda carga, afección, gravamen, opción, restricción, limitación o derecho en favor de persona alguna y responsabilidad, y con todos los derechos inherentes a las mismas.

6.3 Manifestaciones y garantías de los Licenciantes

Los Licenciantes manifiestan y garantizan entre sí y a las restantes Partes lo siguiente:

6.3.1 Los Licenciantes son personas jurídicas debidamente constituidas e inscritas en el Registro Mercantil de Madrid y con capacidad legal con arreglo a la legislación española.

6.3.2 Los Licenciantes tienen plena capacidad para formalizar y cumplir este Contrato, cuya suscripción o ejecución no infringe ninguna ley, disposición administrativa, acuerdo, contrato o compromiso por el que cualquiera de ellos esté vinculado, ni tampoco otorga el derecho a terceros a suspender, modificar, revocar, resolver, extinguir o rescindir cualesquiera contratos o acuerdos haya suscrito con cualquier tercero o hayan suscrito cualesquiera terceros en su favor.

6.3.3 Los Licenciantes son titulares del Secreto Industrial del Vendedor y GFAT, según se indica en el **Anexo 2** al presente Contrato.

6.3.4 El Secreto Industrial del Vendedor y GFAT y todos los elementos que lo integran, se encuentran, y así se licenciarán, en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda limitación y responsabilidad, y con todos los derechos inherentes a los mismos.

Las manifestaciones y garantías otorgadas por las Partes se entienden referidas a la fecha del presente Contrato.

7 Régimen de responsabilidad de las Partes

Las Partes se comprometen a indemnizarse y a mantenerse indemnes por cualquier daño o perjuicio que pudiese sufrir cualquiera de ellas en relación con, o como consecuencia de, cualquier incumplimiento de sus obligaciones contempladas en el presente Contrato y por cualquier falsedad o inexactitud de las manifestaciones y garantías realizadas conforme a la Cláusula 6 anterior.

8 Procedimiento de reclamación

8.1 Reclamaciones frente a las Partes

Tan pronto como tenga conocimiento de ello, la Parte perjudicada notificará a la Parte incumplidora la existencia de cualquier daño o perjuicio que, en su opinión, dé derecho, o pudiera dar derecho, a una indemnización, así como la cantidad a abonar a la Parte perjudicada por dicho concepto, si fuera posible su determinación. La Parte incumplidora dispondrá de un plazo máximo de diez (10) días hábiles para manifestar su posición con respecto al requerimiento de la Parte perjudicada.

La falta de respuesta de la Parte incumplidora dentro del plazo indicado equivaldrá a su conformidad con el requerimiento y a su obligación de indemnizar a la Parte perjudicada dentro del plazo de un mes a contar desde al transcurso del plazo de diez (10) días hábiles señalado en el párrafo precedente.

A falta de acuerdo entre la Parte perjudicada y la Parte incumplidora en un plazo de quince (15) días naturales sobre la existencia o inexistencia de la obligación de indemnizar o, en su caso, sobre el importe del daño efectivamente sufrido por la Parte perjudicada, la discrepancia deberá ser sometida a la jurisdicción competente de conformidad con lo dispuesto en la Cláusula 14.2 posterior.

9 Confidencialidad

Salvo exigencia legal en contrario, las Partes conservarán en la más estricta confidencialidad la existencia y los términos del presente Contrato y no utilizarán o expondrán su contenido en relación con ninguna otra finalidad distinta de la formalización entre las Partes y ejecución de la compraventa y licencia de uso.

Lo anteriormente indicado respecto de las Partes no será de aplicación en el supuesto en que concurra alguna de las siguientes circunstancias:

(a) cuando la revelación de la información confidencial venga exigida por ley, por una Administración Pública o una autoridad judicial en el cumplimiento de sus funciones o por la normativa aplicable;

(b) cuando la información sea de carácter notorio o de conocimiento público (por causa distinta a un incumplimiento de lo aquí dispuesto); o

(c) en el supuesto en que alguna de las Partes deba dar a conocer la información confidencial para dar cumplimiento a las obligaciones asumidas en el presente Contrato.

10 Notificaciones

Cualesquiera notificaciones y comunicaciones que deban realizarse las Partes entre sí en relación con el presente Contrato se considerarán debidamente efectuadas si (i) se realizan por escrito; (ii) han sido remitidas por correo certificado con acuse de recibo, *burofax* o cualquier otro medio escrito que acredite su recepción, siempre que se remitan a las direcciones postales de cada una de las Partes que se indican a continuación:

Para Silicio FerroSolar, S.L.U. y Grupo FerroAtlántica, S.A.U.

A/A:	D. Pedro Larrea Paguaga
Dirección:	Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid
E-mail:	pedro.larrea@ferroglobe.com

Para Ferrosolar R&D, S.L., Aurinka Photovoltaic Group, S.L. y Blue Power Corporation, S.L.

A/A:	D. Benjamín Llaneza Caruana
Dirección:	Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid
E-mail:	bllaneza@aurinkapv.com

11 Gastos e impuestos

Cada una de las Partes asumirá los gastos en que hubiera incurrido derivados de la suscripción y formalización en escritura pública de este Contrato y los impuestos que sean de aplicación serán sufragados por el Comprador.

12 Miscelánea

12.1 Protección de Datos Personales

Los datos de carácter personal facilitados por las Partes al amparo del Contrato serán incorporados a uno o varios ficheros de datos de carácter personal. Las personas cuyos datos aparezcan en los citados ficheros podrán hacer ejercicio de los derechos de acceso, rectificación, cancelación y oposición mediante solicitud escrita, firmada y dirigida a la otra Parte, a la dirección que este determine en las notificaciones que deban realizarse de acuerdo con lo establecido en el Contrato. Las Partes informarán a las diferentes personas físicas afectadas de la cesión de sus datos de carácter personal en los términos previstos en la Normativa de Protección de Datos Personales, con ocasión del envío de las notificaciones que deban realizar de conformidad con lo estipulado en el presente Contrato.

Una vez que los datos hayan sido obtenidos por alguna de las Partes, la misma será responsable del cumplimiento de las obligaciones legales relativas al tratamiento de dichos datos desde su propia base de datos y de conformidad con la Normativa de Protección de Datos Personales.

12.2 Formalización en documento público

Las Partes acuerdan que, en unidad de acto con la suscripción el presente Contrato, éste se eleve a público ante el Notario que al efecto designe el Comprador. Los gastos e impuestos derivados de la elevación a público del presente Contrato se satisfarán por el Comprador.

12.3 Interpretación y modificación

Este Contrato constituye la totalidad del acuerdo alcanzado entre las Partes respecto del objeto del mismo, reemplazando y dejando sin efecto lo dispuesto en cualesquiera pactos anteriores entre las Partes en relación con la misma materia en tanto que sean contradictorios con lo aquí dispuesto.

Cualquier modificación de este Contrato habrá de realizarse por las Partes de mutuo acuerdo y formalizarse por escrito, cumpliendo, como mínimo, con las mismas formalidades con que se ha dotado a la suscripción del presente Contrato.

12.4 Renuncia

Cualquier renuncia de cualquiera de los derechos o facultades derivados del Contrato por cualquiera de las Partes deberá realizarse por escrito. La omisión por cualquiera de las Partes a exigir el estricto cumplimiento de cualquier término contractual en una o más ocasiones no podrá ser considerada en ningún caso como renuncia, ni privará a esa Parte del derecho a exigir el estricto cumplimiento de la/s obligación/es contractual/es a posteriori.

12.5 Nulidad

La invalidez, ilegalidad o inejecutabilidad total o parcial de cualquiera de las Cláusulas de este Contrato no afectará o impedirá la vigencia y validez de aquella parte de la misma que no sea inválida, ilegal o inejecutable o de las restantes que permanecerán con plena validez y eficacia. No obstante lo anterior, la Cláusula o Cláusulas inválidas o inejecutables serán interpretadas y cumplidas (en la medida posible) de acuerdo con la intención inicial de las Partes.

12.6 Computo de plazos

Salvo cuando expresamente se estableciera lo contrario en este Contrato: (i) los plazos expresados en “días” se refieren a días naturales, contados a partir del día natural inmediatamente siguiente al del inicio del cómputo, inclusive, hasta el último día natural del plazo, inclusive; (ii) los plazos expresados en “días hábiles” se refieren a días hábiles en la ciudad de Madrid. En este sentido, no computarán aquellos días que no fueran hábiles conforme al calendario de Madrid; y, (iii) los plazos expresados en meses o años se contarán de fecha a fecha desde el día de inicio del cómputo hasta el mismo día del último del plazo (ambos incluidos), salvo que en el último mes o año del plazo no existiese tal fecha, en cuyo caso el plazo terminará el día inmediatamente anterior.

13 Cesión

Las Partes acuerdan que únicamente podrán ceder libremente su posición contractual, así como la totalidad o parte de sus derechos y/u obligaciones asumidos en virtud del presente Contrato, sin modificación ni excepción de clase alguna, a cualquier sociedad que forme parte de su Grupo, mediante notificación a la otra Parte realizada de conformidad con lo establecido en la Cláusula 10.

Las Partes acuerdan que no será necesario un contrato por separado para la formalización de la cesión descrita en el apartado anterior y que la misma no requerirá, para su operatividad, acciones posteriores ni la ejecución de ningún otro documento ni autorización de cualquier clase.

14 Ley aplicable y jurisdicción

14.1 Ley aplicable

El presente Contrato se regirá e interpretará de conformidad con lo dispuesto por la ley española común.

14.2 Jurisdicción

Las Partes se someten expresamente a los Juzgados y Tribunales de Madrid (Capital) para dirimir cualquier litigio que se derive de la interpretación y ejecución de este Contrato.

[*Sigue Hoja de Firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Contrato en un sólo ejemplar para su protocolización, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, renunciando a visar cada página.

Ferrosolar R&D, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

Silicio Ferrosolar, S.L.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

Aurinka Photovoltaic Group, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

Blue Power Corporation, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

Grupo FerroAtlántica, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

Listado de Anexos

Anexo 1:	Listado de Patentes objeto de transmisión.
Anexo 2:	Descripción del Secreto Industrial del Vendedor y GFAT.
Anexo 3:	Descripción de la Tecnología de R&DCo

· ***Title: Silicon refining equipment and method for refining silicon***

Inventors: Dohnomae Hitoshi

ELZABURU	Países	Nº Solicitud	Fecha solicitud	Nº Patente	Nº Publicación	Fecha publicación	Estado
EP-1307	*Europa*	12867534.5	03/02/2012	*	EP2810920A1	10/12/2014	***En vigor***
PE-7276	*USA*	14/374,687	03/02/2012	*	US20150068885A1	12/03/2015	***En vigor***
PE-7274	*Japón*	JP2013-556160	*	*	*	*	***En vigor***
PE-7275	*China*	201280069013.3	03/02/2012	*	CN104220370A	17/12/2014	***En vigor***
	España	12867534.5	03/02/2012	*	EP2810920A1	10/12/2014	***En vigor***

In this method for refining silicon by vacuum melting, the falling of impurity condensate from an impurity trap located above a crucible and contamination of the molten silicon are prevented. A crucible (4) for housing molten silicon (3), and a heating means (5) for heating the crucible (4) are located inside a treatment chamber (2) equipped with a vacuum pump (1); further provided are: an impurity trap having an impurity condensation unit for cooling and condensing the vapor of impurities evaporating from the liquid surface of the molten silicon; and a contamination prevention device for preventing contamination of the molten silicon, having an impurity catch unit for catching impurities when impurities trapped by the impurity trap fall.

· ***Title: Method for manufacturing highly pure silicon, highly pure silicon obtained by this method, and silicon raw material for manufacturing highly pure silicon***

Inventors: Tokumaru Shinji, Hiyoshi Masataka, Kondo Jiro, Dohnomae Hitoshi

ELZABURU	Países	Nº Solicitud	Fecha solicitud	Nº Patente	Nº Publicación	Fecha publicación	Estado
EP-1315	*Europa*	12870715.5	08/03/2012	*	EP2824070B1	14/01/2015	***En vigor***
PE-7297	*USA*	14/383,321	08/03/2012	*	US20150028268A1	29/01/2015	***En trámite***
PE-7296	*Japón*	JP2014-503378	*	*	*	*	***En vigor***
PE-7298	*China*	201280073015.X	08/03/2012	*	CN104271506A	07/01/2015	***En vigor***

Provided are: a method for manufacturing highly pure silicon by unidirectional solidification of molten silicon, that can inexpensively and industrially easily manufacture highly pure silicon that has a low oxygen concentration and low carbon concentration and is suitable for applications such as manufacturing solar cells; highly pure silicon obtained by this method; and silicon raw material for

manufacturing highly pure silicon. A method for manufacturing highly pure silicon using molten silicon containing 100 to 1000 ppmw of carbon and 0.5 to 2000 ppmw of germanium as the raw material when manufacturing highly pure silicon by unidirectionally solidifying molten silicon raw material in a casting container, the highly pure silicon obtained by this method, and the silicon raw material for manufacturing the highly pure silicon.

· ***Title: Silicon refining device***

Inventors: Yutaka Kishida

ELZABURU	Países	Nº Solicitud	Fecha solicitud	Nº Patente	Nº Publicación	Fecha publicación	Estado
EP-1314	*Europa*	12870741.1	09/03/2012	*	EP2824071A1	14/01/2015	***En vigor***
PE-7294	*USA*	14/381,150	09/03/2012	*	US20150033798A1	05/02/2015	***En vigor***
PE-7293	*Japón*	*	*	*	*	*	***En vigor***
PE-7295	*China*	2014092200739760.	*	*	*	*	***En vigor***

Provided is a silicon refining device that is used when industrially producing high purity silicon by vacuum melting, has a high P removal rate and thus a high productivity, and is practical device cost-wise with a simple and cheap device configuration. This silicon refining device comprises, in a decompression vessel that is provided with a vacuum pump, a crucible that contains a metal silicon material, a heating device that heats the crucible, and a molten metal surface thermal insulation member that covers the upper portion of silicon molten metal and has an exhaust opening which has an opening area that is smaller than the silicon molten metal surface area. The molten metal surface thermal insulation member comprises a laminated insulation material which has a multilayer structure in which three or more laminates are laminated at predetermined intervals from each other, and which exhibits a radiant heat insulating function based on the multilayer structure.

· ***Title: Method and device for solidifying and purifying metallic silicon***

Inventors: Masahiro Tanaka, Yutaka Kishida

ELZABURU	Países	Nº Solicitud	Fecha solicitud	Nº Patente	Nº Publicación	Fecha publicación	Estado
PE-7285	*China*	201180055381.8	15/11/2011	CN103209924B	CN103209924A	17/07/2013	***En vigor***
PE-7284	*Taiwan*	100141293	11/11/2011	*	TW201228935	16/07/2012	***En vigor***

Provided are a solidification purification method for a metallic silicon and a device therefor, which can more effectively and surely remove an impurity element than ever before while keeping the productivity of a crystal high. The solidification purification method for a metallic silicon, in which a melt of metallic silicon in a mold of a solidification purification device is subjected to unidirectional

solidification to remove an impurity element in the metallic silicon, includes performing heating and/or cooling of the melt such that a compositional supercooling index {VOGC=(V/G)×Cm} expressed by using a temperature gradient G on a melt side of a solidification interface, a concentration Cm of the impurity element in the melt during the solidification, and a solidification velocity V maintains a relationship of 1/10{0.59(D/m)}≤VOGC<0.59(D/m) with a critical value {0.59(D/m)} of compositional supercoiling expressed by using a gradient m of a liquidus line read from a state diagram of silicon-impurity element in the metallic silicon and a diffusion coefficient D of the impurity element.

· ***Title: Silicon purification apparatus and silicon purification method***

Inventors: Dohnomae Hitoshi

ELZABURU	Países	NºSolicitud	Fecha solicitud	Nº Patente	NºPublicación	Fecha publicación	Estado
PE-7269	*Japón*	JP2013-554143	*	*	*	*	***En vigor***

Provided are: a silicon purification apparatus that uses a ring-shaped thermal-insulating lid, which can be replaced while heating a crucible, as a thermal-insulating means for keeping the surface of a silicon melt at a high temperature, and has a simple structure and is easy to produce, said silicon purification apparatus being capable of continuously processing several tens of portions of charged silicon with the crucible heated as is; a silicon purification method that makes use of the silicon purification apparatus; and a purification method. The present invention pertains to a silicon purification apparatus, which is provided with, inside a depressurization chamber equipped with a vacuum pump, a graphite crucible having an opening at the upper end and accommodating silicon therein, and a heating device for heating said crucible, said silicon purification apparatus being characterized by being provided with a ring-shaped thermal-insulating lid that covers the opening of the crucible at the top of the crucible and has an exhaust opening with an area smaller than the surface of the silicon melt inside the crucible, said thermal-insulating lid being capable of being replaced during heating of the crucible in the decompression chamber. The present invention further pertains to a silicon purification method that makes use of the silicon purification apparatus.

· ***Title: Metal or semiconductor melt refinement method, and vacuum refinement device Inventors***: Kishida Yutaka, Dohnomae Hitoshi, Kondo Jiro

ELZABURU	Países	NºSolicitud	Fecha solicitud	Nº Patente	NºPublicación	Fecha publicación	Estado
PE-7278	*Japón*	JP2013-557273	*	*	*	*	***En vigor***

An objective of the present invention is, in refining a metal or a semiconductor melt, without impairing refining efficiency, to alleviate wear and tear commensurate with unevenness in a crucible caused by instability in melt flow, and to allow safe operation over long periods of time such that leakages from the crucible do not occur. Provided is a metal or semiconductor melt refining method, in which, by using an AC resistance heating heater as a crucible heating method, the melt is heat retained and mixed by a rotating magnetic field which is generated by the resistance heating heater. The metal or semiconductor melt refinement method and a vacuum refinement device which is

optimal for the refinement method are characterized in that, in order that a fluid instability does not occur in the boundary between the melt and the bottom face of the crucible when the melt is rotated by the rotating magnetic field, with a kinematic viscosity coefficient of the melt designated ν (m2/sec), the radius of the fluid surface of the melt designated R (m), and the rotational angular velocity of the melt designated Ω (rad/sec), the operation is carried out such that the value of a Reynolds number (Re) which is defined as Re=R×(Ω/ν)^(1/2) does not exceed 600.

· ***Title: Silicon melt transfer member and silicon melt transfer method***

Inventors: Yutaka Kishida, Hitoshi Dohnomae, Kensuke Okazawa

ELZABURU	Países	NºSolicitud	Fecha solicitud	Nº Patente	NºPublicación	Fecha publicación	Estado
PE-7249	*China*	201080025161.6	08/06/2010	CN102459076B	07/01/2015	CN102459076A	***En vigor***

Disclosed are a simple silicon melt transfer member and a silicon melt transfer method not requiring a heating means, for use in the production of high-purity silicon used as a raw material for semiconductor elements and solar cells. The silicon melt transfer member comprises L-shaped or cylindrical members with extremely small heat capacity, the peripheries of which are protected by an insulation material with extremely small heat capacity. The total heat capacity of the transfer member is no more than 13000(J/Kg). Using this transfer member, a silicon melt is transferred at a flow volume of no less than 50(kg/min), and at a flow speed of no less than 0.1(m/sec).

·***Title: Method and removing carbon from silicon***

Inventors: Hiyoshi Masataka, Kondo Jiro

ELZABURU	NºSolicitud	Fecha Solicitud	Nº Patente	NºPublicación	Fecha Publicación	Estado
PE-7290	2005-058000	02/03/2005	JP5100969B	JP2006-240914A	14/09/2006	***En vigor***

Problem to be solved: To provide a method for removing carbon from silicon by which the carbon concentration in silicon is simply decreased to ≤3 ppm by mass.

Solution: Silicon having the carbon concentration of ≤3 ppm by mass is obtained by keeping silicon in a fused state in an atmosphere at ≤800 Pa CO partial pressure for ≥30 minutes and then unidirectionally solidifying the silicon.

· ***Title: Conveying method for silicon melt and method for conveying silicon melt.***

Inventors: Kishida Yutaka, Donomae Hitoshi, Okazawa Kensuke, Tokumaru Shinji, Hiyoshi Masataka, Okajima Masaki

ELZABURU	NºSolicitud	Fecha Solicitud	Nº Patente	NºPublicación	Fecha Publicación	Estado
PE-7291	2009-137312	08/06/2009	-	JP2010-280552A	16/12/2010	***En vigor***

Problem to be solved: To provide a simple conveying member and transfer method for a silicon melt requiring no heating equipment in the production of high purity silicon used as the raw material for a semiconductor element and a solar cell.

Solution: The conveying member for a silicon melt is composed of an angled or cylindrical member having an extremely reduced heat capacity. The periphery thereof is protected with an insulating material having an extremely reduced heat capacity, and the total of the heat capacities in the conveying member is controlled to ≤13,000(J/Kg). By using this conveying member, a silicon melt is conveyed at a flow rate of ≥50(Kg/min) and also at a flow velocity of ≥0.1(m/sec).

Boron Removal:

1. Quality control of graphite and knowledge about optimal graphite qualities for silicon melting process and slag-silicon melting.
2. Knowledge gained about manufacturing process of graphite crucible using the inner part of crucible.
3. Operating procedures of induction furnace with graphite crucible.
4. Slag composition to optimize boron removal.
5. Graphite crucible thickness progress prediction model
6. Operating procedures for skimming on the furnace with robot (including software and robot tools).
7. Knowledge gained about refractory material used for the furnace assembly in order to avoid boron and phosphorous contamination.
8. Knowledge gained about suction systems to recover fume particles from induction furnaces.
9. Development of applications for the recovery of collected wastes in the baghouses of induction furnace.
10. Detachment of free silicon from slag
11. Mathematical model of induction furnace

Electromagnetic Solidification:

1. [1]Operating procedures for purification of silicon by solidification using a flat low-speed electromagnetic stirring device. (Stirrer)
2. [2]Operating procedures for purification of silicon by solidification using a cylindrical high-speed electromagnetic stirring device, including a crucible (Rotator).
3. [3]Technical knowledge about liquid-solid separation (including automated tilting procedure and device).

[1] GFAT has the right to licence or not these procedures to protect his core business at his own discretion.

[2] Licence over these procedures and knowledge should include special provisions to respect rights of the manufacturer of this equipment and to avoid transfer of this technology out of the Licensee.

[3] Same as footnote 2

Phosphorous removal:

4. Operating procedures of vacuum furnace
5. Quality control of raw materials which are used in vacuum furnace
6. Knowledge gained about refractory material used for the vacuum operation. Further, knowledge about properties of graphite and composites which work directly with silicon in an inert atmosphere and vacuum.
7. Technical development to use crucibles of 1200 mm diameter in present furnaces and larger size in new furnaces.
8. Mathematical model of vacuum furnace and operating process of evaporation of impurities.

Directional Solidification:

9. Load system of molten silicon in directional solidification furnace.
10. Segregation of carbon from top and bottom of the ingot by decanting and flotation.
11. Graphite moulds for directional solidification
12. Manufacturing system of silica moulds for directional solidification.
13. Knowledge gained about ingots cutting with diamond wire.

Hydrometallurgical Processes for silicon refining:

14. Knowledge gained about materials and operating procedures for silicon hydrometallurgical processes.
15. Cleaning treatment of slag traces on silicon.
16. Surface stripping treatment on silicon.
17. Highly contaminated silicon recycling treatments (including MG silicon fines).

Analysis:

18. Preparation procedures of silicon samples for chemical analysis
19. Knowledge gained about analysis of silicon samples by ICP-OES and ICP-MS.

20. Characterization of silicon in all process stages by resistivity measurements.

Assessment, recovery and valorisation of by-products from solar silicon production:

21. Microsilica:
    a. Manufacturing process various silicates
22. Fines

Anexo 3 – Descripción de la Tecnología de R&DCo

Se refiere a la tecnología aportada por Blue Power Corporation, S.L. a Ferrosolar R&D, S.L. (anteriormente denominada Freeboy Sistem, S.L.) en la escritura de compraventa de tecnología y cesión contractual otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza el 23 de febrero de 2017 con el número 517 de su protocolo.

Exhibit 4.38

MANDATO DE VENTA Y ACUERDO DE COLABORACIÓN PARA LA BÚSQUEDA DE POTENCIALES INVERSORES

celebrado entre

GRUPO FERROATLÁNTICA, S.A.U.,

SILICIO FERROSOLAR, S.L.U.,

AURINKA PHOTOVOLTAIC GROUP, S.L.,

BLUE POWER CORPORATION, S.L.

Y

FERROSOLAR OPCO GROUP, S.L.

En Madrid, a 11 de julio de 2019

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MANDATO DE VENTA Y ACUERDO DE COLABORACIÓN PARA LA BÚSQUEDA DE POTENCIALES INVERSORES

En Madrid, a 11 de julio de 2019

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **Grupo FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 19 de octubre de 2007, bajo el número 3.838 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 24921, folio 24, , hoja M-448707, y con Código de Identificación Fiscal A-85255370 ("**Grupo FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura pública de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.699, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 34508, folio 177, sección 8, hoja M-448707.

Asimismo, interviene en nombre y representación de la sociedad **FerroAtlántica, S.A.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Raul Vall Vidardell, el día 29 de septiembre de 1992, bajo el número 3.016 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 3720, folio 188, hoja M-63610, y con Código de Identificación Fiscal A-80420516 ("**FAT**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.695, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid, al tomo 29861, folio 175, sección 8, hoja M-63610.

Asimismo, interviene en nombre y representación de la sociedad **Silicio FerroSolar, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Jaime Recarte Casanova, el día 10 de julio de 2.008, bajo el número 2.369 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 25905, folio 20, hoja M- 466968, y con Código de Identificación Fiscal B-85504884 ("**SFS**"). Ostenta dicha representación, que asegura vigente, en

virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.700, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 25905, folio 215, sección 8, hoja M-466968.

Interviene en nombre y representación de la sociedad **Ferrosolar OpCo Group, S.L.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796, folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (en adelante, "**Opco**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de apoderado, en virtud de poder otorgado a su favor por dicha sociedad, el cual ha sido elevado a público en el día de hoy, mediante escritura otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza.

Y DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid , y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L.,** domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345 , folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

Asimismo, interviene en nombre y representación de la sociedad **Blue Power Corporation, S.L.**, domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Madrid, D. Rafael Vallejo Zapatero, el día 20 de julio de 2015, bajo el número 1.257 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 33.763, folio 12,hoja M-607671, y con Código de Identificación Fiscal B-87339248 ("**Blue Power**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura otorgada, ante el Notario de Madrid, D. Ignacio Manrique Plaza, con el número 2031 de orden de su protocolo.

En adelante, Grupo FAT, FAT, SFS, OpCo, Aurinka y Blue Power serán conjuntamente denominadas las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes declaran tener capacidad legal suficiente para celebrar este contrato, por lo que

EXPONEN

(A) Que, con fecha 20 de diciembre de 2016, Grupo FAT, SFS, FAT, Blue Power y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre ellas de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(B) Que, en el marco del JVA, Grupo FAT, SFS, FAT, Blue Power y Aurinka acordaron ejecutar un nuevo establecimiento industrial para la producción de silicio calidad solar en La Nava, Puertollano.

(C) Que las Partes, FerroAtlántica Participaciones, S.L.U. (la "**Sociedad Beneficiaria**") y Ferrosolar R&D, S.L. ("**R&DCo**") han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(D) Que las sociedades R&DCo y OpCo fueron constituidas en virtud de lo establecido en el JVA.

(E) Que, como consecuencia de los acuerdos adoptados por las Partes, la Sociedad Beneficiaria y R&DCo en el marco del Contrato de Transacción, con efectos a partir del día de hoy, OpCo pasará a ser titularidad de la Sociedad Beneficiaria (75%) y de Grupo FAT (25%) y los socios de R&DCo serán SFS (50%) y Aurinka (50%).

(F) Que, como consecuencia de la decisión de resolver y extinguir el JVA, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes, la Sociedad Beneficiaria y R&DCo llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra (i) el otorgamiento de un derecho de tanteo a favor de Aurinka sobre ciertos activos de la planta de Puertollano titularidad de OpCo descritos en el correspondiente contrato de otorgamiento de dicho derecho de tanteo (el "**Derecho de Tanteo sobre los Activos**") y (ii) el otorgamiento de un derecho de tanteo a favor de Aurinka sobre la totalidad de las participaciones sociales de R&DCo de las que SFS es titular (el "**Derecho de Tanteo sobre las Participaciones de R&DCo**").

(G) Que es intención de Grupo FAT, FAT y OpCo realizar sus mejores esfuerzos a fin de transmitir todos los activos de la planta de Puertollano titularidad de OpCo que se enumeran en el **Anexo 1** al presente contrato (los "**Activos**"). Asimismo, es intención de SFS realizar sus mejores esfuerzos a fin de transmitir la totalidad de las participaciones sociales de R&DCo de las que es titular, las cuales se describen en el **Anexo 2** al presente contrato, así como de aquéllas que pueda adquirir en un futuro (las "**Participaciones**").

(H) Que es intención de Aurinka actuar coordinadamente con, y asesorar a, Grupo FAT, FAT, OpCo y SFS en las labores de búsqueda de posibles terceros inversores que puedan adquirir los Activos y la totalidad de las Participaciones, sin perjuicio de la posibilidad de ejercer el Derecho de Tanteo sobre los Activos y el Derecho de Tanteo sobre las Participaciones de R&DCo por parte de Aurinka.

(I) Que, en el caso de que Grupo FAT, FAT y OpCo alcanzaran un acuerdo definitivo con algún tercero para la venta de los Activos Grupo FAT, FAT y OpCo realizarán sus mejores esfuerzos para que dicho acuerdo contemple la contratación de Aurinka como socio tecnológico del proyecto de producción de silicio calidad solar en La Nava, Puertollano (el "**Proyecto**").

(J) Que Grupo FAT, como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial FAT, con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FAT mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la tenencia de participaciones, acciones y/o cuotas sociales que confieren la mayoría del capital social en otras sociedades, a favor de la Sociedad Beneficiaria, recibiendo el accionista único, esto es Grupo FAT, la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la Sociedad Beneficiaria incluye, entre otras, las participaciones sociales de OpCo que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y la Sociedad Beneficiaria quedó efectivamente constituida, a día de hoy es la Sociedad Beneficiaria la titular de todas las participaciones sociales de OpCo trasmitidas en virtud de dicha escisión.

En virtud de lo anterior, las Partes reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente acuerdo (el "**Contrato**") con sujeción a las siguientes

CLÁUSULAS

1 Objeto del Contrato y compromisos de las Partes

1.1 Constituye el objeto del presente Contrato el otorgamiento por parte de OpCo y de SFS de un mandato de venta a favor de Aurinka consistente en: (i) la realización por su parte de sus mejores esfuerzos para buscar terceros inversores que adquieran la totalidad de los Activos y de las Participaciones; (ii) la prestación por parte de Aurinka a OpCo y SFS de los servicios que se indican en el **Anexo 3** al Contrato (los "**Servicios**"); y (iii) , en caso de que se verifique la transmisión de los referidos Activos a un tercero, la contratación de Aurinka por parte de dicho tercero como socio tecnológico para el desarrollo del Proyecto. Todo lo anterior sin perjuicio de la posibilidad de ejercer el Derecho de Tanteo sobre los Activos y el Derecho de Tanteo sobre las Participaciones de R&DCo por parte de Aurinka.

1.2 Grupo FAT, FAT, SFS y OpCo se comprometen, con efectos a partir de la presente fecha, a realizar sus mejores esfuerzos de forma coordinada a fin de buscar un tercero inversor que adquiera todos los Activos.

1.3 Asimismo, Grupo FAT, FAT, SFS y OpCo se comprometen, con efectos a partir de la presente fecha, a realizar sus mejores esfuerzos de forma coordinada a fin de buscar un tercero inversor que adquiera la totalidad de las Participaciones.

1.4 Grupo FAT, FAT, SFS y OpCo mandatan en este momento a Aurinka para que proceda a la búsqueda de un tercero que adquiera la totalidad de los Activos y de las Participaciones. Este mandato de venta expirará el 31 de diciembre de 2020 simultáneamente con el Derecho de Tanteo sobre los Activos y el Derecho de Tanteo sobre las Participaciones de R&DCo concedidos a Aurinka.

1.5 Aurinka, por su parte, se compromete, con efectos a partir de la presente fecha, a actuar coordinadamente con, y asesorar a, Grupo FAT, FAT, SFS y OpCo en las labores de búsqueda de posibles terceros inversores que puedan adquirir los Activos y la totalidad de las Participaciones.

1.6 Asimismo, Aurinka se compromete a prestar los Servicios de manera diligente, a seguir las indicaciones que OpCo o SFS puedan darle en relación con la prestación los mismos y a mantener puntualmente informadas a OpCo y a SFS en relación con cualquier aspecto relativo al proceso de venta de los Activos y de las Participaciones. Sin perjuicio de lo anterior, en ningún caso podrán derivarse responsabilidades, de cualquier tipo, frente a Aurinka, en el caso de que no se proceda a la venta de los Activos y de las Participaciones.

Cualesquiera gastos en que incurra Aurinka al objeto de prestar los Servicios, serán sufragados por Grupo FAT y/o FAT, siempre que medie previa autorización solicitada por Aurinka.

1.7 Las Partes acuerdan que, en el caso de que Grupo FAT, FAT y OpCo alcanzaran un acuerdo definitivo con algún tercero para la venta de los Activos, Grupo FAT, FAT y OpCo realizarán sus mejores esfuerzos para que dicho acuerdo contemple la contratación de Aurinka como socio tecnológico del Proyecto, en los términos y bajo las condiciones que se acuerden con dicho tercero. Todo lo anterior sin perjuicio de la posibilidad de ejercer el Derecho de Tanteo sobre los Activos y el Derecho de Tanteo sobre las Participaciones de R&DCo por parte de Aurinka.

1.8 En el supuesto de que Aurinka no ejercite el Derecho de Tanteo sobre los Activos y el Derecho de Tanteo sobre las Participaciones de R&DCo, de conformidad con lo previsto en los correspondientes contratos que regulan el ejercicio de dichos derechos, Aurinka se compromete a otorgar su consentimiento expreso, autorizando y aprobando la transmisión por parte de SFS de la totalidad de las Participaciones a un tercero por el precio y demás términos y condiciones que SFS estime oportuno, y se compromete expresa e irrevocablemente a realizar las actuaciones que fueran precisas a los efectos de dar pleno y total cumplimiento al compromiso aquí adquirido.

Asimismo, y sin perjuicio de lo señalado en el párrafo anterior, Aurinka se compromete, junto con SFS, a reunirse con carácter de Junta General Extraordinaria y Universal de R&DCo cuando SFS lo solicite, al objeto de autorizar expresamente a SFS para que realice la transmisión pretendida a favor de un tercero, comprometiéndose Aurinka a renunciar en dicho acto y de forma irrevocable al ejercicio de sus derechos de adquisición preferente sobre dichas Participaciones y dando por cumplidos todos los trámites y demás requisitos legal y estatuariamente previstos en relación con la Junta General Universal mencionada y con la transmisión de las mismas a favor del tercero.

1.9 A los efectos de dar cumplimiento a los compromisos adquiridos por las Partes en virtud de lo señalado anteriormente, y con el objetivo de actuar en todo momento de forma coordinada, las Partes se comprometen a mantenerse mutua y puntualmente informadas de cualquier contacto que realicen

con potenciales adquirentes, así como de cualquier avance, compromisos, acuerdo y, en general, noticia relevante que cualquiera de ellas pueda recibir en relación con lo anterior.

1.10 Los compromisos adquiridos en virtud de lo señalado en las Cláusulas 1.2, 1.3**,** 1.5, 1.6 y 1.7 se configuran como una obligación de medios, no de resultado.

2 Importe y abono de los honorarios a percibir por Aurinka

2.1 Importe de los honorarios a percibir por Aurinka

Aurinka recibirá en todo caso, e independientemente de que haya intermediado o no en la venta de los Activos, una comisión calculada como un porcentaje sobre el precio total obtenido en la desinversión de los Activos, de acuerdo con los siguientes baremos:

2.1.1 Si la desinversión se produce no más tarde del 31 de diciembre de 2019, inclusive, Aurinka tendrá derecho a percibir:

(i) una comisión igual a un cinco por ciento (5%) del precio de venta hasta un precio máximo de venta de TREINTA Y SEIS MILLONES SESCIENTOS MIL EUROS (36.600.000 €); más

(ii) una comisión igual a un veinticinco por ciento (25%) del precio de venta calculada sobre la parte del precio de venta que supere, en su caso, los TREINTA Y SEIS MILLONES SESCIENTOS MIL EUROS (36.600.000 €).

El precio de venta sobre el que se calculará la comisión a percibir por Aurinka será el neto que resulte después de deducir del precio de venta todos los gastos de la operación, a excepción del importe de la comisión que le corresponda percibir a Aurinka.

2.1.2 Si la desinversión se produce después del 31 de diciembre de 2019, Aurinka tendrá derecho a percibir:

(i) una comisión igual a un cinco por ciento (5%) calculada sobre el precio de venta, hasta un precio máximo de venta de VEINTICINCO MILLONES DE EUROS (25.000.000 €); más

(ii) una comisión igual a un veinticinco por ciento (25%) calculada sobre la parte del precio de venta que supere, en su caso, los VEINTICINCO MILLONES DE EUROS (25.000.000 €).

El precio de venta será el neto que resulte después de deducir todos los gastos de la operación, excluyendo de este cómputo los de la comisión de Aurinka.

El importe de la comisión que finalmente se devengue a favor de Aurinka, de conformidad con lo dispuesto en esta Cláusula, en adelante, será denominada los "**Honorarios de Aurinka**".

2.2 Pago de los Honorarios de Aurinka

2.2.1 El pago de los Honorarios de Aurinka se efectuará dentro de los treinta (30) días siguientes a contar desde aquél en que Grupo FAT, FAT u OpCo cobre/n del tercero adquirente de manera efectiva el precio de transmisión de los Activos que sean transmitidos, mediante transferencia bancaria a la cuenta titularidad de Aurinka abierta en La Caixa y con número ES3421006076540200074761.

2.2.2 Por tanto, en caso de que el precio de transmisión de los Activos obtenido por Grupo FAT, FAT u OpCo incluya un precio retenido o el otorgamiento de un aval bancario o cualquier otro tipo de garantía que implique la indisponibilidad por Grupo FAT, FAT u OpCo de un importe equivalente al otorgado bajo la garantía de que se trate a efectos de hacer frente a cualquier eventual responsabilidad legal o contractual de Grupo FAT, FAT u OpCo frente al tercero adquirente, Grupo FAT, FAT u OpCo podrá/n retener de los Honorarios de Aurinka un importe igual a la comisión correspondiente a ese último tramo del precio de venta (superior o inferior a los valores máximos referidos en la cláusula 2.1) que haya sido retenido a Grupo FAT, FAT u OpCo por el tercero adquirente. Dicho importe quedará retenido hasta que sea efectivamente percibido por Grupo FAT, FAT u OpCo o hasta el momento en que la garantía sea efectivamente liberada a favor Grupo FAT, FAT u OpCo.

En caso de que los importes retenidos o las garantías prestadas se liberasen parcialmente, Grupo FAT, FAT u OpCo abonará/n a Aurinka una parte proporcional equivalente de los Honorarios de Aurinka que estuviese retenida.

El importe de los Honorarios de Aurinka que haya sido retenido por Grupo FAT, FAT u OpCo, de conformidad con lo dispuesto en esta Cláusula, se pagará no más tarde de los treinta (30) días naturales siguientes al día en que (i) se produzca el cobro por Grupo FAT, FAT u OpCo de tales importes; o (ii) se liberen las correspondientes garantías en su favor.

Si tuviese lugar el cobro parcial por parte Grupo FAT, FAT u OpCo de los importes retenidos o la liberación parcial de las garantías correspondientes señaladas anteriormente, Grupo FAT, FAT u OpCo deberá/n abonar a Aurinka la cantidad proporcional de los Honorarios de Aurinka retenidos correspondiente en el plazo de treinta (30) días naturales indicado anteriormente.

Para que se verifique la obligación de Grupo FAT, FAT u OpCo de abonar los Honorarios de Aurinka, de conformidad con lo dispuesto anteriormente, será preciso que Aurinka emita la correspondiente factura.

3 Compromiso de venta

En caso de que se reciba una oferta de adquisición del 100% de R&DCo de un tercero y SFS esté dispuesta a aceptarla, las Partes se comprometen irrevocablemente a vender sus participaciones sociales en R&DCo en los términos que traslade dicho tercero.

4 Confidencialidad

Salvo exigencia legal en contrario, las Partes conservarán en la más estricta confidencialidad la existencia y los términos del presente Contrato y no utilizarán o expondrán su contenido en relación con ninguna otra finalidad distinta de la formalización entre las Partes de los compromisos adquiridos en virtud del mismo.

Lo anteriormente indicado respecto de las Partes no será de aplicación en el supuesto en que concurra alguna de las siguientes circunstancias:

(a) cuando la revelación de la información confidencial venga exigida por ley, por una Administración Pública o una autoridad judicial en el cumplimiento de sus funciones o por la normativa aplicable;

(b) cuando la información sea de carácter notorio o de conocimiento público (por causa distinta a un incumplimiento de lo aquí dispuesto); o

(c) en el supuesto en que alguna de las Partes deba dar a conocer la información confidencial para dar cumplimiento a las obligaciones asumidas en el presente Contrato.

5 Notificaciones

Cualesquiera notificaciones y comunicaciones que deban realizarse las Partes entre sí en relación con el presente Contrato se considerarán debidamente efectuadas si (i) se realizan por escrito; (ii) han sido remitidas por correo certificado con acuse de recibo, *burofax* o cualquier otro medio escrito que acredite su recepción, siempre que se remitan a las direcciones postales de cada una de las Partes que se indican a continuación:

Para: Grupo FerroAtlántica, S.A.U., FerroAtlántica, S.A.U., Ferrosolar OpCo Group, S.L. y Silicio FerroSolar, S.L.U.

A/A:	D. Pedro Larrea Paguaga
Dirección:	Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid
E-mail:	pedro.larrea@ferroglobe.com

Para: Aurinka Photovoltaic Group, S.L. y Blue Power Corporation, S.L.

A/A:	D. Benjamín Llaneza Caruana
Dirección:	Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid
E-mail:	bllaneza@aurinkapv.com

6 Gastos e impuestos

Cada una de las Partes asumirá los gastos en que hubiera incurrido derivados de la suscripción y formalización en escritura pública de este Contrato y los impuestos que sean de aplicación serán sufragados por la Parte que solicite dicha formalización en escritura pública.

7 Miscelánea

7.1 Protección de Datos Personales

Los datos de carácter personal facilitados por las Partes al amparo del Contrato serán incorporados a uno o varios ficheros de datos de carácter personal. Las personas cuyos datos aparezcan en los citados ficheros podrán hacer ejercicio de los derechos de acceso, rectificación, cancelación y oposición mediante solicitud escrita, firmada y dirigida a la otra Parte, a la dirección que este determine en las notificaciones que deban realizarse de acuerdo con lo establecido en el Contrato. Las Partes informarán a las diferentes personas físicas afectadas de la cesión de sus datos de carácter personal en los términos previstos en la Normativa de Protección de Datos Personales, con ocasión del envío de las notificaciones que deban realizar de conformidad con lo estipulado en el presente Contrato.

Una vez que los datos hayan sido obtenidos por alguna de las Partes, la misma será responsable del cumplimiento de las obligaciones legales relativas al tratamiento de dichos datos desde su propia base de datos y de conformidad con la Normativa de Protección de Datos Personales.

7.2 Formalización en documento público

Cualquiera de las Partes podrá solicitar que el presente Contrato se eleve a público ante el Notario que al efecto designe la Parte solicitante. Los gastos e impuestos derivados de la elevación a público del presente Contrato se satisfarán por la Parte solicitante.

7.3 Interpretación y modificación

Este Contrato constituye la totalidad del acuerdo alcanzado entre las Partes respecto del objeto del mismo, reemplazando y dejando sin efecto lo dispuesto en cualesquiera pactos anteriores entre las Partes en relación con la misma materia en tanto que sean contradictorios con lo aquí dispuesto.

Cualquier modificación de este Contrato habrá de realizarse por las Partes de mutuo acuerdo y formalizarse por escrito, cumpliendo, como mínimo, con las mismas formalidades con que se ha dotado a la suscripción del presente Contrato.

7.4 Renuncia

Cualquier renuncia de cualquiera de los derechos o facultades derivados del Contrato por cualquiera de las Partes deberá realizarse por escrito. La omisión por cualquiera de las Partes a exigir el estricto cumplimiento de cualquier término contractual en una o más ocasiones no podrá ser considerada en ningún caso como renuncia, ni privará a esa Parte del derecho a exigir el estricto cumplimiento de la/s obligación/es contractual/es a posteriori.

7.5 Nulidad

La invalidez, ilegalidad o inejecutabilidad total o parcial de cualquiera de las Cláusulas de este Contrato no afectará o impedirá la vigencia y validez de aquella parte de la misma que no sea inválida, ilegal o inejecutable o de las restantes que permanecerán con plena validez y eficacia. No obstante lo anterior, la Cláusula o Cláusulas inválidas o inejecutables serán interpretadas y cumplidas (en la medida posible) de acuerdo con la intención inicial de las Partes.

7.6 Computo de plazos

Salvo cuando expresamente se estableciera lo contrario en este Contrato: (i) los plazos expresados en “días” se refieren a días naturales, contados a partir del día natural inmediatamente siguiente al del inicio del cómputo, inclusive, hasta el último día natural del plazo, inclusive; (ii) los plazos expresados en “días hábiles” se refieren a días hábiles en la ciudad de Madrid. En este sentido, no computarán aquellos días que no fueran hábiles conforme al calendario de Madrid; y, (iii) los plazos expresados en meses o años se contarán de fecha a fecha desde el día de inicio del cómputo hasta el mismo día del último del plazo (ambos incluidos), salvo que en el último mes o año del plazo no existiese tal fecha, en cuyo caso el plazo terminará el día inmediatamente anterior.

8 Cesión

Las Partes acuerdan que únicamente Grupo FAT, FAT, SFS y OpCo podrán ceder libremente su posición contractual, así como la totalidad o parte de sus derechos y/u obligaciones asumidos en virtud del presente Contrato, sin modificación ni excepción de clase alguna, a cualquier sociedad que pertenezca al mismo grupo de sociedades al que las mismas pertenecen (en el sentido establecido en el artículo 42 del Código de Comercio), mediante notificación a la otra Parte realizada de conformidad con lo establecido en la Cláusula 5.

Las Partes acuerdan que no será necesario un contrato por separado para la formalización de la cesión descrita en el apartado anterior y que la misma no requerirá, para su operatividad, acciones posteriores ni la ejecución de ningún otro documento ni autorización de cualquier clase.

9 Ley aplicable y jurisdicción

9.1 Ley aplicable

El presente Contrato se regirá e interpretará de conformidad con lo dispuesto por la ley española común.

9.2 Jurisdicción

Las Partes se someten expresamente a los Juzgados y Tribunales de la ciudad de Madrid para dirimir cualquier litigio que se derive de la interpretación y ejecución de este Contrato.

[*Sigue hoja de firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Contrato por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

GRUPO FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

SILICIO FERROSOLAR, S.L.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROATLÁNTICA, S.A.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

FERROSOLAR OPCO GROUP, S.L.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

AURINKA PHOTOVOLTAIC GROUP, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

BLUE POWER CORPORATION, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

Listado de Anexos

Anexo 1:	Listado de Activos
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Anexo 1 – Listado de Activos

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Dado que ambas partes conjuntamente han gestionado los pedidos y facturas mediante los cuales se han adquirido los equipos de referencia, a fin de facilitar la descripción de todos ellos, se listan los pedidos efectuados y las facturas recibidas a la fecha (las siglas n.a. significan no aplica, al no haberse recibido factura alguna de dicho pedido a la fecha)

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
HORNOS DE INDUCCIÓN	180104	5121
		5201/131813
		5203
		5209
		5215
		5217
	180106	066/18
	180120	18/04/2660
		18/11/2682
		19/05/5991
	180166	F-18-0291
	180171	5172/130592
	180173	282/18
		325/18
		398/18
		001/19
		002/19
		003/19
	180193	5202/131184
		5204
		5210
		5216
		5218
	180213	357/18
	180223	n.a.
	180238	n.a.
	180256	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
HORNOS DE VACÍO	180103	118116
		118311
	180107	3016144137
		3016160054
	180112	3016181582
		3016239932
	180112-1	FZ-8002
		FZ-8103
	180114	1-FA-30.200
	180116	3016181583
	180117	180897
	180121	026/18
	180123	1-FA-30.201
	180124	180030/2
	180125	180925
	180126	A/146879
	180126-1	S2 695132
		S2 694854
	180127	000206/18
	180128	FV2018C10002238
		2018C10002635
		2018C10002956
	180129	3016221485
		3016242024
		3016239933
		3016299753
		3016257000
	180130	61335932
		61337261
	180132	0037/18
	180136	S2 697915
		S2 697938
		S2 697991
	180137	A18092
	180138	25917
	180142	S246
	180143	S2 706212
	180144	FZ-8211

180145	118312
	118613
180146	046/18
180147	0/2018/1888
180148	181718
180148-1	S2 711044
	S2 711045
180165-1	S331
180168	TP-18-001
	TP-18-002
180172	180850
180176	2019/0085
180177	181632
180178	184214
180180	144665
180183 (OPCO)	S799
180186 (OPCO)	145/18
180188	3019099203
180197	318079
180203	296119634
180206	318106
180208	318107
180210	118636
180212	S2 757693
180213-1	P18156
180215-1	2391
180220	FV0252-18
180222	P18167
180224	n.a.
180226-rev1	135/18
180227	FV0251-18
180230-1	S584
180231	20180453
180231-1	FZ-8754
180236	91FVR18-289
180237	P18189
180239	3016463302
	3016468578
	3016469235
	3016484371
180240 - rev1	19 4

180241	201800059
180242	91FVR18-382
180245	P18215
180246-1	T60
180252	133/18
180253	n.a.
180255	FV-000080899
	FV-000091888
180257	18000216
	18000217
	18000218

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
MACHAQUEO Y MOLIENDA	170198	3/FA/2/2017
		3/FA/1/2017
		3/FA/3/2017
		3/FA/4/2017
	171200	20173022
		20184004
	171201	20183000
	171202	20183023
	180131	201830006
		201830006
		201830006
		20193000
		20193002
	180156	1/SI0010/2018
		1/SI0021/2018
		1/SI0029/2018
	180157	1/SI0011/2018
		1/SI0020/2018
		1/SI0030/2018
		1/SI0034/2018
	180229	n.a.
	180232	20193001
	180232	20193003
	180249	177/2018
	180250	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
SILOS Y COMPOSICIÓN DE CARGA	180102	13/2018
		47/2018
	180108	A/123
	180113	1/SI0013/2018
	180133	65/2018
		105/2018
		126/2018
		129/2018
		01/2019
	180134	66/2018
		106/2018
		127/2018
		130/2018
		02/2019
	180154	A/406
		A/749
	180163	1/SI0005/2018
		1/SI0015/2018
		1/SI0024/2018
	180164	1/SI0004/2018
		1/SI0014/2018
		1/SI0023/2018
		1/SI0032/2018

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
AUTOMATIZACIÓN	180100	1/SI 0001/2018
		1/SI 0002/2018
		1/SI 0003/2018
		1/SI0033/2018
	180158	1/SI0006/2018
		1/SI0019/2018
		1/SI0025/2018
	180159	1/SI0007/2018
		1/SI0018/2018
		1/SI0026/2018
	180160	1/SI0008/2018
		1/SI0022/2018
		1/SI0027/2018
	180161	1/SI0009/2017
		1/SI0017/2018
		1/SI0028/2018
	180162	1/SI0012/2017
		1/SI0016/2018
		1/SI0031/2018
	180233	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
SUMINISTRO ELÉCTRICO	180151	58481083
		58481106
	180182	18000128
		18000138
		18000163
		18000170
		18000175
		18000201
		18000220
		18000252
		18000253
	180191	58481082
		58481107
		58481109
		58481094

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
SISTEMA DE ASPIRACIÓN	180122	18720009
		18720097
		18720147
		18720225
	180169	18720251
	180192	36193
		36412
		36625
	180204	18720252

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
REFRIGERACIÓN	180199	99548827
	180244	F-18-0580
		F-18-0652

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
LIXIVIACIÓN	180115	2018F0010
		2018F0033
	180149	TR18-0090
		TR18-0106
		TR18-0199
	180152	A/404
		A/832
	180153	A/405
	180167	20180228
		20180311
		20180312
	180194	20180339
		20180457
	180234	VFR18-011057
	180253-1	11180005
	180254	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
LABORATORIO	180140	218-GC-SVX-65
	180141	D17447
	180150	18/1642
	180174	9100045270
	180175	FV-028594
	180184	n.a.
	180187	10085
	180139/ 190102 (OPCO)	195208048

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
OTROS EQUIPOS	180155	A/357
	180165	CLM0048019F00001
	180170	FA2018169
		FW2018232
		FA2018 278
		FA2019 183
		FA2019 182
		FA2019 128
		FA2019 126
	180179	No hay
	180183	20180285
	180185	2018F0041
		2018F0053
		62
		000069
	180186	24974
		25268
	180195	18000890/1
		18001092/1
	180200	20180351
	180209	F18_11_04a
	180217	n.a.
	180218	n.a.
	180219	F18_09_02
		FA18_10_10
	180221	2018/1-000471
	180235	25177
		25268
	180247	F18_11_18
	180248	F18_11_19

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
EDIFICACIÓN	170199	FV17/0315
		FV17/0357
		FV18/0009
		FV18/0050
		FV18/0227
	170199B	FV18/0010
		FV18/0051
		FV18/0228
	180101	FV18/0052
		FV18/0138
	180101/180110	FV18/0294
	180109	FV18/0113
	180110	FV18/0137
	180111	n.a.
	180118	FV18/0139
		FV18/0173
		FV18/0215
		FV18/0253
		FV18/0289
		FV18/0337
		FV18/0360
		FV18/0400
		FV18/0436
		FV19/0015
	180119	CCR-18/3
	180189	FV18/0240
	180196	4320018A00835
		4320019A00279
	180205	FV18/0313
	180207	FV18/0314
	180211	FV19/0005
	180214	FV18/0315
	180216	1F13III0001
		1F13JAE00001
		1F13JCL00001
	180243	4320019S0127
		4320019S02630
	180246	F-18-0581

F-18-0653	
180251	FV18/0431
	FV18/0435
	FV19/0016
180258	18000219

Anexo 2 – Descripción de las Participaciones

Número de Participaciones	Títulos de propiedad
50.000 participaciones sociales, de un euro de valor nominal cada una de ellas, numeradas de la 50.001 a la 100.000, ambas inclusive.	Escritura de aumento de capital social de R&DCo, otorgada ante el notario de Madrid, D. Ignacio Manrique Plaza, el día 24 de febrero de 2017, bajo el número 526 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34.796, folio 185, hoja M-625891, inscripción 6.

Anexo 3 – Descripción de los Servicios

" Elaborar un cuaderno de venta o infomemo en el plazo de dos (2) meses a contar desde la presente fecha y distribuirlo a potenciales terceros adquirentes de los Activos y las Participaciones.

" Asesorar a OpCo y a SFS a fin de adoptar la estructura y la estrategia más apropiadas a los efectos de lograr la transmisión de los Activos y las Participaciones a un tercero;

" Intermediar en la búsqueda de un tercero potencial adquirente de los Activos y las Participaciones.

" Proporcionar los análisis de negocios, de mercado y financieros que OpCO y SFS razonablemente estimen necesarios en relación con la potencial transmisión de los Activos y las Participaciones a un tercero.

" Proporcionar un análisis de las consideraciones de valoración de los Activos y las Participaciones.

" Redactar y elaborar cualquier tipo de documentación, cuaderno de venta, memorándum, etc. que OpCo y SFS razonablemente consideren necesarios en relación con la potencial transmisión de los Activos y las Participaciones a un tercero, incluyendo la preparación de presentaciones, informes o comunicaciones para describir los Activos, las Participaciones, el negocio desarrollado a través de los Activos y sus implicaciones, a fin de que los mismos puedan ser enviados a terceros potenciales adquirentes.

" Coordinar el proceso de venta de los Activos y las Participaciones, incluyendo la preparación de *data romos* y el suministro de información a los terceros potenciales adquirentes en el marco de los trabajos previos a la *due diligence* y a la *due diligence* propiamente dicha, las interacciones con los terceros potenciales adquirentes y demás actuaciones sean preceptivas hasta completar la transmisión de los Activos y las Participaciones.

" Asistir a reuniones con OpCo, SFS, sus asesores, accionistas, así como con los terceros potenciales adquirentes de los Activos y de las Participaciones.

" Asistir a OpCo y a SFS en la negociación del acuerdo de compra de los Activos y de las Participaciones.

Exhibit 4.39

CONTRATO DE OTORGAMIENTO DE UN DERECHO DE TANTEO SOBRE CIERTOS ACTIVOS TITULARIDAD DE FERROSOLAR OPCO GROUP, S.L.

celebrado entre

FERROSOLAR OPCO GROUP, S.L.U.

(el "**Concedente**" u "**OpCo**")

Y

AURINKA PHOTOVOLTAIC GROUP, S.L.

(el "**Optante**" o "**Aurinka**")

En Madrid, a 11 de julio de 2019

Índice

CONTRATO DE OTORGAMIENTO DE UN DERECHO DE TANTEO SOBRE CIERTOS ACTIVOS TITULARIDAD DE FERROSOLAR OPCO GROUP, S.L.U.

En Madrid, a 11 de julio de 2019.

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad Ferrosolar OpCo Group, S.L., domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido mediante escritura otorgada ante el notario de Madrid, D. Antonio de la Esperanza Rodríguez, el día 31 de mayo de 2016, bajo el número 2.079 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34796, folio 167, hoja M-625889, y con Código de Identificación Fiscal B-87576567 (en adelante, indistintamente denominada el "**Concedente**" u "**OpCo**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de apoderado, en virtud de poder otorgado a su favor por dicha sociedad, el cual ha sido elevado a público en el día de hoy, mediante escritura otorgada ante el Notario de Madrid, D. Ignacio Manrique Plaza.

Y DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad Aurinka Photovoltaic Group, S.L., domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345, folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 ("**Optante**" o "**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

En adelante, el Concedente y el Optante serán conjuntamente denominados las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes declaran tener capacidad legal suficiente para celebrar este contrato, por lo que

EXPONEN

(A) Que el Concedente es titular de los activos que se detallan en el **Anexo 1** al presente contrato (en adelante, los "**Activos**").

(B) Que, con fecha 20 de diciembre de 2016, Grupo FerroAtlántica, S.A.U., Silicio Ferrosolar, S.L.U., FerroAtlántica, S.A.U., Blue Power Corporation, S.L. y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(C) Que Grupo FerroAtlántica, S.A.U., Silicio Ferrosolar, S.L.U., FerroAtlántica, S.A.U., Blue Power Corporation, S.L. y Aurinka han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(D) Que, como consecuencia de la decisión de resolver y extinguir el JVA, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra el otorgamiento de un derecho de tanteo sobre los Activos a favor del Optante.

(E) Que, asimismo, está previsto que en el día de hoy la sociedad Silicio FerroSolar, S.L.U. ("**SFS**") otorgue a favor del Optante un derecho de tanteo sobre la totalidad de las participaciones sociales de Ferrosolar R&D, S.L. de las que SFS es titular (el "**Derecho de Tanteo sobre las Participaciones de R&DCo**").

(F) Que el Concedente está interesado en otorgar al Optante un derecho de adquisición preferente o de tanteo sobre los elementos que conforman los Activos para el caso de que el Concedente:

a) reciba una oferta firme e irrevocable y por escrito de adquisición de la totalidad de los Activos de un tercero distinto de una sociedad perteneciente a su mismo grupo de sociedades (entendiendo como grupo de sociedades lo dispuesto en el artículo 42 del Código de Comercio (el "**Grupo**")). Dicho tercero, en adelante, será denominado el "**Tercero**"; y

b) se proponga proceder a transmitir los Activos a dicho Tercero,

(en adelante, el "**Derecho de Tanteo**").

(G) Que Grupo FerroAtlántica, S.A.U. ("**Grupo FAT**"), como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial FerroAtlántica, S.A.U.("**FAT**"), con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FAT mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la

tenencia de participaciones, acciones y/o cuotas sociales que confieren la mayoría del capital social en otras sociedades, a favor de FerroAtlántica Participaciones, S.L.U. (la "**Sociedad Beneficiaria**"), recibiendo el accionista único, esto es Grupo FAT, la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la Sociedad Beneficiaria incluye, entre otras, las participaciones sociales de OpCo que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y la Sociedad Beneficiaria quedó efectivamente constituida, a día de hoy es la Sociedad Beneficiaria la titular de todas las participaciones sociales de OpCo trasmitidas en virtud de dicha escisión.

En virtud de lo anterior, las Partes, reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente contrato que regule el otorgamiento del Derecho de Tanteo a favor del Optante (en adelante, el "**Contrato**"), con sujeción a las siguientes

CLÁUSULAS

1 Objeto

En virtud del presente Contrato, el Concedente otorga al Optante el Derecho de Tanteo, que el Optante acepta.

A efectos meramente aclaratorios, se hace constar que el Derecho de Tanteo no será de aplicación en el supuesto de que los Activos, de forma individual o conjunta, vayan a ser transmitidos o se transmitan a una sociedad perteneciente al Grupo del Concedente. Asimismo, en caso de que el Concedente transmita los Activos a una sociedad de su Grupo, la misma deberá subrogarse en la posición contractual del Concedente bajo el presente Contrato con carácter simultáneo a dicha transmisión.

2 Duración

El Derecho de Tanteo estará en vigor desde el día de hoy y hasta el 30 de diciembre de 2020, inclusive.

3 Precio

3.1 Precio del Derecho de Tanteo

El Derecho de Tanteo se otorga con carácter gratuito.

3.2 Precio de transmisión de los Activos en caso de ejercitarse el Derecho de Tanteo y demás condiciones esenciales de la venta

El precio total de adquisición de los Activos y los restantes términos esenciales de la transmisión de los mismos, en caso de ejercitarse el Derecho de Tanteo, serán los que se indiquen en la oferta de adquisición recibida del Tercero.

3.3 Impuestos

El precio establecido en la presente Cláusula no incluye los impuestos indirectos que según la legislación fueren aplicables, que deberán ser abonados por las Partes según establezca la legislación vigente en el momento del ejercicio del Derecho de Tanteo.

4 Ejercicio del Derecho de Tanteo y transmisión de los Activos a favor del Optante

4.1 Ejercicio del Derecho de Tanteo

4.1.1 Supuesto en el que el Concedente reciba de un Tercero una oferta de adquisición de todos los Activos exclusivamente

En caso de que el Concedente reciba de un Tercero una oferta firme, irrevocable y por escrito de adquisición de todos los elementos que conforman los Activos (la "**Oferta**") y el Concedente estuviese dispuesto a aceptarla, el Optante dispondrá del Derecho de Tanteo respecto de los Activos, para lo cual el Concedente se obliga expresamente a comunicar por escrito al Optante su pretensión de transmitir todos los Activos, así como las condiciones de dicha transmisión contenidas en la Oferta, dentro de los diez (10) días naturales siguientes a la recepción de la misma.

Tras dicha comunicación, el Optante dispondrá de un plazo de veinte (20) días naturales para ejercer el Derecho de Tanteo en términos no menos favorables que los comunicados al Optante en la Oferta. Si el Optante no ejercitase el Derecho de Tanteo dentro del plazo señalado anteriormente, se entenderá que renuncia al mismo y, en consecuencia, al Derecho de Tanteo. Para el ejercicio del Derecho de Tanteo, el Optante deberá notificar al Concedente el ejercicio de dicho derecho mediante el envío de una comunicación sustancialmente idéntica al borrador de notificación que se adjunta al presente Contrato como **Anexo 2**, en la forma establecida en la Cláusula 8 siguiente.

4.1.2 Supuesto en el que el Concedente reciba de un Tercero una oferta de adquisición de todos los Activos y SFS reciba del Tercero una oferta de adquisición de las participaciones de Ferrosolar R&D, S.L. de las que sea titular

En este caso, el ejercicio por parte del Optante del Derecho de Tanteo y la consiguiente transmisión a su favor de los Activos quedan condicionados al ejercicio de forma simultánea por parte del Optante del Derecho de Tanteo sobre las Participaciones de R&DCo. En todo lo demás, será de aplicación lo previsto en la Cláusula 4.1.1 anterior y en este Contrato en relación con el ejercicio del Derecho de Tanteo y, en relación con el ejercicio del Derecho de Tanteo sobre las Participaciones de R&DCo, será de aplicación lo previsto en el contrato que regule el otorgamiento de dicho derecho.

4.2 Transmisión de los Activos a favor del Optante

4.2.1 Ejercitado el Derecho de Tanteo y, en caso de ser de aplicación, el Derecho de Tanteo sobre las Participaciones de R&DCo, el Concedente se obliga a comparecer en la notaría de Madrid capital que al efecto designe el Optante, el día y a la hora que indique en la notificación por la que le informe del ejercicio de su derecho (la "**Notificación**"), que no podrá ser anterior a los veinte (20) días naturales siguientes a la fecha en que el Concedente reciba la Notificación, ni posterior a los treinta (30) días naturales siguientes a la fecha de recepción de la Notificación por parte del Concedente, debiendo formalizarse el contrato de compraventa de los Activos y, en su caso, de las participaciones sociales de Ferrosolar R&D, S.L. titularidad de SFS de forma simultánea y ante notario dentro del plazo señalado anteriormente. Los Activos se transmitirán como cuerpo cierto, en el estado en el que se encuentren en el momento de su transmisión al Optante, y el Concedente no dará ningún tipo de garantías en relación con el estado, mantenimiento y funcionamiento de los mismos, a excepción de las garantías relativas a la titularidad de los Activos por parte del Concedente.

4.2.2 Una vez recibida la Notificación por el Concedente, el Optante deberá desmantelar, retirar y trasladar de su ubicación actual todos los Activos, no más tarde de la primera de las siguientes fechas: (i) noventa (90) días naturales a contar desde la fecha de recepción de la Notificación por parte del Concedente; o (ii) el 30 de diciembre de 2020. En caso de que el Concedente recibiera la Notificación entre el 2 de diciembre de 2020 y el 30 de diciembre de 2020, inclusive, el plazo para desmantelar, retirar y trasladar de su ubicación actual todos los Activos sobre los que hubiese ejercitado su Derecho de Tanteo identificados en dicha Notificación será de noventa (90) días naturales a contar desde la fecha de recepción de la referida Notificación por parte del Concedente.

4.2.3 El precio de la transmisión de los Activos deberá abonarse mediante transferencia bancaria en el momento en que los mismos sean transmitidos, sin retención de cantidad alguna por ningún concepto, a salvo de aquéllas que deban practicarse en aplicación de la normativa en vigor.

4.2.4 En caso de que, una vez ejercitado el Derecho de Tanteo por parte del Optante sobre todos los Activos, no se verificase la transmisión de los Activos y/o, en su caso, de las participaciones sociales de Ferrosolar R&D, S.L. titularidad de SFS por cualquier causa no imputable al Optante, el presente Contrato seguirá en vigor hasta el 30 de diciembre de 2020, inclusive.

4.2.5 En caso de que, una vez ejercitado el Derecho de Tanteo por parte del Optante sobre todos los Activos, no se verificase la transmisión de los mismos y/o, en su caso, de las participaciones sociales de Ferrosolar R&D, S.L. titularidad de SFS por cualquier causa imputable al Optante o en caso de que el Optante no abonase el precio de compraventa de los Activos, será de aplicación lo previsto en las Cláusulas 5.1 y 6a) siguientes, sin perjuicio de la responsabilidad en que el Optante

hubiese incurrido y de su obligación de abonar al Concedente los daños y perjuicios que éste hubiese sufrido a consecuencia de ello.

4.2.6 El Optante será responsable del riesgo y ventura de los Activos sobre los que hubiera ejercitado su Derecho de Tanteo desde el momento en que el Concedente reciba la Notificación correspondiente a los mismos, exonerando expresa e íntegramente al Concedente de cualquier obligación de custodia, conservación, mantenimiento y de cualquier responsabilidad derivada de ello en relación con los Activos. Asimismo, en el marco de las actuaciones a llevar a cabo por el Optante o sus contratistas y subcontratistas en relación con el desmantelamiento, desalojo y traslado de los Activos sobre los que hubiera ejercido su Derecho de Tanteo, el Optante será plenamente responsable frente al Concedente de cualquier daño, perjuicio o menoscabo que pudiera causar a la planta de Puertollano, a cualquiera de los elementos integrantes de la misma y/o a cualquiera de los equipos e instalaciones ubicados en dicha planta, debiendo indemnizar al Concedente en el plazo de treinta (30) días a contar desde aquél en que el Concedente le notifique la existencia del daño, perjuicio o menoscabo sufrido.

4.2.7 Cualesquiera costes, gastos, trámites legales o administrativos que deban realizarse a los efectos de modificar la titularidad de los Activos tras la transmisión de los mismos al Optante, incluidos aquéllos en que pueda incurrir el Concedente, serán por cuenta y a cargo del Optante, comprometiéndose el Concedente a colaborar de buena fe con el Optante en la realización de las actuaciones que razonablemente éste le solicite.

5 Condición suspensiva y extinción del Derecho de Tanteo

5.1 Condiciones suspensivas

La validez, efectividad, entrada en vigor y perfeccionamiento de la transmisión de los Activos a favor del Optante queda condicionada de manera expresa al abono efectivo por parte del Optante al Concedente del precio de adquisición de los mismos dentro de los treinta (30) días naturales siguientes a la fecha de recepción de la Notificación por parte del Concedente.

En virtud de lo expuesto en el párrafo anterior, en tanto el precio de adquisición de los Activos no sea íntegramente satisfecho al Concedente, la transmisión de los Activos que corresponda quedará en suspenso, no desplegará sus efectos ni se entenderá, por tanto, perfeccionada la compraventa de los mismos, permaneciendo dichos Activos en propiedad del Concedente.

Si, llegado el 31 de diciembre de 2020, no se hubiese cumplido la condición suspensiva señalada anteriormente, el Derecho de Tanteo quedará extinguido automáticamente y la transmisión de los Activos a favor del Optante no se entenderá perfeccionada, sin necesidad de que ninguna de las Partes realice comunicación alguna a la otra Parte.

5.2 Extinción del Derecho de Tanteo

El Derecho de Tanteo quedará automáticamente extinguido llegado el 31 de diciembre de 2020.

Asimismo, si el Optante no hiciera uso de su Derecho de Tanteo y cualquiera de los elementos que conforman los Activos fuese transmitido a un Tercero, el Derecho de Tanteo quedará automáticamente extinguido.

6 Resolución del Contrato

El Contrato podrá resolverse por las siguientes causas:

a) En relación con alguna de las Partes, cuando medie incumplimiento grave de las obligaciones de dicha Parte, incluido el supuesto previsto en la Cláusula 4.2.5 anterior, sin perjuicio de la facultad de la Parte cumplidora de optar entre exigir el cumplimiento o la resolución del Contrato, con el resarcimiento de daños y abono de intereses en ambos casos. La Parte cumplidora también podrán pedir la resolución, aun después de haber optado por el cumplimiento, cuando éste resulte imposible.

b) Por acuerdo unánime de las Partes por escrito.

7 Confidencialidad

Salvo exigencia legal en contrario, las Partes conservarán en la más estricta confidencialidad la existencia y los términos del presente Contrato y no utilizarán o expondrán su contenido en relación con ninguna otra finalidad distinta de la formalización entre las Partes y ejecución del Derecho de Tanteo.

Lo anteriormente indicado respecto de las Partes no será de aplicación en el supuesto en que concurra alguna de las siguientes circunstancias:

(a) cuando la revelación de la información confidencial venga exigida por ley, por una Administración Pública o una autoridad judicial en el cumplimiento de sus funciones o por la normativa aplicable;

(b) cuando la información sea de carácter notorio o de conocimiento público (por causa distinta a un incumplimiento de lo aquí dispuesto); o

(c) en el supuesto en que alguna de las Partes deba dar a conocer la información confidencial para dar cumplimiento a las obligaciones asumidas en el presente Contrato.

8 Notificaciones

Cualesquiera notificaciones y comunicaciones que deban realizarse las Partes entre sí en relación con el presente Contrato se considerarán debidamente efectuadas si (i) se realizan por escrito; (ii) han sido remitidas por correo certificado con acuse de recibo, *burofax* o cualquier

otro medio escrito que acredite su recepción, siempre que se remitan a las direcciones postales de cada una de las Partes que se indican a continuación:

Para Aurinka Photovoltaic Group, S.L.

A/A:	D. Benjamín Llaneza Caruana
Dirección:	E-mail: Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid
E-mail:	bllaneza@aurinkapv.com

Para Ferrosolar OpCo Group, S.L.

A/A:	D. Pedro Larrea Paguaga
Dirección:	Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid
E-mail:	pedro.larrea@ferroglobe.com

9 Gastos e impuestos

Cada una de las Partes asumirá los gastos en que hubiera incurrido derivados de la suscripción y formalización en escritura pública de este Contrato y los impuestos que sean de aplicación serán sufragados por la Parte que solicite dicha formalización en escritura pública.

10 Miscelánea

10.1 Protección de Datos Personales

Los datos de carácter personal facilitados por las Partes al amparo del Contrato serán incorporados a uno o varios ficheros de datos de carácter personal. Las personas cuyos datos aparezcan en los citados ficheros podrán hacer ejercicio de los derechos de acceso, rectificación, cancelación y oposición mediante solicitud escrita, firmada y dirigida a la otra Parte, a la dirección que este determine en las notificaciones que deban realizarse de acuerdo con lo establecido en el Contrato. Las Partes informarán a las diferentes personas físicas afectadas de la cesión de sus datos de carácter personal en los términos previstos en la Normativa de Protección de Datos Personales, con ocasión del envío de las notificaciones que deban realizar de conformidad con lo estipulado en el presente Contrato.

Una vez que los datos hayan sido obtenidos por alguna de las Partes, la misma será responsable del cumplimiento de las obligaciones legales relativas al tratamiento de dichos datos desde su propia base de datos y de conformidad con la Normativa de Protección de Datos Personales.

10.2 Formalización en documento público

Cualquiera de las Partes podrá solicitar que el presente Contrato se eleve a público ante el Notario que al efecto designe la Parte solicitante. Los gastos e impuestos derivados de la elevación a público del presente Contrato se satisfarán por la Parte solicitante.

10.3 Interpretación y modificación

Este Contrato constituye la totalidad del acuerdo alcanzado entre las Partes respecto del objeto del mismo, reemplazando y dejando sin efecto lo dispuesto en cualesquiera pactos anteriores entre las Partes en relación con la misma materia en tanto que sean contradictorios con lo aquí dispuesto.

Cualquier modificación de este Contrato habrá de realizarse por las Partes de mutuo acuerdo y formalizarse por escrito, cumpliendo, como mínimo, con las mismas formalidades con que se ha dotado a la suscripción del presente Contrato.

10.4 Renuncia

Cualquier renuncia de cualquiera de los derechos o facultades derivados del Contrato por cualquiera de las Partes deberá realizarse por escrito. La omisión por cualquiera de las Partes a exigir el estricto cumplimiento de cualquier término contractual en una o más ocasiones no podrá ser considerada en ningún caso como renuncia, ni privará a esa Parte del derecho a exigir el estricto cumplimiento de la/s obligación/es contractual/es a posteriori.

10.5 Nulidad

La invalidez, ilegalidad o inejecutabilidad total o parcial de cualquiera de las Cláusulas de este Contrato no afectará o impedirá la vigencia y validez de aquella parte de la misma que no sea inválida, ilegal o inejecutable o de las restantes que permanecerán con plena validez y eficacia. No obstante lo anterior, la Cláusula o Cláusulas inválidas o inejecutables serán interpretadas y cumplidas (en la medida posible) de acuerdo con la intención inicial de las Partes.

10.6 Computo de plazos

Salvo cuando expresamente se estableciera lo contrario en este Contrato: (i) los plazos expresados en “días” se refieren a días naturales, contados a partir del día natural inmediatamente siguiente al del inicio del cómputo, inclusive, hasta el último día natural del plazo, inclusive; (ii) los plazos expresados en “días hábiles” se refieren a días hábiles en la ciudad de Madrid. En este sentido, no computarán aquellos días que no fueran hábiles conforme al calendario de Madrid; y, (iii) los plazos expresados en meses o años se contarán de fecha a fecha desde el día de inicio del cómputo hasta el mismo día del último del plazo (ambos incluidos), salvo que en el último mes o año del plazo no existiese tal fecha, en cuyo caso el plazo terminará el día inmediatamente anterior.

11 Cesión

Las Partes acuerdan que ambas podrán ceder libremente su posición contractual, así como la totalidad o parte de sus derechos y/u obligaciones asumidos en virtud del presente Contrato, sin modificación ni excepción de clase alguna, única y exclusivamente a cualquier sociedad que forme parte de su Grupo, mediante notificación a la otra Parte realizada de conformidad con lo establecido en la Cláusula 8.

Las Partes acuerdan que no será necesario un contrato por separado para la formalización de la cesión descrita en el apartado anterior y que la misma no requerirá, para su operatividad, acciones posteriores ni la ejecución de ningún otro documento ni autorización de cualquier clase.

12 Ley aplicable y jurisdicción

12.1 Ley aplicable

El presente Contrato se regirá e interpretará de conformidad con lo dispuesto por la ley española común.

12.2 Jurisdicción

Las Partes se someten expresamente a los Juzgados y Tribunales de la ciudad de Madrid (Capital) para dirimir cualquier litigio que se derive de la interpretación y ejecución de este Contrato.

[*Sigue Hoja de Firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Contrato por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

Aurinka Photovoltaic Group, S.L.

Firmado:	/s/ Benjamín Llaneza Caruana
Nombre:	Benjamín Llaneza Caruana
Título:	Administrador Único

Ferrosolar OpCo Group, S.L.U.

Firmado:	/s/ Clara Cerdán Molina
Nombre:	Clara Cerdán Molina
Título:	General Counsel

Listado de Anexos

Anexo 1:	Listado de Activos
Anexo 2:	Borrador de la notificación comunicando el ejercicio del Derecho de Tanteo

Anexo 1 – Listado de Activos

Dado que ambas partes conjuntamente han gestionado los pedidos y facturas mediante los cuales se han adquirido los equipos de referencia, a fin de facilitar la descripción de todos ellos, se listan los pedidos efectuados y las facturas recibidas a la fecha (las siglas n.a. significan no aplica, al no haberse recibido factura alguna de dicho pedido a la fecha)

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
HORNOS DE INDUCCIÓN	180104	5121
		5201/131813
		5203
		5209
		5215
		5217
	180106	066/18
	180120	18/04/2660
		18/11/2682
		19/05/5991
	180166	F-18-0291
	180171	5172/130592
	180173	282/18
		325/18
		398/18
		001/19
		002/19
		003/19
	180193	5202/131184
		5204
		5210
		5216
		5218
	180213	357/18
	180223	n.a.
	180238	n.a.
	180256	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
HORNOS DE VACÍO	180103	118116
		118311
	180107	3016144137
		3016160054
	180112	3016181582
		3016239932
	180112-1	FZ-8002
		FZ-8103
	180114	1-FA-30.200
	180116	3016181583
	180117	180897
	180121	026/18
	180123	1-FA-30.201
	180124	180030/2
	180125	180925
	180126	A/146879
	180126-1	S2 695132
		S2 694854
	180127	000206/18
	180128	FV2018C10002238
		2018C10002635
		2018C10002956
	180129	3016221485
		3016242024
		3016239933
		3016299753
		3016257000
	180130	61335932
		61337261
	180132	0037/18
	180136	S2 697915
		S2 697938
		S2 697991
	180137	A18092
	180138	25917
	180142	S246
	180143	S2 706212
	180144	FZ-8211
	180145	118312
		118613

180146	046/18
180147	0/2018/1888
180148	181718
180148-1	S2 711044
	S2 711045
180165-1	S331
180168	TP-18-001
	TP-18-002
180172	180850
180176	2019/0085
180177	181632
180178	184214
180180	144665
180183 (OPCO)	S799
180186 (OPCO)	145/18
180188	3019099203
180197	318079
180203	296119634
180206	318106
180208	318107
180210	118636
180212	S2 757693
180213-1	P18156
180215-1	2391
180220	FV0252-18
180222	P18167
180224	n.a.
180226-rev1	135/18
180227	FV0251-18
180230-1	S584
180231	20180453
180231-1	FZ-8754
180236	91FVR18-289
180237	P18189
180239	3016463302
	3016468578
	3016469235
	3016484371
180240 - rev1	19 4
180241	201800059
180242	91FVR18-382
180245	P18215

180246-1	T60
180252	133/18
180253	n.a.
180255	FV-000080899
	FV-000091888
180257	18000216
	18000217
	18000218

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
MACHAQUEO Y MOLIENDA	170198	3/FA/2/2017
		3/FA/1/2017
		3/FA/3/2017
		3/FA/4/2017
	171200	20173022
		20184004
	171201	20183000
	171202	20183023
	180131	201830006
		201830006
		201830006
		20193000
		20193002
	180156	1/SI0010/2018
		1/SI0021/2018
		1/SI0029/2018
	180157	1/SI0011/2018
		1/SI0020/2018
		1/SI0030/2018
		1/SI0034/2018
	180229	n.a.
	180232	20193001
	180232	20193003
	180249	177/2018
	180250	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
SILOS Y COMPOSICIÓN DE CARGA	180102	13/2018
		47/2018
	180108	A/123
	180113	1/SI0013/2018
	180133	65/2018
		105/2018
		126/2018
		129/2018
		01/2019
	180134	66/2018
		106/2018
		127/2018
		130/2018
		02/2019
	180154	A/406
		A/749
	180163	1/SI0005/2018
		1/SI0015/2018
		1/SI0024/2018
	180164	1/SI0004/2018
		1/SI0014/2018
		1/SI0023/2018
		1/SI0032/2018

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
AUTOMATIZACIÓN	180100	1/SI 0001/2018
		1/SI 0002/2018
		1/SI 0003/2018
		1/SI0033/2018
	180158	1/SI0006/2018
		1/SI0019/2018
		1/SI0025/2018
	180159	1/SI0007/2018
		1/SI0018/2018
		1/SI0026/2018
	180160	1/SI0008/2018
		1/SI0022/2018
		1/SI0027/2018
	180161	1/SI0009/2017
		1/SI0017/2018
		1/SI0028/2018
	180162	1/SI0012/2017
		1/SI0016/2018
		1/SI0031/2018
	180233	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
SUMINISTRO ELÉCTRICO	180151	58481083
		58481106
	180182	18000128
		18000138
		18000163
		18000170
		18000175
		18000201
		18000220
		18000252
		18000253
	180191	58481082
		58481107
		58481109
		58481094

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
SISTEMA DE ASPIRACIÓN	180122	18720009
		18720097
		18720147
		18720225
	180169	18720251
	180192	36193
		36412
		36625
	180204	18720252

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
REFRIGERACIÓN	180199	99548827
	180244	F-18-0580
		F-18-0652

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
LIXIVIACIÓN	180115	2018F0010
		2018F0033
	180149	TR18-0090
		TR18-0106
		TR18-0199
	180152	A/404
		A/832
	180153	A/405
	180167	20180228
		20180311
		20180312
	180194	20180339
		20180457
	180234	VFR18-011057
	180253-1	11180005
	180254	n.a.

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
LABORATORIO	180140	218-GC-SVX-65
	180141	D17447
	180150	18/1642
	180174	9100045270
	180175	FV-028594
	180184	n.a.
	180187	10085
	180139/ 190102 (OPCO)	195208048

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
OTROS EQUIPOS	180155	A/357
	180165	CLM0048019F00001
	180170	FA2018169
		FW2018232
		FA2018 278
		FA2019 183
		FA2019 182
		FA2019 128
		FA2019 126
	180179	No hay
	180183	20180285
	180185	2018F0041
		2018F0053
		62
		000069
	180186	24974
		25268
	180195	18000890/1
		18001092/1
	180200	20180351
	180209	F18_11_04a
	180217	n.a.
	180218	n.a.
	180219	F18_09_02
		FA18_10_10
	180221	2018/1-000471
	180235	25177
		25268
	180247	F18_11_18
	180248	F18_11_19

CONCEPTO	NÚMERO DE PEDIDO	REFERENCIA DE FACTURA
EDIFICACIÓN	170199	FV17/0315
		FV17/0357
		FV18/0009
		FV18/0050
		FV18/0227
	170199B	FV18/0010
		FV18/0051
		FV18/0228
	180101	FV18/0052
		FV18/0138
	180101/180110	FV18/0294
	180109	FV18/0113
	180110	FV18/0137
	180111	n.a.
	180118	FV18/0139
		FV18/0173
		FV18/0215
		FV18/0253
		FV18/0289
		FV18/0337
		FV18/0360
		FV18/0400
		FV18/0436
		FV19/0015
	180119	CCR-18/3
	180189	FV18/0240
	180196	4320018A00835
		4320019A00279
	180205	FV18/0313
	180207	FV18/0314
	180211	FV19/0005
	180214	FV18/0315
	180216	1F13III0001
		1F13JAE00001
		1F13JCL00001
	180243	4320019S0127
		4320019S02630
	180246	F-18-0581
		F-18-0653
	180251	FV18/0431

FV18/0435	
FV19/0016	
180258	18000219

Anexo 2 – Borrador de la notificación comunicando el ejercicio del Derecho de Tanteo

[*Razón social del destinatario*]

[*Nombre del representante del destinatario*]

[*Dirección*]

Referencia: Contrato de otorgamiento de Derecho de Tanteo, de fecha [*], suscrito entre Aurinka Photovoltaic Group, S.L. y Ferrosolar OpCo Group, S.LU.. (el "**Acuerdo**") – Comunicación ejercicio del Derecho de Tanteo sobre los Activos

Estimado Sr. [*]

Me dirijo a usted en referencia al Acuerdo.

De acuerdo con los términos de la Cláusula [*] del Acuerdo, por la presente le notifico el ejercicio del Derecho de Tanteo sobre los Activos y le convoco para acudir el día [*] en la notaría de D. [*], sita en [*], a las [*] horas.

Por la presente solicito que Ferrosolar OpCo Group, S.L.U. proceda a adoptar y llevar a cabo cuantas medidas y acciones sean necesarias para cumplir con las reglas de transmisión de los Activos sean de aplicación.

Cualquier término que aparezca en mayúsculas en la presente comunicación y que no esté expresamente definido en la misma tendrá el significado que se le atribuye en el Acuerdo.

Reciba un cordial saludo,

_____

D. [*]

CONTRATO DE OTORGAMIENTO DE UN DERECHO DE TANTEO SOBRE LAS PARTICIPACIONES SOCIALES DE LA SOCIEDAD FERROSOLAR R&D, S.L. TITULARIDAD DE SILICIO FERROSOLAR, S.L.U.

celebrado entre

SILICIO FERROSOLAR, S.L.U.

(el "**Concedente**" o "**SFS**")

Y

AURINKA PHOTOVOLTAIC GROUP, S.L.

(el "**Optante**" o "**Aurinka**")

En Madrid, a 11 de julio de 2019

Índice

CONTRATO DE OTORGAMIENTO DE UN DERECHO DE TANTEO SOBRE LAS PARTICIPACIONES SOCIALES DE LA SOCIEDAD FERROSOLAR R&D, S.L. TITULARIDAD DE SILICIO FERROSOLAR, S.L.U.

En Madrid, a 11 de julio de 2019.

REUNIDOS

DE UNA PARTE

(1) **Dña. Clara Cerdán Molina**, mayor de edad, de nacionalidad española, Abogado, con D.N.I nº 48498082-Y, en vigor, y domicilio a estos efectos en Paseo de la Castellana, nº 259-D- Torre Espacio, planta 49, 28046, Madrid.

Interviene en nombre y representación de la sociedad **Silicio FerroSolar, S.L.U.**, domiciliada en Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid, constituida por tiempo indefinido, mediante escritura otorgada ante el notario de Madrid, D. **Jaime Recarte Casanova**, el día 10 de julio de 2.008, bajo el número 2.369 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 25905 , folio 20 , hoja M- 466968 , y con Código de Identificación Fiscal B-85504884 (en adelante, indistintamente denominada el "**Concedente**" o "**SFS**"). Ostenta dicha representación, que asegura vigente, en virtud de escritura de apoderamiento otorgada ante el Notario de Madrid, D. Jaime Recarte Casanova, el 14 de septiembre de 2016, con número de protocolo 3.700, la cual fue debidamente inscrita en la hoja registral abierta a dicha sociedad en el Registro Mercantil de Madrid al tomo 25905, folio 215, sección 8, hoja M-466968.

Y DE OTRA PARTE

(2) **D. Benjamín Llaneza Caruana**, de nacionalidad española, mayor de edad, casado, con domicilio profesional en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, y con Documento Nacional de Identidad número 50446574-F, en vigor.

Interviene en nombre y representación de la sociedad **Aurinka Photovoltaic Group, S.L.,** domiciliada en Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid, constituida por tiempo indefinido mediante escritura pública otorgada ante el notario de Guadarrama, D. Agustín Diego Isasa, el día 9 de noviembre de 2.010, bajo el número 1.615 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 28.345, folio 156, hoja M-510497, y con Código de Identificación Fiscal B-86070547 (en adelante, indistintamente denominada el "**Optante**" o "**Aurinka**"). Ostenta dicha representación, que asegura vigente, en virtud de su cargo de Administrador Único de la misma, en virtud de escritura de constitución antes mencionada.

En adelante, el Concedente y el Optante serán conjuntamente denominados las "**Partes**" y cada una de ellas individualmente una "**Parte**".

Las Partes declaran tener capacidad legal suficiente para celebrar este contrato, por lo que

EXPONEN

(A) Que el Concedente es titular de 50.000 participaciones sociales de la sociedad **Ferrosolar R&D, S.L.** ("**R&DCo**"), de un euro (1 €) de valor nominal cada una de ellas y numeradas de la 50.001 a la 100.000, ambas inclusive, representativas del 50% del capital social de R&DCo, según el desglose y en virtud de los títulos de propiedad que se indican en el **Anexo 1** del presente contrato (en adelante, las "**Participaciones**"), las cuales son objeto del Derecho de Tanteo (tal y como dicho término se define más adelante).

(B) Que, con fecha 20 de diciembre de 2016, Grupo FerroAtlántica, S.A.U., SFS, FerroAtlántica, S.A.U., Blue Power Corporation, S.L. y Aurinka suscribieron un acuerdo de *Joint Venture*, el cual fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 3.539 de su protocolo, y posteriormente fue novado mediante acuerdo suscrito entre las Partes de fecha 24 de febrero de 2017, que fue elevado a público ese mismo día, ante el notario de Madrid, D. Ignacio Manrique Plaza, con el número 524 de su protocolo (en adelante, el acuerdo de *Joint Venture* según resulta tras la novación del mismo, será denominado el "**JVA**").

(C) Que Grupo FerroAtlántica, S.A.U., SFS, FerroAtlántica, S.A.U., Blue Power Corporation, S.L., Aurinka, Ferrosolar OpCo Group, S.L.U. ("**OpCo**"), R&DCo y FerroAtlántica Participaciones, S.L.U. (la "**Sociedad Beneficiaria**") han suscrito, en el día de hoy, un contrato-marco de transacción, de resolución del JVA y demás acuerdos derivados del mismo y asunción de compromisos complementarios (en adelante, el "**Contrato de Transacción**").

(D) Que, como consecuencia de la decisión de resolver y extinguir el JVA, en virtud de lo dispuesto en la Cláusula 2 del Contrato de Transacción, las Partes llevarán a cabo una serie de actuaciones en unidad de acto, entre las que se encuentra el otorgamiento de un derecho de tanteo sobre las Participaciones a favor del Optante.

(E) Que, asimismo, está previsto que en el día de hoy, OpCo otorgue a favor del Optante un derecho de tanteo sobre ciertos activos de su titularidad ubicados en la planta de Puertollano de los que OpCo es titular (el "**Derecho de Tanteo sobre los Activos**"). Dichos activos son los que se detallan en el contrato que regula el Derecho de Tanteo sobre los Activos (los "**Activos**").

(F) Que el Concedente está interesado en otorgar al Optante un derecho de adquisición preferente o de tanteo sobre la totalidad de las Participaciones para el caso de que el Concedente:

a) reciba una oferta firme, irrevocable y por escrito de adquisición de la totalidad, no de algunas, de las Participaciones por parte de un tercero distinto de una sociedad perteneciente a su mismo grupo de sociedades (entendiendo como grupo de sociedades

lo dispuesto en el artículo 42 del Código de Comercio (el "**Grupo**")). Dicho tercero, en adelante, será denominado el "**Tercero**"; y

b) se proponga proceder a transmitir las Participaciones a dicho Tercero,

(en adelante, el "**Derecho de Tanteo**").

(G) Que Grupo FerroAtlántica, S.A.U., como accionista único, está actualmente llevando a cabo un proceso de reorganización societaria y empresarial en su filial FerroAtlántica, S.A.U., con el objeto de promover y facilitar la gestión separada e independiente de cada una de las ramas de negocio. En este contexto, el pasado 2 de abril de 2019, se firmó ante notario la escisión parcial sin extinción de FerroAtlántica, S.A.U. mediante la transmisión en bloque y por sucesión universal de su rama financiera del negocio, consistente en la tenencia de participaciones, acciones y/o cuotas sociales que confieren la mayoría del capital social en otras sociedades, a favor de la Sociedad Beneficiaria, recibiendo el accionista único, esto es Grupo FerroAtlántica, S.A.U., la totalidad de las participaciones sociales en que se divide el capital social de la Sociedad Beneficiaria. La transmisión en bloque que se traspasa a la Sociedad Beneficiaria incluye, entre otras, las participaciones sociales de OpCo que antes de la ejecución de la escisión financiera eran propiedad de FAT. Por tanto, dado que con fecha 28 de junio de 2019 se inscribió la referida escisión y la Sociedad Beneficiaria quedó efectivamente constituida, a día de hoy es la Sociedad Beneficiaria la titular de todas las participaciones sociales de OpCo trasmitidas en virtud de dicha escisión.

En virtud de lo anterior, las Partes, reconociéndose mutuamente capacidad para ello, acuerdan suscribir el presente contrato (en adelante, el "**Contrato**"), con sujeción a las siguientes

CLÁUSULAS

1. Objeto

En virtud del presente Contrato, el Concedente otorga al Optante el Derecho de Tanteo, que el Optante acepta.

A efectos meramente aclaratorios, se hace constar que el Derecho de Tanteo no será de aplicación en el supuesto de que las Participaciones, de forma individual o conjunta, vayan a ser transmitidas o se transmitan a una sociedad perteneciente al Grupo del Concedente. Asimismo, en caso de que el Concedente transmita las Participaciones a una sociedad de su Grupo, la sociedad adquirente deberá subrogarse en la posición contractual del Concedente bajo el presente Contrato con carácter simultáneo a dicha transmisión.

2. Duración

El Derecho de Tanteo estará en vigor desde el día de hoy y hasta el 30 de diciembre de 2020, inclusive.

3. Precio

3.1 Precio del Derecho de Tanteo

El Derecho de Tanteo se otorga con carácter gratuito.

3.2 Precio de transmisión de las Participaciones en caso de ejercitarse el Derecho de Tanteo y demás condiciones esenciales de la venta

El precio total de adquisición de las Participaciones y los restantes términos esenciales de la transmisión de las mismas, en caso de ejercitarse el Derecho de Tanteo, serán los que se indiquen en la oferta de adquisición recibida del Tercero.

3.3 Impuestos

El precio establecido en la presente Cláusula no incluye los impuestos indirectos que según la legislación fueren aplicables, que deberán ser abonados por las Partes según establezca la legislación vigente en el momento del ejercicio del Derecho de Tanteo.

4 Ejercicio del Derecho de Tanteo y transmisión de las Participaciones a favor del Optante

4.1 Ejercicio del Derecho de Tanteo

4.1.1 Supuesto en el que el Concedente reciba de un Tercero una oferta de adquisición de las Participaciones

En caso de que el Concedente reciba de un Tercero una oferta firme, irrevocable y por escrito de adquisición de las Participaciones (la "**Oferta**") y el Concedente estuviese dispuesto a aceptarla, el Optante dispondrá del Derecho de Tanteo respecto de la totalidad de las Participaciones, para lo cual el Concedente se obliga expresamente a comunicar por escrito al Optante su pretensión de transmitir las Participaciones, así como las condiciones de dicha transmisión contenidas en la Oferta, dentro de los diez (10) días naturales siguientes a la recepción de la misma.

Tras dicha comunicación, el Optante dispondrá de un plazo de veinte (20) días naturales para ejercer el Derecho de Tanteo en términos no menos favorables que los comunicados al Optante en la Oferta. Si el Optante no ejercitase el Derecho de Tanteo dentro del plazo señalado anteriormente, se entenderá que renuncia al mismo. Para el ejercicio del Derecho de Tanteo, el Optante deberá notificar al Concedente el ejercicio de dicho derecho mediante el envío de una comunicación sustancialmente idéntica al borrador de notificación que se adjunta al presente Contrato como **Anexo 2**, en la forma establecida en la Cláusula 8 siguiente.

4.1.2 Supuesto en el que el Concedente reciba de un Tercero una oferta de adquisición de las Participaciones y OpCo reciba del Tercero una oferta de adquisición de todos los Activos

En este caso, el ejercicio por parte del Optante del Derecho de Tanteo, y la consiguiente transmisión a su favor de las Participaciones, quedan condicionados al

ejercicio de forma simultánea por parte del Optante del Derecho de Tanteo sobre la totalidad de los Activos. En todo lo demás, será de aplicación lo previsto en la Cláusula 5.1.1 anterior y en este Contrato en relación con el ejercicio del Derecho de Tanteo y, en relación con el ejercicio del Derecho de Tanteo sobre los Activos, será de aplicación lo previsto en el contrato que regule el otorgamiento de dicho derecho.

4.1.3 Obligaciones adicionales en relación con el ejercicio del Derecho de Tanteo

En caso de que la Oferta incluyese (i) el repago o la adquisición de los préstamos concedidos a R&DCo por SFS o por cualquiera de las sociedades pertenecientes a su Grupo; (ii) el abono de cualesquiera derechos de créditos tuvieran dichas sociedades frente a R&DCo; y/o (iii) la subrogación en la posición contractual del prestamista bajo dichos préstamos, será requisito indispensable para el ejercicio del Derecho de Tanteo que el Optante asuma dichas obligaciones en los mismos términos que aquéllos contenidos en la Oferta,

4.2 Transmisión de las Participaciones a favor del Optante

4.2.1 Ejercitado el Derecho de Tanteo y, en caso de ser de aplicación, el Derecho de Tanteo sobre los Activos, el Concedente se obliga a comparecer en la notaría de Madrid capital que al efecto designe el Optante, el día y a la hora que indique en la notificación por la que le informe del ejercicio de su derecho (la "**Notificación**"), que no podrá ser anterior a los veinte (20) días naturales siguientes a la fecha en que el Concedente reciba la Notificación, ni posterior a los treinta (30) días naturales siguientes a la fecha de recepción de la Notificación por parte del Concedente, debiendo formalizarse el contrato de compraventa de las Participaciones y, en su caso, de los Activos de forma simultánea y ante notario dentro del plazo señalado anteriormente. Las Participaciones se transmitirán en pleno dominio, con cuanto les sea inherente y accesorio, libres de toda carga, afección, gravamen, opción, restricción, limitación o derecho en favor de persona alguna, y con todos los derechos económicos y políticos inherentes a las mismas y el Concedente no dará ningún tipo de garantías en relación con las mismas, a excepción de o dispuesto anteriormente y de las relativas a la capacidad.

4.2.2 El precio de la transmisión de las Participaciones deberá abonarse mediante transferencia bancaria en el momento en que las mismas sean transmitidas, sin retención de cantidad alguna por ningún concepto, a salvo de aquéllas que deban practicarse en aplicación de la normativa en vigor.

4.2.3 En caso de que, una vez ejercitado el Derecho de Tanteo por parte del Optante, no se verificase la transmisión de las Participaciones y/o, en su caso, de los Activos por cualquier causa no imputable al Optante, el presente Contrato seguirá en vigor hasta el 30 de diciembre de 2020, inclusive.

4.2.4 En caso de que, una vez ejercitado el Derecho de Tanteo por parte del Optante sobre las Participaciones, no se verificase la transmisión de Participaciones y/o, en su

caso, de los Activos por cualquier causa imputable al Optante o éste no abonase el precio de compraventa de los mismos, será de aplicación lo previsto en las Cláusulas 5.1 y 6a) siguientes, sin perjuicio de la responsabilidad en que el Optante hubiese incurrido y de su obligación de abonar al Concedente los daños y perjuicios que éste hubiese sufrido a consecuencia de ello.

5 Condición suspensiva y extinción del Derecho de Tanteo

5.1 Condiciones suspensivas

La validez, efectividad, entrada en vigor y perfeccionamiento de la transmisión de las Participaciones a favor del Optante queda condicionada de manera expresa al abono efectivo por parte del Optante al Concedente del precio de adquisición de las mismas y, en su caso, al cumplimiento de lo previsto en la Cláusula 4.1.3 anterior, dentro de los treinta (30) días naturales siguientes a la fecha de recepción de la Notificación por parte del Concedente.

En virtud de lo expuesto en el párrafo anterior, en tanto el precio de adquisición de las Participaciones no sea íntegramente satisfecho al Concedente y las obligaciones previstas en la Cláusula 4.1.3 anterior no estén íntegramente cumplidas, la transmisión de las mismas quedará en suspenso, no desplegará sus efectos ni se entenderá, por tanto, perfeccionada la compraventa de las mismas, permaneciendo dichas Participaciones en propiedad del Concedente.

Si, una vez transcurridos treinta (30) días naturales a contar desde la fecha de recepción de la Notificación por parte del Concedente, no se hubiese cumplido la condición suspensiva señalada anteriormente, el Derecho de Tanteo quedará extinguido automáticamente y la transmisión de las Participaciones a favor del Optante no se entenderá perfeccionada, sin necesidad de que ninguna de las Partes realice comunicación alguna a la otra Parte.

5.2 Extinción del Derecho de Tanteo

El Derecho de Tanteo quedará automáticamente extinguido en caso de que transcurran treinta (30) días naturales a contar desde la fecha de recepción de la Notificación por parte del Concedente, sin que se haya cumplido la condición suspensiva señalada en la Cláusula 5.1 anterior.

Asimismo, el Derecho de Tanteo quedará automáticamente extinguido el 31 de diciembre de 2020.

6 Resolución del Contrato

El Contrato podrá resolverse por las siguientes causas:

a) En relación con alguna de las Partes, cuando medie incumplimiento grave de las obligaciones de dicha Parte, incluido el supuesto previsto en la Cláusula 4.2.4 anterior, sin perjuicio de la facultad de la Parte cumplidora de optar entre exigir el cumplimiento o la resolución del Contrato, con el resarcimiento de daños y abono

de intereses en ambos casos. La Parte cumplidora también podrán pedir la resolución, aun después de haber optado por el cumplimiento, cuando éste resulte imposible.

b) Por acuerdo unánime de las Partes por escrito.

7 Confidencialidad

Salvo exigencia legal en contrario, las Partes conservarán en la más estricta confidencialidad la existencia y los términos del presente Contrato y no utilizarán o expondrán su contenido en relación con ninguna otra finalidad distinta de la formalización entre las Partes y ejecución del Derecho de Tanteo.

Lo anteriormente indicado respecto de las Partes no será de aplicación en el supuesto en que concurra alguna de las siguientes circunstancias:

(a) cuando la revelación de la información confidencial venga exigida por ley, por una Administración Pública o una autoridad judicial en el cumplimiento de sus funciones o por la normativa aplicable;

(b) cuando la información sea de carácter notorio o de conocimiento público (por causa distinta a un incumplimiento de lo aquí dispuesto); o

(c) en el supuesto en que alguna de las Partes deba dar a conocer la información confidencial para dar cumplimiento a las obligaciones asumidas en el presente Contrato.

8 Notificaciones

Cualesquiera notificaciones y comunicaciones que deban realizarse las Partes entre sí en relación con el presente Contrato se considerarán debidamente efectuadas si (i) se realizan por escrito; (ii) han sido remitidas por correo certificado con acuse de recibo, *burofax* o cualquier otro medio escrito que acredite su recepción, siempre que se remitan a las direcciones postales de cada una de las Partes que se indican a continuación:

Para Aurinka Photovoltaic Group, S.L.
A/A: D. Benjamín Llaneza Caruana
Dirección: E-mail: Calle Marie Curie, 19, Edificio Autocampo II, oficina 2-2, 28521 – Rivas Vaciamadrid, Madrid
E-mail: bllaneza@aurinkapv.com

Para Silicio Ferrosolar, S.L.U.
A/A: D. Pedro Larrea Paguaga
Dirección: Torre Espacio, Paseo de la Castellana, 259-D, Planta 49, 28046 - Madrid
E-mail: pedro.larrea@ferroglobe.com

9 Gastos e impuestos

Cada una de las Partes asumirá los gastos en que hubiera incurrido derivados de la suscripción y formalización en escritura pública de este Contrato y los impuestos que sean de aplicación serán sufragados por la Parte que solicite dicha formalización en escritura pública.

10 Miscelánea

10.1 Protección de Datos Personales

Los datos de carácter personal facilitados por las Partes al amparo del Contrato serán incorporados a uno o varios ficheros de datos de carácter personal. Las personas cuyos datos aparezcan en los citados ficheros podrán hacer ejercicio de los derechos de acceso, rectificación, cancelación y oposición mediante solicitud escrita, firmada y dirigida a la otra parte, a la dirección que este determine en las notificaciones que deban realizarse de acuerdo con lo establecido en el Contrato. Las Partes informarán a las diferentes personas físicas afectadas de la cesión de sus datos de carácter personal en los términos previstos en la Normativa de Protección de Datos Personales, con ocasión del envío de las notificaciones que deban realizar de conformidad con lo estipulado en el presente Contrato.

Una vez que los datos hayan sido obtenidos por alguna de las Partes, la misma será responsable del cumplimiento de las obligaciones legales relativas al tratamiento de dichos datos desde su propia base de datos y de conformidad con la Normativa de Protección de Datos Personales.

10.2 Formalización en documento público

Cualquiera de las Partes podrá solicitar que el presente Contrato se eleve a público ante el Notario que al efecto designe la Parte solicitante. Los gastos e impuestos derivados de la elevación a público del presente Contrato se satisfarán por la Parte solicitante.

10.3 Interpretación y modificación

Este Contrato constituye la totalidad del acuerdo alcanzado entre las Partes respecto del objeto del mismo, reemplazando y dejando sin efecto lo dispuesto en cualesquiera pactos anteriores entre las Partes en relación con la misma materia en tanto que sean contradictorios con lo aquí dispuesto.

Cualquier modificación de este Contrato habrá de realizarse por las Partes de mutuo acuerdo y formalizarse por escrito, cumpliendo, como mínimo, con las mismas formalidades con que se ha dotado a la suscripción del presente Contrato.

10.4 Renuncia

Cualquier renuncia de cualquiera de los derechos o facultades derivados del Contrato por cualquiera de las Partes deberá realizarse por escrito. La omisión por cualquiera de las Partes a exigir el estricto cumplimiento de cualquier término contractual en una o más ocasiones no podrá ser considerada en ningún caso como renuncia, ni privará a esa Parte del derecho a exigir el estricto cumplimiento de la/s obligación/es contractual/es a posteriori.

10.5 Nulidad

La invalidez, ilegalidad o inejecutabilidad total o parcial de cualquiera de las Cláusulas de este Contrato no afectará o impedirá la vigencia y validez de aquella parte de la misma que no sea inválida, ilegal o inejecutable o de las restantes que permanecerán con plena validez y eficacia. No obstante lo anterior, la Cláusula o Cláusulas inválidas o inejecutables serán interpretadas y cumplidas (en la medida posible) de acuerdo con la intención inicial de las Partes .

10.6 Computo de plazos

Salvo cuando expresamente se estableciera lo contrario en este Contrato: (i) los plazos expresados en “días” se refieren a días naturales, contados a partir del día natural inmediatamente siguiente al del inicio del cómputo, inclusive, hasta el último día natural del plazo, inclusive; (ii) los plazos expresados en “días hábiles” se refieren a días hábiles en la ciudad de Madrid. En este sentido, no computarán aquellos días que no fueran hábiles conforme al calendario de Madrid; y, (iii) los plazos expresados en meses o años se contarán de fecha a fecha desde el día de inicio del cómputo hasta el mismo día del último del plazo (ambos incluidos), salvo que en el último mes o año del plazo no existiese tal fecha, en cuyo caso el plazo terminará el día inmediatamente anterior.

11 Cesión

Las Partes podrán ceder libremente su posición contractual, así como la totalidad o parte de sus derechos y/u obligaciones asumidos en virtud del presente Contrato, sin modificación ni excepción de clase alguna, única y exclusivamente a cualquier sociedad que forme parte de su Grupo, mediante notificación a la otra Parte realizada de conformidad con lo establecido en la Cláusula 8.

Las Partes acuerdan que no será necesario un contrato por separado para la formalización de la cesión descrita en el apartado anterior y que la misma no requerirá, para su operatividad, acciones posteriores ni la ejecución de ningún otro documento ni autorización de cualquier clase.

12 Ley aplicable y jurisdicción

12.1 Ley aplicable

El presente Contrato se regirá e interpretará de conformidad con lo dispuesto por la ley española común.

12.2 Jurisdicción

Las Partes se someten expresamente a los Juzgados y Tribunales de la ciudad de Madrid (Capital) para dirimir cualquier litigio que se derive de la interpretación y ejecución de este Contrato.

[*Sigue Hoja de Firmas*]

Y PARA QUE CONSTE Y EN PRUEBA DE CONFORMIDAD, las Partes firman este Contrato por duplicado, a un solo efecto, en el lugar y en la fecha indicados en el encabezamiento, visando cada página.

Aurinka Photovoltaic Group, S.L.	**Silicio Ferrosolar, S.L.U.**
Firmado: /s/ Benjamín Llaneza Caruana	Firmado: /s/ Clara Cerdán Molina
Nombre: Benjamín Llaneza Caruana	Nombre: Clara Cerdán Molina
Titulo: Administrador Único	Titulo: General Counsel

Listado de Anexos

Anexo 1: Identificación de las Participaciones y títulos de propiedad

Anexo 2: Borrador de la notificación comunicando el ejercicio del Derecho de Tanteo

Anexo 1 – Identificación de las Participaciones y títulos de propiedad

Número de Participaciones	Títulos de propiedad
50.000 participaciones sociales, de un euro de valor nominal cada una de ellas, numeradas de la 50.001 a la 100.000, ambas inclusive.	Escritura de aumento de capital social de R&DCo, otorgada ante el notario de Madrid, D. Ignacio Manrique Plaza, el día 24 de febrero de 2017, bajo el número 526 de orden de su protocolo, inscrita en el Registro Mercantil de Madrid al tomo 34.796, folio 185, hoja M-625891, inscripción 6.

Anexo 2 – Borrador de la notificación comunicando el ejercicio del Derecho de Tanteo

[*Razón social del destinatario*]

[*Nombre del representante del destinatario*]

[*Dirección*]

Referencia: Contrato de otorgamiento de Derecho de Tanteo, de fecha [*], suscrito entre Aurinka Photovoltaic Group, S.L. y Silicio Ferrosolar, S.LU.. (el "**Acuerdo**") – Comunicación ejercicio del Derecho de Tanteo sobre las Participaciones

Estimado Sr. [*]

Me dirijo a usted en referencia al Acuerdo.

De acuerdo con los términos de la Cláusula [*] del Acuerdo, por la presente le notifico el ejercicio del Derecho de Tanteo sobre las Participaciones y le convoco para acudir el día [*] en la notaría de D. [*], sita en [*], a las [*] horas.

Por la presente solicito que Silicio Ferrosolar, S.L.U. proceda a adoptar y llevar a cabo cuantas medidas y acciones sean necesarias para cumplir con las reglas de transmisión de Participaciones sean de aplicación.

Cualquier término que aparezca en mayúsculas en la presente comunicación y que no esté expresamente definido en la misma tendrá el significado que se le atribuye en el Acuerdo.

Reciba un cordial saludo,

_____

D. [*]

Exhibit 8.1

SUBSIDARIES OF THE REGISTRANT*

Name	Registered
Alabama Sand and Gravel, Inc.	United States
Alden Resources, LLC	United States
Alden Sales Corporation, LLC	United States
ARL Resources, LLC	United States
Core Metals Group Holdings, LLC	United States
Core Metals Group, LLC	United States
Gatliff Services, LLC	United States
GBG Holdings, LLC	United States
Globe Metallurgical Inc.	United States
Globe Metals Enterprises, Inc.	United States
GSM Alloys I, Inc.	United States
GSM Alloys II, Inc.	United States
GSM Enterprises Holdings, Inc.	United States
GSM Enterprises, LLC	United States
GSM Sales, Inc.	United States
LF Resources, Inc.	United States
Metallurgical Process Materials, LLC	United States
Norchem, Inc.	United States
QSIP Canada ULC	Canada
Quebec Silicon General Partner	Canada
Quebec Silicon Limited Partnership	Canada
Tennessee Alloys Company, LLC	United States
West Virginia Alloys, Inc.	United States
WVA Manufacturing, LLC	United States
Cuarzos Industriales, S.A.U.	Spain
Ferroatlántica del Cinca, S.L.	Spain
Ferroatlántica de Sabón, S.L.U.	Spain
Ferroatlántica de Boo, S.L.U.	Spain
Ferroglobe Mangan Norge AS	Norway
Ferroglobe Manganese France SAS	France
FerroPem, S.A.S.	France
Ferrous Receivables DAC.	Ireland
Grupo FerroAtlántica, S.A.U	Spain
Kintuck (France) SAS	France
Kintuck AS	Norway
Rocas, Arcillas y Minerales, S.A.	Spain
Rebone Mining (Pty.), Ltd.	South Africa
Silicon Smelters (Pty.), Ltd.	South Africa
Silicon Technology (Pty.), Ltd.	South Africa
Thaba Chueu Mining (Pty.), Ltd.	South Africa
Samquarz Proprietary Limited	South Africa
Actifs Solaires Bécancour, Inc	Canada
Cuarzos Indus. de Venezuela (Cuarzoven), S.A.	Venezuela
Emix, S.A.S.	France
ECPI, Inc.	United States
FerroAtlántica Canada Company Ltd	Canada
Ferroatlántica de México, S.A. de C.V.	Mexico
Ferroatlántica de Venezuela (FerroVen), S.A.	Venezuela
Ferroatlántica Deutschland, GmbH	Germany
Ferroatlántica do Brasil Mineraçao Ltda.	Brazil
Ferroatlántica I+D, S.L.U.	Spain
Ferroatlántica Participaciones, S.L.U.	Spain
FerroAtlántica International Ltd	United Kingdom
Ferroatlántica y Cía., F. de Ferroaleac. y Metales, S.C.	Spain
Ferroatlántica, S.A.U.	Spain
Ferroglobe Services (UK) PLC	United Kingdom
FerroManganese Mauritania SARL	Mauritania
Ferroquartz Company Inc.	Canada
Ferroquartz Holdings, Ltd (Hong Kong)	Hong Kong
FerroQuartz Mauritania SARL	Mauritania
Ferrosolar OPCO Group SL.	Spain
Ferrosolar R&D SL.	Spain
FerroTambao, SARL	Burkina Faso
Globe Metales S.R.L.	Argentina
Globe Metallurgical Carbon, LLC	United States
Globe Specialty Metals, Inc.	United States
Grupo FerroAtlántica de Servicios, S.L.U.	Spain
GSM Netherlands, BV	Netherlands
Laurel Ford Resources, Inc.	United States
MST Financial Holdings, LLC	United States
MST Financial, LLC	United States
MST Resources, LLC	United States
Ningxia Yonvey Coal Industrial Co., Ltd.	China
Photosil Industries, SAS	France
Silicio Ferrosolar, SLU	Spain
Solsil, Inc.	United States
Ultracore Energy SA	Argentina

* The names of other subsidiaries that would not constitute a significant subsidiary in the aggregate have been omitted.

Exhibit 12.1

CERTIFICATION

I, Marco Levi, certify that:

1. I have reviewed this annual report on Form 20-F of Ferroglobe PLC;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in U.S. Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in U.S. Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: May 29, 2020

By: /s/ Marco Levi
Chief Executive Officer (Principal Executive Officer)

Exhibit 12.2

CERTIFICATION

I, Beatriz García-Cos, certify that:

1. I have reviewed this annual report on Form 20-F of Ferroglobe PLC;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in U.S. Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in U.S. Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: May 29, 2020

By: /s/ Beatriz García-Cos
Chief Financial Officer and Principal Accounting Officer (Principal Financial Officer)

Exhibit 13.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Ferroglobe PLC (the "Company") on Form 20-F for the period ended December 31, 2019, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 29, 2020

By: /s/ Marco Levi
Chief Executive Officer (Principal Executive Officer)

By: /s/ Beatriz García-Cos
Chief Financial Officer and Principal Accounting Officer (Principal Financial Officer)

This certification is being furnished to the U.S. Securities and Exchange Commission with this Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by such Act, be deemed filed by the Company for purposes of Section 18 of the U.S. Securities Exchange Act of 1934, or otherwise subject to the liability of that section.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Ferroglobe and will be retained by Ferroglobe and furnished to the U.S. Securities and Exchange Commission or its staff upon request.

Exhibit 15.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-208911 on Form S-8 of our reports relating to the financial statements of Ferroglobe PLC and the effectiveness of Ferroglobe PLC's internal control over financial reporting dated May 29, 2020, appearing in the Annual Report on Form 20-F of Ferroglobe PLC for the year ended December 31, 2019.

/s/ Deloitte, S.L.

Madrid, Spain
May 29, 2020

Exhibit 16.1

Mine Safety and Health Administration Safety Data

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act") was enacted. Section 1503 of the Act contains new reporting requirements regarding coal or other mine safety.

We are committed to providing a safe workplace for all of our employees. We continue to engage proactively with federal and state agencies in support of measures which can legitimately improve the safety and well-being of our employees.

The operation of our mines located in the United States is subject to regulation by the Federal Mine Safety and Health Administration (MSHA) under the Federal Mine Safety and Health Act of 1977 (the "Mine Act"). MSHA inspects our mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. We present information below regarding certain mining safety and health violations, orders and citations issued by MSHA, as well as related assessments and legal actions with respect to our mining operations. In evaluating this information, consideration should be given to factors such as the following: (i) the number of violations, citations and orders will vary depending on the size of the mine, (ii) the number of citations and orders issued will vary from inspector to inspector and mine to mine, and (iii) violations, citations and orders can be contested and appealed, and in that process, may be reduced in severity and amount, and are sometimes dismissed.

The table below includes references to specific sections of the Mine Act. We are providing the information in the table by mining complex because that is how we manage and operate our business. The information in the table reflects violations, citations and orders issued to us by MSHA and related assessments and legal actions during the year ended December 31, 2019, as reflected in our records. Due to timing and other factors, the data in our system may not agree with the data maintained by MSHA.

For each mine, of which we or one of our Subsidiaries is an operator (number of occurrences, except for proposed assessment U.S. Dollar values).

Mine of Operating Name/MSHA Identification Number	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessments Proposed ($)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (yes/no)	Received Notice of Potential to Have Pattern Under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#) (A)	Legal Actions Initiated During the Period (#)	Legal Actions Resolved During Period (#)
Alden Resources - Maple Creek North - 1519788	-	-	-	-	-	-	-	No	No	-	-	-
Alden Resources Maple Creek Springtown - 1519814	-	-	-	-	-	121	-	No	No	-	1.00	1.00
Alden Resources - Imperial Hollow - 1519818	-	-	-	-	-	2,408	-	No	No	-	17.00	17.00
Alden Resources - King Mountain- 1519854	-	-	-	-	-	484	-	No	No	-	4.00	4.00
Alden Resources - Bryants Store - 1519864	-	-	-	-	-	-	-	No	No	-	-	-
Alden Resources - Mine #3 Bain Branch- 1517691	-	-	-	-	-	654	-	No	No	-	3.00	3.00
Alden Resources - Gatliff Plant - 1509938	6	-	-	-	-	4,620	-	No	No	8.00	30.00	22.00
Alden Resources - Harps Creek - 1518466	-	-	-	-	-	1,829	-	No	No	-	15.00	17.00
Alden Resources Mine #5 Log Cabin - 1518426	15	-	-	-	-	12,593	-	No	No	8.00	67.00	59.00
ARL Resources - Emlyn Tipple - 1508019	-	-	-	-	-	-	-	No	No	-	-	-

(A) The pending legal actions are all contests of citations and orders, which typically are filed prior to an operator's receipt of a proposed penalty assessment from MSHA or relate to orders for which penalties are not assessed (such as imminent danger orders under Section 107 of the Mine Act). This category includes:

- contests of citations or orders issued under section 104 of the Mine Act,

- contests of imminent danger withdrawal orders under section 107 of the Mine Act, and
- emergency response plan dispute proceedings (as required under the Mine Improvement and New Emergency Response Act of 2006, Pub. L. No. 109-236, 120 Stat. 493).