

SunEdison Semiconductor Ltd
Form 424B4
June 24, 2015
Table of Contents

**Filed Pursuant to Rule 424(b)(4)
Registration No. 333-204596**

The information in this preliminary prospectus supplement and the accompanying prospectus is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JUNE 24, 2015

PRELIMINARY PROSPECTUS SUPPLEMENT

15,935,828 Shares

SunEdison Semiconductor Limited

Ordinary Shares

The selling shareholders named in this prospectus supplement are offering 15,935,828 ordinary shares of SunEdison Semiconductor Limited. We will not receive any of the proceeds from the sale of our ordinary shares by the selling shareholders.

Our ordinary shares are traded on the NASDAQ Global Select Market under the symbol SEMI. On June 23, 2015, the last reported sale price of our ordinary shares was \$21.03 per share.

Investing in our ordinary shares involves risks that are described in the Risk Factors section beginning on page S-12 of this prospectus supplement.

We are an emerging growth company as defined in Section 2(a) of the Securities Act of 1933, as amended, and are subject to reduced public company reporting requirements. See Risk Factors Risks Related to this Offering and Ownership of Our Ordinary Shares We are an emerging growth company and may elect to comply with reduced public company reporting requirements, which could make our ordinary shares less attractive to investors.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts (1)	\$	\$
Proceeds, before expenses, to selling shareholders	\$	\$

(1) We refer you to Underwriting beginning on page S-27 of this prospectus supplement for additional information regarding underwriting compensation.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about _____, 2015.

Deutsche Bank Securities

Barclays

BBVA KeyBanc Capital Markets

Credit Suisse

Macquarie Capital RBC Capital Markets

Goldman, Sachs & Co.

Morgan Stanley

Wells Fargo Securities

The date of this prospectus supplement is _____, 2015.

Table of Contents

Table of Contents

TABLE OF CONTENTS

Prospectus Supplement

<u>ABOUT THIS PROSPECTUS SUPPLEMENT</u>	S-ii
<u>SUMMARY</u>	S-1
<u>SUMMARY HISTORICAL FINANCIAL DATA</u>	S-7
<u>RISK FACTORS</u>	S-12
<u>CAUTIONARY STATEMENT CONCERNING FORWARD LOOKING STATEMENTS</u>	S-16
<u>INDUSTRY AND MARKET DATA</u>	S-17
<u>USE OF PROCEEDS</u>	S-18
<u>PRICE RANGE OF ORDINARY SHARES</u>	S-18
<u>DIVIDEND POLICY</u>	S-18
<u>SELLING SHAREHOLDERS</u>	S-19
<u>MATERIAL TAX CONSIDERATIONS</u>	S-20
<u>UNDERWRITING</u>	S-27
<u>LEGAL MATTERS</u>	S-33
<u>EXPERTS</u>	S-33
<u>WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE</u>	S-33
Prospectus	

<u>ABOUT THIS PROSPECTUS</u>	1
<u>CAUTIONARY STATEMENT CONCERNING FORWARD LOOKING STATEMENTS</u>	2
<u>THE COMPANY</u>	3
<u>RISK FACTORS</u>	6
<u>ENFORCEMENT OF CIVIL LIABILITIES UNDER UNITED STATES FEDERAL SECURITIES LAWS</u>	6
<u>SELLING SHAREHOLDERS</u>	7
<u>DESCRIPTION OF CERTAIN INDEBTEDNESS</u>	18
<u>DESCRIPTION OF SHARE CAPITAL</u>	20
<u>COMPARISON OF SHAREHOLDER RIGHTS</u>	27
<u>PLAN OF DISTRIBUTION</u>	39
<u>LEGAL MATTERS</u>	40

EXPERTS

40

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

40

S-i

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document consists of two parts. The first part is this prospectus supplement, which describes the terms of this offering of ordinary shares and the selling shareholders and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated June 23, 2015, including the documents incorporated by reference therein, provides more general information, including information regarding our ordinary shares and the selling shareholders. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date (for example, a document incorporated by reference in this prospectus supplement or in the accompanying prospectus) the statement in the document having the later date modifies or supersedes the earlier statement.

Neither we, the underwriters, nor the selling shareholders have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We, the underwriters, and the selling shareholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement and the accompanying prospectus is accurate as of the date on its respective cover, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates.

As used in this prospectus supplement, unless the context otherwise indicates, the reference to our business, we, our, us, the Company or similar terms refer to the semiconductor materials business as operated as a business segment of SunEdison, Inc., or SunEdison, for periods prior to our initial public offering, or IPO, and related separation of our business from SunEdison, or the Separation, completed on May 28, 2014, and to SunEdison Semiconductor Limited, together with, where appropriate, its consolidated subsidiaries, or SSL, for periods after the completion of our IPO and the Separation. References in this prospectus to S\$ refer to Singapore dollars.

The name and mark, SunEdison, Inc., and other trademarks, trade names and service marks of SunEdison, Inc. appearing in this prospectus supplement are the property of SunEdison, Inc. SunEdison Semiconductor Limited and other trademarks, trade names and service marks of SunEdison Semiconductor Limited appearing in this prospectus supplement are the property of SunEdison Semiconductor Limited. This prospectus supplement also contains additional trade names, trademarks and service marks belonging to SunEdison, Inc. and to other companies. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

For investors outside the United States: Neither we nor any of the underwriters have taken any action that would permit this offering or possession or distribution of this prospectus supplement in any jurisdiction where action for that purpose is required, other than in the United States. Persons who have come into possession of this prospectus supplement in a jurisdiction outside the United States are required to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus supplement.

Table of Contents

SUMMARY

This summary highlights important features of this offering and the information included or incorporated by reference in this prospectus supplement. This summary does not contain all of the information that you should consider before investing in our ordinary shares. You should read carefully the entire prospectus supplement, the accompanying prospectus and the documents incorporated by reference, especially the risks of investing in our ordinary shares discussed under Risk Factors. You should also carefully read the information incorporated by reference in this prospectus supplement, including our financial statements and the exhibits to the registration statement of which this prospectus supplement is a part.

Business and Industry Overview

We are a global leader in the development, manufacture and sale of silicon wafers to the semiconductor industry. Wafers are used as the base substrate for nearly all semiconductor devices, which in turn provide the foundation for the entire electronics industry. Our business was established in 1959 and was known during most of our history as MEMC Electronic Materials, Inc., or MEMC. We became a stand-alone public company upon the completion of our IPO on May 28, 2014. We have developed a broad product portfolio, an extensive global manufacturing footprint, process technology expertise and supply chain flexibility, while increasing our capital efficiency and maintaining a lean operating culture.

Throughout our over 55 years of operations, we have pioneered a number of semiconductor industry firsts, including the development of the dislocation-free Czochralski, or CZ, silicon crystal growth process and the chemical-mechanical planarization, or CMP, process, as well as the initial production and commercialization of 100mm and 200mm semiconductor wafers. More recently, we have been a leader in the development of advanced substrates such as epitaxial, or EPI, wafers and wafers for the silicon-on-insulator, or SOI, market, which enable advanced computing and communications applications.

We primarily sell our products to the major semiconductor manufacturers throughout the world, including integrated device manufacturers and pure-play semiconductor foundries, and to a lesser extent, leading companies that specialize in wafer customization. During 2014, our largest customers were Samsung Electronics Co., Ltd., or Samsung Electronics, Taiwan Semiconductor Manufacturing Company, or TSMC, and STMicroelectronics. We operate facilities in major semiconductor manufacturing regions throughout the world, including Taiwan, Malaysia, South Korea, Italy, Japan and the United States. We have chosen to locate our manufacturing facilities in regions that offer both low operating costs and close proximity to our customers to facilitate collaboration on product development activities and shorten product delivery times.

The market for semiconductor wafers is large and growing. According to Gartner, Inc., or Gartner, the merchant semiconductor silicon wafer market in 2012 was approximately \$9 billion, in 2013 was approximately \$8 billion and in 2014 was approximately \$9 billion worldwide and is expected to grow at a 5.5% compound annual growth rate, or CAGR, from 2013 to 2018, reaching approximately \$10.4 billion by 2018. This growth in semiconductor wafer demand has been largely attributable to the proliferation of mobile devices such as smart phones and tablets. These devices require semiconductors that are energy efficient, low cost, high performance and highly integrated into a small footprint. Semiconductors offering those characteristics increasingly require EPI and SOI wafers. We believe that our process technology expertise in EPI and SOI wafer manufacturing combined with our capital efficiency provides us with significant opportunities as the markets for EPI and SOI wafers continue to grow.

The semiconductor wafer industry has undergone significant consolidation over the past 20 years, from more than 20 suppliers in the 1990s to only five major suppliers today, including Shin-Etsu Handotai, SUMCO Corporation,

Siltronic AG, LG Siltron and us, which suppliers accounted for approximately 88% of all

S-1

Table of Contents

semiconductor wafer sales in 2013, according to Gartner. This consolidation is due in large part to the significant increase in the capital investment and manufacturing capacity needed to compete effectively. We have expanded our market share by revenue from 8% in 2008 to 11% in 2013, according to Gartner. We believe this improvement is in large part the result of our emphasis on technology and product innovation and customer service, as well as consistently delivering high quality wafers that meet our customers' evolving requirements. We believe we are well positioned to continue to expand our market share and capitalize on the increasing demand for more advanced wafer products. We generated net sales of \$840.1 million, \$920.6 million and \$934.2 million and net (loss) income attributable to us of \$(90.2) million, \$(57.7) million and \$121.3 million, in 2014, 2013 and 2012, respectively. For the three months ended March 31, 2015 and 2014, we generated net sales of \$199.4 million and \$206.1 million and net loss attributable to SSL of \$9.3 million and \$14.6 million, respectively.

Semiconductor devices are at the core of modern electronics. According to Gartner, the total semiconductor market worldwide was \$315 billion in 2013. These devices include microprocessors, memory, analog, mixed-signal and radio frequency, or RF, integrated circuits, discrete, application specific integrated circuits, microelectromechanical systems, or MEMS, and image sensors. Recent semiconductor growth has been largely attributable to the proliferation of mobile devices, which has driven the need for low cost, high performance semiconductors that provide efficient power consumption and a reduced footprint. In order to meet these demands, technology innovation in the semiconductor industry has continued at a strong pace over the past decade, resulting in shrinking process geometries, larger wafer sizes, more stringent technical specifications and the introduction of advanced substrates and device structures. The continual advancement in the connectivity of everyday devices to the internet, such as home automation, smart grid metering and parking meters, represents a significant growth opportunity in the semiconductor industry. In addition to continued growth in the mobile device and internet connectivity markets, future semiconductor industry growth is expected to be further driven by new and emerging markets and applications, such as in the healthcare and automotive industries, which are increasingly incorporating advanced technologies in their services and products.

Semiconductor wafers are increasingly required to meet specific performance characteristics. For example, semiconductors used in applications such as mobile devices and cloud infrastructure are increasingly requiring EPI wafers, which enable lower power consumption due to their near perfect surface characteristics. According to Gartner, the epitaxial semiconductor silicon wafer market is expected to grow from \$3.0 billion in 2013 to \$4.1 billion in 2018, representing a 6.1% CAGR. Similarly, demand for SOI wafers is growing as a result of the ability of SOI wafers to improve switching speeds and enhance the performance of RF devices such as power amplifiers, switches and sensors. According to MarketsandMarkets, the SOI market is expected to grow from \$506 million in 2014 to \$1.3 billion in 2020, representing a 16.9% CAGR. The growth is expected to be driven by the increased penetration in mobile system-on-chips and RF devices. At the same time, the worldwide polished wafer market is expected to grow by a 5.1% CAGR from 2013 to 2018, according to Gartner. As a semiconductor wafer manufacturer focused on advanced EPI and SOI product solutions, we believe we are well positioned to capitalize on the growth opportunities resulting from industry consolidation and the increasing demand for EPI and SOI wafers.

Our Strengths

Our strengths as a manufacturer of semiconductor wafers include the following:

History of product innovation and process technology expertise. We have a more than 55 year history, under the MEMC brand, of product innovation, including achieving several major advancements in the semiconductor wafer industry, such as the development of the dislocation-free CZ silicon crystal growth process and the CMP process, as well as the initial production and commercialization of 100mm and 200mm semiconductor wafers. We have developed advanced substrates such as EPI wafers and, more recently, SOI

S-2

Table of Contents

wafers to maintain our history of product innovation. We have also developed significant technology expertise in wafer manufacturing processes, including diamond wire cutting, integrated software-enabled tooling and flexible equipment processes supporting the manufacture of semiconductor wafers with various diameters.

Broad product portfolio. We have developed a broad product portfolio. Our products include polished, EPI, SOI, perfect silicon and magic denuded zone wafers ranging in diameter from 100mm to 300mm. Our process capabilities provide us with the ability to customize our products to address the specific performance characteristics required by our customers. For example, as one of only three primary SOI wafer suppliers, we are capable of satisfying all of our customers' wafer requirements in microprocessors, memory, analog, mixed-signal and RF integrated circuits, discrete, application specific integrated circuits, MEMS and image sensors.

Extensive global footprint with close customer collaboration. We have an established global manufacturing network consisting of eight facilities located in Taiwan, Malaysia, South Korea, Italy, Japan and the United States. We have located our facilities in areas that offer a combination of low operating costs and highly educated work forces in close proximity to our customers. This local presence enables us to collaborate with our customers on product design and development activities and shorten product delivery and response times. Our diverse global footprint also enables us to mitigate risk in the event of natural disasters or other occurrences that can disrupt manufacturing. We estimate that the cost to replicate our current global manufacturing footprint is approximately 3.5 times the net book value of our fixed assets as of December 31, 2013.

Established relationships with blue chip customers. We work with all of the major semiconductor device manufacturers in the world, including integrated device manufacturers and pure-play semiconductor foundries. Our continued focus on developing strong customer relationships has resulted in several awards from our key customers. For example, we were the only company in 2012 to receive supplier excellence awards from each of Samsung Electronics, TSMC and Analog Devices based on our performance, quality, service and support. We also received supplier excellence awards from TSMC in 2013 and from Samsung Electronics and Infineon Technologies in 2014. We collaborate with our customers on their research and development, or R&D, activities, allowing us to develop wafer products that meet their product design expectations rapidly and efficiently.

Company-wide focus on capital efficiency and maintaining a lean operating culture. We have implemented several initiatives since 2009 designed to rationalize our use of resources, optimize those resources for the most attractive market opportunities and manage our production capacity to meet demand efficiently. Our engineers' understanding of both the science and operation of the tools within our factories enables us to streamline equipment controls, software interfaces and operational parameters to improve the productivity of our equipment. We have also designed our manufacturing processes to be flexible and scalable with low to moderate additional capital investment necessary to pursue new opportunities or increase capacity. We continue to focus on improving our equipment productivity through our Overall Equipment Effectiveness program, which has improved our safety, customer satisfaction and on-time delivery and reduced facility disruptions. As evidence of these improvements, from 2010 to 2013 our recordable incidences decreased by approximately 50%, our customer complaints decreased by approximately 70%, our customer on-time delivery improved by 13 percentage points and our facility disruptions were reduced by over 90%.

Experienced management team with extensive expertise. Our top six senior managers average 25 years of relevant experience from multiple segments of the semiconductor industry, having joined us from leading technology companies including General Electric, Intel and Motorola. In addition, we have a large and technologically proficient professional staff with approximately 700 engineers, of whom over 88 focus solely on R&D and 50 have Ph.Ds.

S-3

Table of Contents

Our Business Strategy

Our goal is to continue to be a market leader and increase our market share in the large and growing semiconductor wafer industry. Key elements of our strategy include:

Extending our product and process technology leadership. We are focused on developing leading edge technologies for the semiconductor wafer market. As our customers' needs evolve with decreasing transistor sizes, increasing degrees of integration and ongoing pressures for cost reduction, the requirements and specifications for semiconductor wafers are also evolving. We are investing in new product and process technologies to be able to offer products with enhanced features, such as flatness, uniformity, resistivity and reduced defects. For example, we are making substantial investments to further our product offerings in 300mm EPI and polished wafers for below 20 nanometer process technologies and in 200mm SOI wafers for wireless applications.

Increasing our customer penetration and market share. We intend to increase our customer penetration and market share by enhancing our global sales, design and technical support organizations and leveraging our broad product portfolio. We are also focused on capitalizing on attractive new opportunities with current and new customers in emerging applications. For example, we are working closely with customers to design product solutions that enable continued transistor scaling and include 3-D transistors and Fully Depleted SOI planar transistors, as well as to address process issues related to the introduction of new materials in wafer fabrication and advanced lithography. In addition, we are developing wafer solutions that enable integration of multiple functions, such as logic, memory and analog, on the same chip.

Continuing to deliver high quality customer service. We intend to continue our increased focus on delivering high quality customer service and manufacturing flexibility by leveraging our local presence that results from our diverse geographic footprint. We are focused on enhancing our established quality assurance programs and dedicated services and support staff in order to continue to respond quickly to changing demands and product cycles of our customers.

Maintaining focus on operational improvements. We intend to continue our focus on maintaining a lean operating environment and capital efficiency. We believe our Overall Equipment Effectiveness program and other operational improvements have enabled us to improve lead times across the supply chain, as well as our performance with respect to safety, customer satisfaction and on-time delivery and reduced facility disruptions. These improvements have freed up capacity, reduced costs and significantly improved equipment reliability. Our lean operating structure positions us to add production capacity as needed at low to moderate incremental capital expense by optimizing equipment utilization.

Capitalizing on the benefits of being an independent entity. We believe that being a separately traded public company enables us to be a more focused business with the ability to target our investment and research initiatives solely on semiconductor wafers. We believe our independence also allows us to align the interests and incentives of our employees exclusively with the success of our business and better positions us for further consolidation in the industry.

Recent Developments

On June 23, 2015, we entered into a letter agreement with SunEdison regarding granular polysilicon supply matters, or the Supply Agreement. The Supply Agreement provides for a long-term supply by SunEdison and the joint venture SMP, Ltd. of our granular semiconductor grade polysilicon needs. The Supply Agreement provides for a fixed price per kilogram of the granular polysilicon for each year over the 10.5-year period of the Supply Agreement. The price for polysilicon decreases during the term of the Supply Agreement. In exchange, we have agreed to assign all of our

share of the dividend and distributions from SMP, Ltd. to SunEdison for the duration

S-4

Table of Contents

of the Supply Agreement. Because these arrangements are different than those originally agreed upon by and between SunEdison's subsidiary, SunEdison Producer Singapore Pte Ltd., and our subsidiary, SunEdison Semiconductor B.V., relating to the SMP, Ltd. joint venture, the parties have agreed to take all necessary steps to provide for these changes in the original polysilicon supply agreement and to otherwise implement these provisions relating to SMP, Ltd.

In addition, the Supply Agreement provides that to the extent we must purchase semiconductor grade polysilicon from a third party supplier to meet our polysilicon needs in 2015, SunEdison will reimburse us for certain incremental costs that we incur for such third party purchases. This reimbursement obligation is subject to both per kilogram and aggregate reimbursement amounts.

Implications of Being an Emerging Growth Company

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These include, but are not limited to, (i) reduced obligations with respect to the disclosure of selected financial data in certain registration statements filed with the SEC, (ii) reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, (iii) an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 and (iv) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and the requirement to obtain shareholder approval of any golden parachute payments not previously approved.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, or Securities Act, for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. As of March 31, 2015, we have adopted all current accounting standards. We intend to take advantage of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for private companies. Section 107 of the JOBS Act provides that we can elect to opt out of the extended transition period at any time and that election is irrevocable.

We will continue to be an emerging growth company until the earliest to occur of (1) the last day of the fiscal year during which we had total annual gross revenues of at least \$1 billion (as indexed for inflation), (2) the last day of the fiscal year following the fifth anniversary of the date of our IPO, which will occur in 2019, (3) the date on which we have, during the previous three-year period, issued more than \$1 billion in non-convertible debt and (4) the date on which we are deemed to be a large accelerated filer, as defined under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Corporate Information

Our principal executive offices are located at 11 Lorong 3 Toa Payoh, Singapore 319579, and our telephone number at that address is +65 6681-9300. Our principal executive offices in the United States are located at 501 Pearl Drive (City of O'Fallon), St. Peters, Missouri 63376, and our telephone number at that address is (636) 474-5000. Our website address is www.sunedisonsemi.com. The information on our website is not part of this prospectus supplement.

S-5

Table of Contents

The Offering

Summary details of the offering of our ordinary shares under this prospectus supplement and the accompanying prospectus are set forth below.

Ordinary shares offered by selling shareholders	15,935,828 shares.
Selling shareholders	SunEdison, Samsung Fine Chemicals Co., Ltd. and Samsung Electronics Co., Ltd.
Ordinary shares to be outstanding immediately after this offering	41,833,039 shares.
Use of proceeds	We will not receive any of the proceeds from the sale of our ordinary shares by the selling shareholders.
Dividend policy	We do not currently anticipate declaring or paying any cash dividends on our ordinary shares for the foreseeable future. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on then existing conditions, including our financial condition, results of operations, contractual restrictions (including in the agreements governing our credit facilities), capital requirements, business prospects and other factors our board of directors may deem relevant. In addition, pursuant to Singapore law and our articles of association, no dividends may be paid except out of our profits. See Dividend Policy.
Listing symbol	Our ordinary shares are listed on the NASDAQ Global Select Market under the symbol SEMI.
The number of ordinary shares that will be outstanding immediately after this offering is based upon the number of outstanding ordinary shares as of June 19, 2015, and excludes the following, in each case as of such date:	
<ul style="list-style-type: none"> an aggregate of approximately 3.0 million ordinary shares issuable upon exercise of stock options outstanding with a weighted-average exercise price of \$15.74 per share; an aggregate of approximately 1.8 million ordinary shares issuable upon settlement of time-vesting and performance-vesting restricted stock units and restricted stock awards outstanding; and 	

an aggregate of approximately 5.8 million ordinary shares reserved for issuance under our equity incentive plans.

S-6

Table of Contents

SUMMARY HISTORICAL FINANCIAL DATA

The following table shows summary historical financial data at the dates and for the periods indicated. The summary historical statement of operations data for the years ended December 31, 2014, 2013 and 2012 have been derived from our audited consolidated financial statements incorporated by reference into this prospectus supplement from our Annual Report on Form 10-K for the year ended December 31, 2014. The summary historical statement of operations data for the three months ended March 31, 2015 and 2014 and balance sheet data as of March 31, 2015 have been derived from our unaudited condensed consolidated financial statements incorporated by reference in this prospectus supplement from our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, which include all adjustments, consisting of normal recurring adjustments, which management considers necessary for a fair presentation of the financial position and the results of operations for such periods. The historical financial statements for the years ended December 31, 2014, 2013 and 2012 and for the three months ended March 31, 2014 represent the financial results of SunEdison's semiconductor materials business that was contributed to us as part of the Separation for those periods.

Our historical combined financial statements for periods prior to the completion of the Separation include expenses of SunEdison that were allocated to us for certain functions, including general corporate expenses related to communications, corporate administration, finance, legal, information technology, human resources, compliance, employee benefits and incentives, operations, research and development and stock compensation. These expenses were allocated in our historical results of operations on the basis of direct usage, where identifiable, with the remainder primarily allocated on the basis of revenue or other related sales metrics, headcount or number of our manufacturing plants. We consider the expense allocation methodology and results to be reasonable for all periods presented. However, these allocations may not necessarily be indicative of the actual expenses we would have incurred as an independent publicly traded company during the periods prior to our IPO or of the costs we will incur in the future. No significant restructuring or impairment charges were included in these allocations from SunEdison.

The historical combined and consolidated financial statements incorporated by reference in this prospectus supplement from our Annual Report on Form 10-K for the year ended December 31, 2014, and unaudited condensed consolidated financial statements incorporated by reference in this prospectus supplement from our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015 may not be indicative of our future performance and do not necessarily reflect what our financial position and results of operations would have been had we operated as a stand-alone public company during the periods presented, including changes that occurred in our operations and capital structure as a result of the Separation and related transactions.

Table of Contents

The following tables should be read together with, and are qualified in their entirety by reference to, the historical consolidated financial statements and the accompanying notes appearing in our Annual Report on Form 10-K for the year ended December 31, 2014 and unaudited condensed consolidated financial statements and the accompanying notes incorporated by reference from our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015. Among other things, the historical consolidated financial statements include more detailed information regarding the basis of presentation for the information in the following table. The tables should also be read together with

Management's Discussion and Analysis of Financial Condition and Results of Operations and Certain Relationships and Related Transactions, and Director Independence in our Annual Report on Form 10-K for the year ended December 31, 2014 and Management's Discussion and Analysis of Financial Condition and Results of Operations in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, each of which is incorporated by reference into this prospectus supplement, as well as the other information contained in such filings.

	Fiscal Year Ended December 31,			Three Months Ended March 31,	
	2014	2013	2012	2015	2014
				(unaudited)	(unaudited)
	(in millions, except per share amounts)				
Statement of Operations Data:					
Net sales to non-affiliates	\$ 837.7	\$ 911.5	\$ 927.4	\$ 199.0	\$ 205.8
Net sales to affiliates	2.4	9.1	6.8	0.4	0.3
Cost of goods sold	761.1	838.9	852.4	182.2	197.8
Gross profit	79.0	81.7	81.8	17.2	8.3
Operating expenses (income):					
Marketing and administration	84.8	105.1	100.7	20.5	21.8
Research and development	34.8	37.0	33.4	8.1	8.0
Restructuring (reversals) charges(1)	(22.9)	(75.0)	(149.6)	1.2	(4.6)
Loss (gain) on sale / receipt of property, plant and equipment(2)	4.7		(31.7)		
Long-lived asset impairment charges(3)	59.4	33.6	1.5	0.1	
Operating (loss) income	(81.8)	(19.0)	127.5	(12.7)	(16.9)
Non-operating expenses (income)					
Interest expense	9.2	0.8	1.0	3.5	0.2
Interest income	(0.5)	(0.5)	(0.7)	(0.1)	(0.1)
Interest, net-affiliates	(0.1)	(4.1)	(2.2)		(0.1)
Other, net	(2.6)	(3.9)	3.1	(10.4)	(5.3)
Total non-operating expenses (income)	6.0	(7.7)	1.2	(7.0)	(5.3)
(Loss) income before income tax expense	(87.8)	(11.3)	126.3	(5.7)	(11.6)
Income tax expense	2.6	44.0	3.6	3.3	3.6
(Loss) income before equity in earnings of equity method investments	(90.4)	(55.3)	122.7	(9.0)	(15.2)
	(0.6)			(0.3)	

Equity in loss of equity method investments,
net of tax

Net (loss) income	(91.0)	(55.3)	122.7	(9.3)	(15.2)
Net loss (income) attributable to noncontrolling interests	0.8	(2.4)	(1.4)		0.6
Net (loss) income attributable to SSL	\$ (90.2)	\$ (57.7)	\$ 121.3	\$ (9.3)	\$ (14.6)
Basic (loss) earnings per share(4)	\$ (2.17)	\$ (1.39)	\$ 2.92	\$ (0.22)	\$ (0.35)
Diluted (loss) earnings per share(4)	\$ (2.17)	\$ (1.39)	\$ 2.92	\$ (0.22)	\$ (0.35)
Other Financial Data:					
Adjusted EBITDA (unaudited)(5)	\$ 89.2	\$ 74.6	\$ 74.9	\$ 31.6	\$ 15.0

S-8

Table of Contents

	As of March 31, 2015 (unaudited) (in millions)
Balance Sheet Data:	
Cash and cash equivalents	\$ 90.6
Working capital	153.2
Total assets	1,161.7
Long-term debt (including current portion)	206.7
Total SunEdison Semiconductor Limited shareholders' equity	662.8
Noncontrolling interests	1.2
Total shareholders' equity	664.0

- (1) Restructuring reversals of \$22.9 million in 2014 includes a \$14.4 million favorable settlement of a polysilicon supply agreement with a subsidiary of SunEdison and \$12.0 million of severance reversals related to the sale of our Merano, Italy polysilicon and chlorosilanes facilities, or the Merano Facilities, as the buyer assumed legal responsibility for those employees. Restructuring reversals of \$75.0 million in 2013 includes a \$62.9 million favorable settlement of a polysilicon supply agreement with a subsidiary of SunEdison. Restructuring reversals of \$149.6 million in 2012 include favorable contract settlements of \$75.7 million with a subsidiary of SunEdison and \$65.8 million with Evonik Degussa SpA, or Evonik.
- (2) Loss on sale of property, plant and equipment in 2014 includes a \$4.7 million loss on our sale of the Merano Facilities that closed during the fourth quarter. Gain on receipt of property, plant and equipment in 2012 includes a \$31.7 million of gain on receipt of the Merano, Italy chlorosilanes plant we received in connection with our settlement with Evonik.
- (3) Asset impairment charges of \$59.4 million in 2014 includes \$57.3 million of impairments related to the assets at our Merano Facilities to write down these assets in the third quarter to their current estimated fair value, which was based on offers from potential buyers we received in the third quarter. Asset impairment charges in 2013 includes approximately \$33.6 million of impairment charges to write down the Merano Facilities assets to their current estimated salvage value as a result of our decision to indefinitely close these facilities. Asset impairment charges in 2012 includes approximately \$1.5 million of impairment charges primarily related to elements of our enterprise software that we no longer use.
- (4) The weighted-average number of shares used to compute pro forma basic and diluted earnings per share for the years ending December 31, 2013, and 2012, and the three months ending March 31, 2014 is 41,506,175, which represents the number of our ordinary shares that were outstanding immediately following the completion of the Separation. The computations of basic and diluted (loss) earnings per share assumes that the number of ordinary shares outstanding for all periods prior to the Separation was equal to the number of ordinary shares outstanding immediately following the completion of the Separation.
- (5) Adjusted EBITDA is a non-GAAP financial measure. This measurement should not be viewed as an alternative to GAAP measures of performance. The presentation of Adjusted EBITDA should not be construed as an inference that our future results will be unaffected by unusual or non-recurring items.

We define Adjusted EBITDA as earnings before net interest expense, income tax expense (benefit), depreciation and amortization, restructuring charges (reversals) and other non-recurring items, loss on sale of property, plant, and equipment, long-lived asset impairment charges, stock compensation expense, and equity in loss of equity method investments. All of the omitted items are either (i) non-cash items or (ii) items that we do not consider in assessing our on-going operating performance. Because it omits non-cash items, we feel that Adjusted EBITDA is less susceptible to variances in actual performance resulting from depreciation, amortization and other non-cash charges and more reflective of other factors that affect our operating performance. Because it omits the other items, we believe Adjusted

EBITDA is also more reflective of our on-going operating performance.

S-9

Table of Contents

We believe Adjusted EBITDA is useful to investors in evaluating our operating performance because:

securities analysts and other interested parties use such calculations as a measure of financial performance and debt service capabilities; and

it is used by our management for internal planning purposes, including aspects of our operating budget and capital expenditures.

Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations include:

it does not reflect our cash expenditures or future requirements for capital expenditures or contractual commitments;

it does not reflect changes in, or cash requirements for, working capital;

it does not reflect interest expense or the cash requirements necessary to service interest or principal payments on our outstanding debt;

it does not reflect payments made or future requirements for income taxes;

it adjusts for restructuring charges (reversals) and other non-recurring items, loss on sale of property, plant, and equipment, and long-lived asset impairments which are factors that we do not consider indicative of future performance;

it adjusts for non-cash stock compensation expense and equity in loss of equity method investments to more clearly reflect comparable period-over-period cash operating performance;

although it reflects adjustments for factors that we do not consider indicative of future performance, we may, in the future, incur expenses similar to the adjustments reflected in our calculation of Adjusted EBITDA; and

although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often have to be replaced in the future and Adjusted EBITDA does not reflect cash requirements for such replacements.

Investors are encouraged to evaluate each adjustment and the reasons we consider it appropriate for supplemental analysis.

The following table presents a reconciliation from net (loss) income attributable to SSL to Adjusted EBITDA:

	Fiscal Year Ended December 31,			Three Months Ended March 31,	
	2014	2013	2012	2015	2014
				(unaudited)	(unaudited)
	(in millions)				
Net (loss) income attributable to SSL	\$ (90.2)	\$ (57.7)	\$ 121.3	\$ (9.3)	\$ (14.6)
Add:					
Interest expense, net	8.6	(3.8)	(1.9)	3.4	
Income tax expense	2.6	44.0	3.6	3.3	3.6
Depreciation and amortization	114.8	119.6	118.7	29.0	28.3
Restructuring (reversals) charges and other non-recurring items(a)	(22.6)	(75.0)	(149.6)	1.2	(4.6)
Loss (Gain) on sale / receipt of property, plant and equipment	4.7		(31.7)		
Long-lived asset impairment charges	59.4	33.6	1.5	0.1	
Stock compensation expense	11.3	13.9	13.0	3.6	2.3
Equity in loss of equity method investments	0.6			0.3	
Adjusted EBITDA	\$ 89.2	\$ 74.6	\$ 74.9	\$ 31.6	\$ 15.0

Table of Contents

- (a) For the year ended December 31, 2014, we recognized approximately \$0.3 million of securities transaction tax related to the acquisition of a 35% interest in SMP, Ltd. We believe this is a non-recurring expense that should be excluded from Adjusted EBITDA as we do not consider this to be useful in assessing our on-going operating performance. As of June 12, 2015, as a result of a recent capital raise by SMP, Ltd., SMP, Ltd. is owned 33.05% by us, 51.95% by SunEdison and 15.00% by Samsung Fine Chemicals Co. Ltd.

S-11

Table of Contents

RISK FACTORS

Investing in our ordinary shares involves risk. You should carefully consider the risk factors contained in our most recent Annual Report on Form 10-K, which are incorporated by reference herein, and the other information contained in this prospectus supplement and the accompanying prospectus, as updated by our subsequent filings under the Exchange Act before deciding to invest in our ordinary shares. These risks could have a material adverse effect on our business, results of operations or financial condition and cause the trading price of our ordinary shares to decline. You could lose all or part of your investment. The risks and uncertainties discussed below and in the documents incorporated by reference are not the only risks we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business, financial condition or results of operations. Our business, financial condition or results of operations could be materially adversely affected by any of these risks and cause the value of our securities, including the ordinary shares offered by this prospectus supplement, to decline. The trading price of our ordinary shares could decline due to any of these risks and you could lose all or part of your investment.

Risks Related to this Offering and Ownership of Our Ordinary Shares

The price of our ordinary shares may fluctuate substantially.

You should consider an investment in our ordinary shares to be risky, and you should invest in our ordinary shares only if you can withstand a significant loss and wide fluctuations in the market value of your investment. Some factors that may cause the market price of our ordinary shares to fluctuate, in addition to the other risks mentioned in this section of the prospectus supplement, are:

our announcements or our competitors' announcements regarding new products or services, enhancements, significant contracts, acquisitions or strategic investments;

changes in earnings estimates or recommendations by securities analysts, if any, who cover our ordinary shares;

failures to meet external expectations or management guidance;

fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;

changes in our capital structure or dividend policy, future issuances of securities, sales of large blocks of ordinary shares by our shareholders, our incurrence of additional debt or our failure to comply with the agreements governing our credit facilities;

reputational issues;

changes in general economic and market conditions in or any of the regions in which we conduct our business;

changes in industry conditions or perceptions;

changes in applicable laws, rules or regulations; and

announcements or actions taken by SunEdison.

In addition, if the market for stocks in our industry or industries related to our industry, or the stock market in general, experiences a loss of investor confidence, the trading price of our ordinary shares could decline for reasons unrelated to our business, financial condition and results of operations. If any of the foregoing occurs, it could cause our share price to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

S-12

Table of Contents

Future sales of our ordinary shares, or the perception in the public markets that these sales may occur, may depress our share price.

Sales of substantial amounts of our ordinary shares in the public market, or the perception that these sales could occur, could adversely affect the price of our ordinary shares and could impair our ability to raise capital through the sale of additional ordinary shares. We and each of our executive officers and directors have agreed, subject to certain exceptions, with the underwriters not to dispose of or hedge any of our ordinary shares or securities convertible into or exchangeable for our ordinary shares during the period from the date of this prospectus supplement continuing through the date that is 45 days after the date of this prospectus supplement. Deutsche Bank Securities Inc. and Goldman Sachs & Co. may, in their sole discretion, release any of these shares from these restrictions at any time without notice.

As of June 19, 2015, we had approximately 4.8 million ordinary shares to be issued upon exercise or vesting of outstanding options and RSUs, as applicable, and an aggregate of approximately 5.8 million ordinary shares available for future issuance under our equity incentive plans. We filed a registration statement on Form S-8 under the Securities Act to register ordinary shares or securities convertible into or exchangeable for ordinary shares issued pursuant to our equity plans. Accordingly, subject to the termination of the lock-up period and restrictions on resale by our executive officers and directors under the Securities Act, shares registered under such registration statements will be available for sale in the open market.

In the future, we may also issue our securities in connection with investments or acquisitions. The number of ordinary shares issued in connection with an investment or acquisition could constitute a material portion of our then-outstanding ordinary shares.

There may not be an active trading market for our ordinary shares, and you may not be able to sell your ordinary shares at or above the public offering price.

We completed our IPO on May 28, 2014. As a result, there has been a public market for our ordinary shares for only approximately one year. An active, liquid and orderly market for our ordinary shares may not be sustained, which could depress the trading price of our ordinary shares. An inactive market may also impair your ability to sell any of our ordinary shares that you purchase. In addition, the market price of our ordinary shares may fluctuate significantly and may be adversely affected by broad market and industry factors, regardless of our actual operating performance. An inactive market may also impair our ability to raise capital by selling our ordinary shares, and it may impair our ability to attract and motivate our employees through equity incentive awards.

We are an emerging growth company and may elect to comply with reduced public company reporting requirements, which could make our ordinary shares less attractive to investors.

We are an emerging growth company, as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various public company reporting requirements. These exemptions include, but are not limited to, (i) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, (ii) reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements, and (iii) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We will continue to be an emerging growth company until the earliest to occur of (a) the last day of the fiscal year during which we had total annual gross revenues of at least \$1.0 billion (as indexed for inflation), (b) the last day of the fiscal year following the fifth anniversary of the date of our IPO, which will occur in 2019, (c) the date on which we have, during the previous three-year period, issued more

than \$1 billion in non-convertible debt and (d) the date on which we are deemed to be a large accelerated filer, as defined under the Exchange Act. We have taken advantage of certain of the reduced disclosure obligations in this filings with the SEC regarding executive compensation and may elect to take advantage of other reduced burdens in future filings. As a result, the

S-13

Table of Contents

information that we provide to holders of our ordinary shares may be different than you might receive from other public reporting companies in which you hold equity interests. We cannot predict if investors will find our ordinary shares less attractive as a result of our reliance on these exemptions. If some investors find our ordinary shares less attractive as a result of any choice we make to reduce disclosure, there may be a less active trading market for our ordinary shares and the price for our ordinary shares may be more volatile.

Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to avail ourselves of this extended transition period for complying with new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As of March 31, 2015, all current accounting standards have been adopted.

We do not currently expect to pay any cash dividends for the foreseeable future.

We do not currently anticipate that we will pay any cash dividends on our ordinary shares for the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon our financial condition, results of operations, contractual restrictions (including those under the our credit facilities and any potential indebtedness we may incur in the future), restrictions imposed by applicable law, tax considerations and other factors our board of directors deems relevant. Our credit agreement currently restricts the payment of dividends. In addition, pursuant to Singapore law and our articles of association, no dividends may be paid except out of our profits. There can be no assurance that we will pay a dividend in the future or continue to pay any dividend if we do commence paying dividends. Accordingly, if you purchase ordinary shares in this offering, realization of a gain on your investment will depend on the appreciation of the price of our ordinary shares, which may never occur. Investors seeking cash dividends in the foreseeable future should not purchase our ordinary shares.

Certain provisions of the agreements we entered into with SunEdison in connection with the Separation may discourage a takeover of our company by a third party or reduce the consideration our shareholders would receive in a sale of our company, each of which could adversely affect the price at which our ordinary shares will trade in the market following completion of this offering.

In connection with our IPO and the Separation, we entered into agreements that provide a framework for our ongoing relationship with SunEdison, including intellectual property licensing agreements, a transition services agreement and a tax matters agreement. Each of these agreements provides that the agreement will automatically terminate upon a change in control of us. Under these agreements, a change of control is generally defined as (i) a person becoming the beneficial owner, directly or indirectly, of equity representing 50% or more of the total voting power of our outstanding equity, (ii) us merging or consolidating with another person whereby less than 50% of the total voting power of the surviving entity is represented by equity held, directly or indirectly, by our former equity holders, or (iii) us selling, transferring or exchanging all or substantially all of our assets to another person, unless more than 50% of the total voting power of the transferee receiving such assets is, directly, or indirectly, owned by our equity holders. Because these agreements are material to our business and operations, these provisions may discourage a takeover of our company by a third party. In addition, a potential acquiror which needed these agreements to continue in effect following its purchase could be required to negotiate new terms for these agreements with SunEdison. In either event, the result may reduce the consideration our shareholders would receive in a sale of us, which in turn could adversely affect the price at which our ordinary shares will trade in the market following completion of the offering.

The Singapore Takeover Code may impede a takeover of our company by a third party, which could adversely affect the value of our ordinary shares.

The Singapore Takeover Code contains provisions that may delay, deter or prevent a future takeover or change in control of our company for so long as we remain a public company with more than 50 shareholders

S-14

Table of Contents

and net tangible assets of S\$5 million or more. Under the Singapore Takeover Code, any person acquiring, whether by a series of transactions over a period of time or not, either on his own or together with parties acting in concert with such person, 30% or more of our voting shares, or, if such person holds, either on his own or together with parties acting in concert with such person, between 30% and 50% (both inclusive) of our voting shares, and such person (or parties acting in concert with such person) acquires additional voting shares representing more than 1% of our voting shares in any six-month period, must, except with the consent of the Securities Industry Council in Singapore, extend a mandatory takeover offer for the remaining voting shares in accordance with the provisions of the Singapore Takeover Code. While the Singapore Takeover Code seeks to ensure fair and equal treatment of all shareholders in a takeover or merger situation, its provisions may discourage or prevent certain types of transactions involving an actual or threatened change of control of our company. These legal requirements may impede or delay a takeover of our company by a third party, which could adversely affect the value of our ordinary shares. While public companies that are not listed on a Singapore exchange may apply to the Securities Industry Council in Singapore for a waiver with respect to compliance with the Singapore Takeover Code, we currently do not intend to seek such a waiver.

Table of Contents

CAUTIONARY STATEMENT CONCERNING FORWARD LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the information incorporated by reference into those documents contain forward-looking statements within the meaning of the federal securities laws. All statements other than statements of historical fact included in this prospectus supplement or incorporated herein are forward-looking statements. These statements relate to analyses and other information, which are based on forecasts of future results and estimates of amounts not yet determinable. These statements also relate to our future prospects, developments and business strategies. These forward-looking statements are identified by the use of terms and phrases such as anticipate, believe, could, estimate, expect, intend, may, plan, predict, project, will and similar terms and phrases, and references to assumptions. However, these words are not the exclusive means of identifying such statements. These statements include, but are not limited to, statements about:

demand and/or pricing of our products or the pricing environment in the future;

the appropriateness of our tax positions and the timing of our tax audits;

the timing of our various manufacturing ramps or the cessation or continuation of production at certain facilities;

the anticipated growth of our business; the effects of economic factors on our market capitalization;

our expectation that we will have the financial resources and liquidity needed to meet our business requirements;

the ultimate impact our legal proceedings may have on us;

the charges we expect to incur, the timing of completion, the savings we expect to realize, the number of employees who will be affected and our execution of our announced restructurings and the number of employees who will be affected;

our expectations regarding our investments in research and development;

our expectations regarding our future cash flow generation;

our ability to purchase our polysilicon requirements from SunEdison;

the timing of reaching full commercial capabilities of the SMP, Ltd. facility, or joint venture to produce high purity polysilicon, including electronic grade polysilicon;

the requirements of and our compliance with the terms governing our indebtedness;

our ability to compete effectively in the markets we serve; and

our working capital and other capital requirements.

These forward-looking statements are based on management's current expectations, estimates, forecasts, and projections about our business and the industry in which we operate and management's beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this prospectus supplement, the accompanying prospectus or those incorporated by reference into those documents may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under "Risk Factors" and elsewhere in this prospectus supplement, the accompanying prospectus or documents incorporated by reference in this prospectus supplement or the accompanying prospectus. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of the document they are included in. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus supplement. See "Where You Can Find More Information; Incorporation By Reference."

Table of Contents**INDUSTRY AND MARKET DATA**

We obtained the market and industry data and other statistical information used throughout this prospectus supplement from our own research, surveys or studies conducted by third parties, independent industry or general publications and other published independent sources. In particular, we have based much of our discussion concerning the industry and market in which we operate on independent data, research opinions and viewpoints published by Gartner. We have based certain statements with respect to the SOI market on information from MarketsandMarkets, a global market research and consulting company. We have also based certain statements with respect to demand for semiconductors and semiconductor applications on information from SEMI Silicon Manufacturers Group, a trade association serving the manufacturing supply chains for the microelectronics and photovoltaic industries, as well as Semiconductor Industry Association and World Semiconductor Trade Statistics, a trade association serving the U.S. semiconductor industry. Industry publications and surveys generally state that they have obtained information from sources believed to be reliable, but do not guarantee the accuracy and completeness of such information.

The following table identifies those statements included in this prospectus supplement that are based on data published by Gartner together with the specific source of such data:

Statement

According to Gartner, Inc., or Gartner, the merchant semiconductor silicon wafer market in 2012 was approximately \$9 billion, in 2013 was approximately \$8 billion and in 2014 was approximately \$9 billion worldwide and is expected to grow at a 5.5% compound annual growth rate, or CAGR, from 2013 to 2018, reaching approximately \$10.4 billion by 2018.

The semiconductor wafer industry has undergone significant consolidation over the past 20 years, from more than 20 suppliers in the 1990s to only five major suppliers today, including Shin-Etsu Handotai, SUMCO Phoenix Corporation, Siltronic AG, LG Siltron, and us, which suppliers accounted for approximately 88% of all semiconductor wafer sales in 2013, according to Gartner.

We have expanded our market share by revenue from 8% in 2008 to 11% in 2013, according to Gartner.

According to Gartner, the total semiconductor market worldwide was \$315 billion in 2013.

According to Gartner, the epitaxial semiconductor silicon wafer market is expected to grow from \$3.0 billion worldwide in 2013 to \$4.1 billion in 2018, representing a 6.1% CAGR.

At the same time, the worldwide polished wafer market is expected to grow by a 5.1% CAGR from 2013 to 2018, according to Gartner.

The Gartner reports described above, or the Gartner Reports, represent data, research opinion or viewpoints published, as part of a syndicated subscription service, by Gartner, and are not representations of fact. Each Gartner Report

Source

Gartner, Forecast: Semiconductor Silicon Wafers, Worldwide, 3Q14 Update, October 2014.

Gartner, Market Share: Silicon Wafers, Worldwide, 2013, May 2014.

Gartner, Market Share: Silicon Wafers, Worldwide, 2013, May 2014.

Gartner, Market Share Analysis: Semiconductor Revenue, Worldwide, 2013, March 27, 2014.

Gartner, Forecast: Semiconductor Silicon Wafers, Worldwide, 3Q14 Update, October 2014.

Gartner, Forecast: Semiconductor Silicon Wafers, Worldwide, 3Q14 Update, October 2014.

speaks as of its original publication date (and not as of the date of this prospectus supplement) and the opinions expressed in the Gartner Reports are subject to change without notice. At the request of Gartner, we have in certain circumstances used the term "epitaxial" instead of our defined term "EPI" in Gartner market data statements.

S-17

Table of Contents**USE OF PROCEEDS**

We will not receive any of the proceeds from the sale of our ordinary shares by the selling shareholders. Pursuant to Singapore law, we are restricted from paying registration expenses and related fees in connection with this offering. As a result of this prohibition, SunEdison has agreed to pay all of the offering expenses in connection with this offering, excluding underwriting discounts and commissions of the Samsung Parties.

PRICE RANGE OF ORDINARY SHARES

Our ordinary shares are traded publicly on the NASDAQ Global Select Market and trade under the symbol SEMI. The following table presents quarterly information on the price range of our ordinary shares. This information indicates the high and low market price per share of our ordinary shares for each recent fiscal quarter reported by the NASDAQ Global Select Market. Our ordinary shares began trading on the NASDAQ Global Select Market on May 22, 2014.

	High	Low
Fiscal Year Ending December 31, 2015:		
First quarter	\$ 27.93	\$ 14.25
Second quarter (through June 23, 2015)	\$ 26.88	\$ 19.93
Fiscal Year Ended December 31, 2014:		
Second quarter (beginning May 22, 2014)	\$ 18.05	\$ 14.00
Third quarter	20.31	15.23
Fourth quarter	20.59	15.60

On June 23, 2015, the last reported sale price of our ordinary shares was \$21.03 per share.

DIVIDEND POLICY

We currently anticipate that we will retain any future earnings for the operation and expansion of our business. Accordingly, we do not currently anticipate declaring or paying any cash dividends on our ordinary shares for the foreseeable future. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on then existing conditions, including our financial condition, results of operations, contractual restrictions (including in the agreements governing our credit facilities), capital requirements, business prospects and other factors our board of directors may deem relevant. We may, by ordinary resolution, declare dividends at a general meeting of shareholders, but we are restricted from paying dividends in excess of the amount recommended by our board of directors. In addition, pursuant to Singapore law and our articles of association, no dividends may be paid except out of our profits.

Because we are a holding company, our ability to pay cash dividends on our ordinary shares may be limited by restrictions on our ability to obtain sufficient funds through dividends from subsidiaries. In particular, the agreements governing our senior secured credit facilities that we entered into in connection with the Separation contain restrictions on the ability of our subsidiaries to make cash dividends to us.

Table of Contents**SELLING SHAREHOLDERS**

The following table sets forth information with respect to the beneficial ownership of our ordinary shares held as of June 19, 2015 by the selling shareholders, the number of shares offered under this prospectus supplement and accompanying prospectus and the shares to be beneficially owned by the selling shareholders after the offering is completed. The percentage of beneficial ownership is based on 41,833,039 ordinary shares outstanding as of June 19, 2015.

Beneficial ownership for the purposes of the following table is determined in accordance with the rules and regulations of the SEC. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting thereof, or to dispose or direct the disposition thereof or has the right to acquire such powers within 60 days. Except as disclosed in the footnotes to this table, we believe that each shareholder identified in the table possesses sole voting and investment power over all ordinary shares shown as beneficially owned by the shareholder.

The address for SunEdison is 13736 Riverport Drive, Suite 180, Maryland Heights, Missouri 63043. The address for Samsung Fine Chemicals is R&D Bldg., 130 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-803, Korea. The address for Samsung Electronics is 129 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Korea.

Name:	Shares Beneficially Owned Prior to Offering	Shares Offered Hereby	Percentage of Shares Beneficially Owned		
			Shares Beneficially Owned After Offering	Prior to Offering	After Offering
SunEdison	10,608,904(1)	10,608,903	1(4)	25.4%	0%
Samsung Fine Chemicals	3,910,000(2)	3,910,000		9.3%	
Samsung Electronics	1,416,925(3)	1,416,925		3.4%	

- (1) This information is based on a Form 4 filed jointly by SunEdison and SunEdison International, Inc. with the SEC on January 21, 2015. According to such Form 4, SunEdison and SunEdison International, Inc. have shared voting and dispositive power with respect to all of the shares.
- (2) This information is based on Amendment No. 1 to Schedule 13G filed by Samsung Fine Chemicals with the SEC on January 20, 2015.
- (3) This information is based on Amendment No. 1 to Schedule 13G filed by Samsung Electronics with the SEC on January 20, 2015.
- (4) SunEdison will continue to hold one share for purposes of compliance with Singapore law. This share is registered in SunEdison's name on the Singapore based register of the Company.

Table of Contents

MATERIAL TAX CONSIDERATIONS

Based on the facts and subject to the limitations set forth herein, the statements of law or legal conclusions under the caption **Material Singapore Tax Considerations** constitute the opinion of Rajah Tann Singapore LLP, our Singapore counsel. Based on the facts and subject to the limitations set forth herein, the statements of law or legal conclusions under the caption **Material U.S. Federal Income Tax Considerations** constitute the opinion of Bryan Cave LLP, our U.S. counsel, as to the material U.S. federal income tax consequences to U.S. Holders (as defined below) under current law of an investment in our ordinary shares.

POTENTIAL PURCHASERS OF OUR ORDINARY SHARES ARE URGED TO CONSULT THEIR OWN TAX ADVISORS TO DETERMINE THE U.S. FEDERAL, STATE, LOCAL, AND NON-U.S. INCOME, ESTATE, AND OTHER TAX AND TAX TREATY CONSIDERATIONS OF PURCHASING, OWNING AND DISPOSING OF OUR ORDINARY SHARES.

Material U.S. Federal Income Tax Considerations

Subject to the limitations and qualifications stated herein, this discussion sets forth a summary of material U.S. federal income tax consequences of the purchase, ownership and disposition of the ordinary shares. The discussion is based on the U.S. Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations thereunder, published rulings and court decisions, all as currently in effect and all subject to change at any time, possibly with retroactive effect. We cannot assure you that a change in law will not alter significantly the tax considerations described in this summary. We have not sought and do not expect to seek any rulings from the U.S. Internal Revenue Service, or the IRS, regarding the matters discussed below. There can be no assurance that the IRS or a court will not take positions concerning the tax consequences of the purchase, ownership or disposition of our ordinary shares that differ from those discussed below.

The discussion of the holders' tax consequences addresses only those persons that acquire their ordinary shares in this offering and that hold those ordinary shares as capital assets (generally, property held for investment) and does not address the tax consequences to any special class of holder, including without limitation, holders of (directly, indirectly or constructively) 10% or more of the ordinary shares, dealers in securities or currencies, banks, tax-exempt organizations, life insurance companies, financial institutions, broker-dealers, regulated investment companies, real estate investment trusts, traders in securities that elect the mark-to-market method of accounting for their securities holdings, persons that hold securities that are a hedge or that are hedged against currency or interest rate risks or that are part of a straddle, conversion or integrated transaction, certain U.S. expatriates, partnerships or other entities classified as partnerships for U.S. federal income tax purposes and U.S. Holders (as defined below) whose functional currency for U.S. federal income tax purposes is not the U.S. dollar. This discussion does not address the effect of the U.S. federal alternative minimum tax, or U.S. federal estate and gift tax, or any state, local or foreign tax laws on a holder of ordinary shares.

For purposes of this discussion, a **U.S. Holder** is a beneficial owner of ordinary shares that is for U.S. federal income tax purposes:

an individual who is a citizen or resident of the United States;

Edgar Filing: SunEdison Semiconductor Ltd - Form 424B4

a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

an estate the income of which is subject to U.S. federal income taxation regardless of its source; or

a trust (i) if a court within the U.S. can exercise primary supervision over its administration, and one or more U.S. persons have the authority to control all of the substantial decisions of that trust, or (ii) that was in existence on August 20, 1996, and validly elected under applicable Treasury Regulations to continue to be treated as a domestic trust.

S-20

Table of Contents

If a partnership or an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes holds our ordinary shares, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. Partners in partnerships that hold our ordinary shares should consult their tax advisors.

If you are considering the purchase of our ordinary shares, you should consult your own tax advisors concerning the particular U.S. federal income tax consequences to you of the purchase, ownership and disposition of our ordinary shares, as well as the consequences to you arising under other U.S. federal tax laws and the laws of any other applicable taxing jurisdiction and any applicable tax treaty in light of your particular circumstances.

Dividends and Other Distributions

As described in the section titled *Dividend Policy*, we do not currently anticipate declaring or paying cash dividends to holders of our ordinary shares in the foreseeable future. However, subject to the discussion below on the passive foreign investment company rules, if we do make distributions of cash or other property in respect of our ordinary shares, the U.S. dollar amount of the gross amount of any such distribution will be taxable as a dividend, to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Such income will be includable in your gross income on the day actually or constructively received by you. To the extent the amount of the distribution exceeds our current and accumulated earnings and profits (as determined under U.S. federal income tax principles), such excess amount will be treated first as a tax-free return of your tax basis in your ordinary shares, and then, to the extent such excess amount exceeds your tax basis in your ordinary shares, as capital gain. The Company, however, may not calculate earnings and profits in accordance with U.S. federal tax principles. In that case, the Company intends to treat the full amount of any distribution by the Company to U.S. Holders as a dividend for U.S. federal income tax purposes. U.S. Holders of the ordinary shares that are corporations generally will not be entitled to claim a dividends received deduction with respect to dividends paid on the ordinary shares.

Dividends received by a non-corporate U.S. Holder, including an individual, may qualify for the lower rates of tax applicable to qualified dividend income provided that (1) our ordinary shares are readily tradable on an established securities market in the United States, (2) we are not a passive foreign investment company for our taxable year in which the dividend is paid and the preceding taxable year, and (3) certain holding period requirements are met. Our ordinary shares will be readily tradable on the NASDAQ Global Select Market. Accordingly, subject to the passive foreign investment company risk discussed below (see *Passive Foreign Investment Company*), dividends paid to a non-corporate U.S. Holder with respect to ordinary shares for which the requisite holding period is satisfied should be eligible for the preferential tax rates applicable to qualified dividend income.

You should consult your own tax advisors regarding the availability of the lower tax rates applicable to qualified dividend income for any dividends that we pay with respect to the ordinary shares, as well as the effect of any change in applicable law.

A U.S. Holder who pays (whether directly or through withholding) Singapore income tax with respect to dividends paid on our ordinary shares generally will be entitled, at the election of such U.S. Holder, to receive either a deduction or credit for such Singapore income tax paid. The rules relating to the determination of the foreign tax credit are complex and you should consult your own tax advisors regarding the availability of a foreign tax credit in your particular circumstances.

Disposition of the Ordinary Shares

You will recognize gain or loss on a sale or exchange of our ordinary shares in an amount equal to the difference between the amount realized (in U.S. dollars) on the sale or exchange and your tax basis (in U.S.

Table of Contents

dollars) in the ordinary shares. Subject to the passive foreign investment company rules discussed below, such gain or loss generally will be capital gain or loss. If you are a non-corporate U.S. Holder, including an individual, that has held the ordinary shares for more than one year, you will be eligible for reduced tax rates. The deductibility of capital losses is subject to limitations.

Any gain or loss that you recognize on a disposition of our ordinary shares generally will be treated as U.S.-source income or loss for foreign tax credit limitation purposes. You should consult your own tax advisors regarding the proper treatment of gain or loss, as well as the availability of a foreign tax credit, in your particular circumstances.

Passive Foreign Investment Company

Based on the current and anticipated value of our assets and the composition of our income and assets, we do not expect to be treated as a passive foreign investment company, or PFIC, for U.S. federal income purposes for our current taxable year ending December 31, 2015, or any future taxable year. However, the determination of PFIC status is based on an annual determination that cannot be made until the close of a taxable year, involves extensive factual investigation, including ascertaining the fair market value of all of our assets on a quarterly basis and the character of each item of income that we earn, and is subject to uncertainty in several respects. Accordingly, we cannot assure you that we will not be treated as a PFIC for our current taxable year ending December 31, 2015, or for any future taxable year or that the IRS will not take a contrary position. Bryan Cave LLP, our U.S. tax counsel, therefore expresses no opinion with respect to our PFIC status for any taxable year or our expectations relating to such status set forth in this paragraph.

A non-U.S. corporation will be treated as a PFIC for U.S. federal income tax purposes for any taxable year if, applying applicable look-through rules, either:

at least 75% of its gross income for such year is passive income; or

at least 50% of the value of its assets (determined based on a quarterly average) during such year is attributable to assets that produce or are held for the production of passive income.

For these purposes, we will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, at least 25% by value of the stock. Subject to various exceptions, passive income generally includes dividends, interest, royalties and rents (other than certain royalties and rents derived in the active conduct of a trade or business and not derived from a related person).

We must make a separate determination each year as to whether we are a PFIC. As a result, our PFIC status may change. If we are a PFIC for any taxable year during which you hold ordinary shares, we generally will continue to be treated as a PFIC for all succeeding years during which you hold the ordinary shares. However, if we cease to be a PFIC, you may avoid some of the adverse effects of the PFIC regime by making a deemed sale election with respect to the ordinary shares, as applicable.

If we are or become a PFIC in a taxable year in which we pay a dividend or the prior taxable year, the preferential tax rates discussed above with respect to dividends paid to non-corporate U.S. Holders would not apply. In addition, if we are a PFIC for any taxable year during which you hold ordinary shares, in the absence of a qualifying electing fund election (which, as noted below, will not be available to you), you will be subject to special tax rules with respect to any excess distribution that you receive and any gain you realize from a sale or other disposition (including a pledge)

of the ordinary shares, unless you make a mark-to-market election as discussed below. Distributions you receive in a taxable year that are greater than 125% of the average annual distributions you received during the shorter of the three preceding taxable years or your holding period for the ordinary shares will be treated as an excess distribution. Under these special tax rules:

the excess distribution or gain will be allocated ratably over your holding period for the ordinary shares,

S-22

Table of Contents

the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we became a PFIC, will be treated as ordinary income, and

the amount allocated to each other year will be subject to the highest tax rate in effect for that year and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

The tax liability for amounts allocated to years prior to the year of disposition or excess distribution cannot be offset by any net operating losses for such years, and gains (but not losses) realized on the sale of the ordinary shares cannot be treated as capital, even if you hold the ordinary shares as capital assets.

If we are treated as a PFIC with respect to you for any taxable year, to the extent any of our subsidiaries are also PFICs, you will be deemed to own shares in such lower-tier PFICs that are directly or indirectly owned by us in the proportion that the value of the ordinary shares you own bears to the value of all of our ordinary shares, and you may be subject to the rules described in the preceding paragraphs with respect to the shares of such lower-tier PFICs you are deemed to own. You should consult your own tax advisor regarding the application of the PFIC rules to any of our subsidiaries.

In certain circumstances, a U.S. Holder of shares in a PFIC may avoid the adverse tax consequences described above by making a qualified electing fund election to include in income its share of the corporation's income on a current basis. However, you may make a qualified electing fund election with respect to your ordinary shares only if we agree to furnish you annually with a PFIC annual information statement as specified in the applicable Treasury regulations. We currently do not intend to prepare or provide the information that would enable you to make a qualified electing fund election.

Alternatively, a U.S. Holder of marketable stock (as defined below) in a PFIC may make a mark-to-market election with respect to such stock to elect out of the tax treatment discussed above. If you make a valid mark-to-market election for the ordinary shares you will include in income each year an amount equal to the excess, if any, of the fair market value of the ordinary shares as of the close of your taxable year over your adjusted basis in such ordinary shares. You are allowed a deduction for the excess, if any, of the adjusted basis of the ordinary shares over their fair market value as of the close of the taxable year. However, deductions are allowable only to the extent of any net mark-to-market gains on the ordinary shares included in your income for prior taxable years. Amounts included in your income under a mark-to-market election, as well as gain on the actual sale or other disposition of the ordinary shares, are treated as ordinary income. Ordinary loss treatment also applies to the deductible portion of any mark-to-market loss on the ordinary shares, as well as to any loss realized on the actual sale or disposition of the ordinary shares, to the extent that the amount of such loss does not exceed the net mark-to-market gains previously included for such ordinary shares. Your basis in the ordinary shares will be adjusted to reflect any such income or loss amounts. If you make such an election, the tax rules that apply to distributions by corporations that are not PFICs would apply to distributions by us, except that the preferential tax rate discussed above under Dividends and Other Distributions would not apply.

The mark-to-market election is available only for marketable stock, which is stock that is traded in other than de minimis quantities on at least 15 days during each calendar quarter (regularly traded) on a qualified exchange or other market, as defined in applicable U.S. Treasury regulations. The NASDAQ Global Select Market is a qualified exchange. We anticipate that our ordinary shares will be regularly traded on the NASDAQ Global Select Market, and therefore, in 2015 and any subsequent year in which our ordinary shares continue to be regularly traded, the mark-to-market election would be available to a holder of our ordinary shares if we become a PFIC. If any of our subsidiaries are or become PFICs, the mark-to-market election will not be available with respect to the shares of such

subsidiaries that are treated as owned by you. Consequently, you could be subject to the PFIC rules with respect to income of the lower-tier PFICs the value of which already had been taken into account indirectly via mark-to-market adjustments.

If you hold ordinary shares in any year in which we are a PFIC, you will also be subject to annual information reporting requirements.

S-23

Table of Contents

The PFIC rules are complex, and you should consult your own tax advisors regarding the application of the PFIC rules to your investment in our ordinary shares and the availability, application and consequences of the elections discussed above.

Information Reporting and Backup Withholding

Unless an exception applies, information reporting to the IRS generally will be required with respect to payments on the ordinary shares and proceeds of the sale of the ordinary shares paid to U.S. Holders, other than corporations and other exempt recipients. Backup withholding, currently at the rate of 28%, may apply to those payments if such a holder fails to provide a taxpayer identification number to the paying agent and to certify that no loss of exemption from backup withholding has occurred. The amounts withheld under the backup withholding rules are not an additional tax and may be refunded, or credited against the holder's U.S. federal income tax liability, if any, provided the required information is furnished to the IRS.

In addition, certain U.S. Holders who are individuals that hold certain foreign financial assets (which may include the ordinary shares), or who have a beneficial interest in or signatory authority over certain foreign financial accounts, are required to report information relating to such assets or accounts, subject to certain exceptions, on IRS Form 8938. Substantial penalties may apply to any failure to timely file IRS Form 8938. Additionally, in the event an applicable U.S. Holder that is required to file IRS Form 8938 does not file such form, the statute of limitations on the assessment and collection of U.S. federal income taxes of such U.S. Holder for the related tax year may not close until three years after the date that the required information is filed.

You should consult your own tax advisor regarding the application of the information reporting and backup withholding requirements to your particular situation.

Medicare Tax

Certain U.S. Holders that are individuals, estates or trusts are required to pay an additional 3.8% tax on, among other things, interest, dividends and gains from the sale or other disposition of capital assets. Each U.S. Holder that is an individual, estate or trust should consult its own tax advisors regarding the effect, if any, of this tax provision on their ownership and disposition of ordinary shares.

Material Singapore Tax Considerations

The following discussion is a summary of material Singapore income tax, stamp duty and estate duty considerations relevant to the purchase, ownership and disposition of our ordinary shares by an investor who is not tax resident or domiciled in Singapore and who does not carry on business or otherwise have a presence in Singapore. The statements made herein regarding taxation are based on certain aspects of the tax laws of Singapore and administrative guidelines issued by the relevant authorities in force as of the date hereof and are subject to any changes in such laws or administrative guidelines, or in the interpretation of those laws or guidelines, occurring after such date, which changes could be made on a retroactive basis. The statements made herein do not describe all of the tax considerations that may be relevant to all our shareholders, some of which (such as dealers in securities) may be subject to different rules. The statements are not intended to be and do not constitute legal or tax advice and no assurance can be given that courts or fiscal authorities responsible for the administration of such laws will agree with the interpretation adopted therein. Each prospective investor should consult an independent tax advisor regarding all Singapore income and other tax consequences applicable to them from owning or disposing of our ordinary shares in light of the investor's particular circumstances.

Dividend distributions

Singapore adopts a one-tier corporate income tax system. Under the one-tier corporate income tax system, the tax paid by a company that is tax resident in Singapore is a final tax. Any dividends paid by a company that is tax resident in Singapore are exempt from Singapore income tax in the hands of the company's shareholders.

S-24

Table of Contents

As our company will be a tax resident of Singapore, the dividends payable by our company will be one-tier tax-exempt dividends and will be exempt from Singapore income tax in the hands of our shareholders, regardless of their legal form or tax residence status. There will be no tax credits attached to the dividends payable by our company.

There is no withholding tax on payment of dividends to non-resident shareholders.

Gains on disposal of our shares

Singapore currently does not impose tax on capital gains. However, there are no specific legislations which deal with the characterization of gains as income or capital in nature. Gains arising from the disposal of our shares may be construed to be income in nature and subject to Singapore income tax, especially if they arise from or are otherwise connected with the activities of a trade or business in Singapore. Such gains may also be considered income in nature, even if they do not arise from an activity in the ordinary course of trade or an ordinary incident of some other business activity, if our shares were purchased with the intention or purpose of making a profit by sale and not with the intention to be held for long-term investment purposes. The determination of whether a gain is income or capital in nature is made by reference to case law based on the circumstances of each case, and reference may be made to a number of factors which are indicative of a person's intention.

Section 13Z of the Income Tax Act (Chapter 134) of Singapore (the ITA) provides that, subject to certain conditions and qualifications, gains by companies derived from the disposal of our shares during the period 1 June 2012 to 31 May 2017 (both dates inclusive) will not be subject to Singapore tax if immediately prior to the date of share disposal, the seller legally and beneficially owned at least 20% of our shares for a continuous period of at least 24 months.

For shareholders who are subject to the income tax treatment provided for under Section 34A of the ITA in relation to the adoption of Financial Reporting Standard 39 Financial Instruments: Recognition and Measurement (FRS 39) for accounting purposes, they may be required to recognize gains or losses (not being gains or losses in the nature of capital) even though no sale or disposal of our shares has been made.

The Inland Revenue Authority of Singapore has issued a circular entitled Income Tax Implications Arising from the Adoption of FRS 39 Financial Instruments: Recognition and Measurement (the FRS 39 Circular). Legislative amendments to give effect to the FRS 39 Circular (FRS 39 Tax Treatment) have been enacted in Section 34A of the ITA.

The FRS 39 Tax Treatment generally applies, subject to certain opt-out provisions, to taxpayers who are required to comply with FRS 39 for financial reporting purposes.

Shareholders who adopt or are adopting the FRS 39 Tax Treatment may be required to recognize gains or losses on the shares for Singapore income tax purposes, even if the shares were not disposed of.

Shareholders who may be subject to such provisions should consult their own accounting and tax advisers regarding the Singapore income tax consequences of their acquisition, ownership and disposal of our shares.

Stamp duty

There is no stamp duty payable in respect of the issuance or holding of our ordinary shares. Stamp duty is not applicable to electronic transfers of our shares effected on a book entry basis. Where an instrument of transfer in respect of shares is executed between the parties, stamp duty is payable on an instrument of transfer of the shares at

the rate of 0.2% of the purchase price for, or market value of, the transferred shares, whichever is higher. The stamp duty is borne by the purchaser unless there is an agreement to the contrary. Where the instrument of transfer is executed outside of Singapore, stamp duty must be paid within 30 days of receipt in Singapore if the instrument of transfer is received in Singapore.

S-25

Table of Contents

Estate Duty

Singapore estate duty has been abolished with respect to all deaths occurring on or after February 15, 2008.

Tax Treaties Regarding Withholding Taxes

There is no comprehensive avoidance of double taxation agreement between the United States and Singapore which applies to withholding taxes on dividends or capital gains.

S-26

Table of Contents**UNDERWRITING**

Subject to the terms and conditions of the underwriting agreement, the underwriters named below, through their representatives, Deutsche Bank Securities Inc. and Goldman, Sachs & Co., have severally agreed to purchase from the selling shareholders the following respective number of ordinary shares at a public offering price less the underwriting discounts listed on the cover page of this prospectus supplement:

Underwriters	Number of Shares
Deutsche Bank Securities Inc.	
Goldman, Sachs & Co.	
Barclays Capital Inc.	
Credit Suisse Securities (USA) LLC	
Morgan Stanley & Co. LLC	
BBVA Securities Inc.	
KeyBanc Capital Markets Inc.	
Macquarie Capital (USA) Inc.	
RBC Capital Markets, LLC	
Wells Fargo Securities, LLC	
Total	15,935,828

The underwriting agreement provides that the obligations of the several underwriters to purchase the ordinary shares offered hereby are subject to certain conditions precedent and that the underwriters will purchase all of the ordinary shares offered by this prospectus supplement and the accompanying prospectus if any of these shares are purchased.

We and the selling shareholders have been advised by the representatives of the underwriters that the underwriters propose to offer the ordinary shares to the public at the public offering price listed on the cover of this prospectus supplement and to dealers at a price that represents a concession not in excess of \$ per share under the public offering price. After the initial public offering, the representatives of the underwriters may change the offering price and other selling terms.

The underwriting discounts per share are equal to the public offering price per ordinary share less the amount paid by the underwriters to the selling shareholders per ordinary share. The underwriting discounts are % of the public offering price. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part. The selling shareholders have agreed to pay the underwriters the following discounts:

	Fee per share	Total Fees
Discounts paid by selling shareholders	\$	\$

In addition, we estimate the total expenses of this offering, excluding underwriting discounts and commissions, will be approximately \$747,000. Pursuant to Singapore law, we are restricted from paying registration expenses and related fees in connection with this offering. As a result of this prohibition, SunEdison has agreed to pay all of the offering

expenses in connection with this offering. SunEdison has also agreed to reimburse the underwriters for certain of their expenses in an amount up to \$25,000 as set forth in the underwriting agreement. Separately, SunEdison has entered into an engagement letter with Deutsche Bank Securities Inc. with respect to the provision of financial advisory services and structuring assistance and for which they are entitled (subject to certain conditions) to separate compensation, including \$1,000,000 to be paid to Deutsche Bank Securities Inc. for advisory services related to, and/or payable at the time of, this offering.

S-27

Table of Contents

We and the selling shareholders have agreed to indemnify the several underwriters against some specified types of liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect of any of these liabilities.

Each of our officers and directors and the selling shareholders, SunEdison and the Samsung Parties, have, subject to certain limited exceptions, agreed not to offer, sell, contract to sell or otherwise dispose of, or enter into any transaction that is designed to, or could be expected to, result in the disposition of any ordinary shares or other securities convertible into or exchangeable or exercisable for our ordinary shares or derivatives of our ordinary shares owned by these persons prior to this offering or ordinary shares issuable upon exercise of options held by these persons for a period of 45 days after the date of this prospectus supplement without the prior written consent of Deutsche Bank Securities Inc. and Goldman, Sachs & Co. This consent may be given at any time without public notice except in limited circumstances. We have entered into a similar agreement with the representatives of the underwriters. There are no agreements between the representatives and any of our shareholders or affiliates releasing them from these lock-up agreements prior to the expiration of the 45 day period.

The representatives of the underwriters have advised us that the underwriters do not intend to confirm sales to any account over which it exercises discretionary authority.

In connection with this offering, the underwriters may purchase and sell our ordinary shares in the open market. These transactions may include short sales, purchases to cover positions created by short sales and stabilizing transactions.

Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in this offering. Because the underwriters are required to purchase all of the shares in this offering, any sales in excess of the number of shares offered in this offering would be naked short sales. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares in the open market prior to the completion of this offering.

Stabilizing transactions consist of various bids for or purchases of our ordinary shares made by the underwriters in the open market prior to the completion of this offering.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or slowing a decline in the market price of our ordinary shares. Additionally, these purchases may stabilize, maintain or otherwise affect the market price of our ordinary shares. As a result, the price of our ordinary shares may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Global Select Market, in the over-the-counter market or otherwise.

The prospectus supplement and the accompanying prospectus in electronic format are being made available on the Internet web site maintained by the representatives of the underwriters of this offering and may be available on Internet web sites maintained by other underwriters. Other than the prospectus supplement and accompanying prospectus in electronic format, the information on any underwriter's web site and any information contained in any other web site maintained by any underwriter is not part of the prospectus supplement and accompanying prospectus or the registration statement of which the prospectus supplement and accompanying prospectus forms a part.

Some of the underwriters (or certain of their affiliates) have provided financial advisory and investment banking services to us, SunEdison and the Samsung Parties in the past and may do so in the future. They receive customary fees and commissions for these services.

S-28

Table of Contents

In May 2014, Deutsche Bank Securities Inc., Goldman, Sachs & Co., Wells Fargo Securities, LLC, and Macquarie Capital (USA) Inc. acted as underwriters in connection with the initial public offering of 7,200,000 of our ordinary shares at a public offering price of \$13.00 per share, less discounts and commissions of \$0.8775 per share. In addition, we granted the underwriters in that offering an option to purchase up to 1,080,000 additional shares, all at the public offering price less the underwriting discount. The option was exercised in full prior to closing. In January 2015, Deutsche Bank Securities Inc., Goldman, Sachs & Co., Barclays Capital Inc., Morgan Stanley & Co. LLC and Macquarie Capital (USA) Inc. acted as underwriters in connection with the sale of 15,000,000 of our ordinary shares by SunEdison and the Samsung Parties, in a registered offering, at a public offering price of \$15.19 per share, less discounts and commissions of \$0.6076 per share. In addition, the selling shareholders granted the underwriters in that offering an option to purchase up to 2,250,000 additional shares, all at the public offering price less the underwriting discount. The option was exercised in full prior to closing.

In 2011, Deutsche Bank Securities Inc. and Goldman, Sachs & Co. acted as initial purchasers in connection with the offering of SunEdison's 7.750% senior notes due 2019. In December 2013, Deutsche Bank Securities Inc., Goldman, Sachs & Co., Macquarie Capital (USA) Inc. and Wells Fargo Securities, LLC acted as initial purchasers in connection with the offering of SunEdison's 2.00% convertible senior notes due 2018 and its 2.75% convertible senior notes due 2021. In June 2014, Deutsche Bank Securities Inc., Goldman, Sachs & Co., Barclays Capital Inc., Macquarie Capital (USA) Inc. and Wells Fargo Securities, LLC acted as initial purchasers in connection with the offering of SunEdison's 0.25% convertible senior notes due 2020. In January 2015, Goldman, Sachs & Co. acted as an initial purchaser in connection with the offering of SunEdison's 2.375% convertible senior notes due 2022. In May 2015, each of the underwriters in this offering acted as an initial purchaser in connection with the offering of SunEdison's 2.625% convertible senior notes due 2023 and 3.375% convertible senior notes due 2025. In connection with these offerings, the underwriters received customary fees and commissions. In addition, affiliates of each of Deutsche Bank Securities Inc., Goldman, Sachs & Co., Barclays Capital Inc. and Macquarie Capital (USA) Inc. are lenders under SunEdison's credit facility.

In 2013, Deutsche Bank Securities Inc., Goldman, Sachs & Co. and Wells Fargo Securities, LLC acted as joint book-running managers in connection with the issuance and sale in a registered offering of 30,000,000 shares of SunEdison's common stock, par value \$0.01 per share, at a public offering price of \$7.25 per share, less discounts and commissions of \$0.29 per share. In addition, SunEdison granted the underwriters in that offering an option to purchase up to 4,500,000 additional shares, all at the public offering price less the underwriting discount. The option was exercised in full prior to closing.

The underwriters (including their respective affiliates) are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and certain of their respective affiliates have provided, and may in the future provide, a variety of these services to us and to persons and entities having relationships with us, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively traded securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities having relationships with us. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or

recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

S-29

Table of Contents

Notice to Investors in the European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State) an offer to the public of any shares which are the subject of this offering contemplated by this prospectus supplement and accompanying prospectus may not be made in that Relevant Member State other than the offers contemplated in the prospectus supplement and accompanying prospectus once the such documents have been approved by the competent authority in such Member State and published and passported in accordance with the Prospectus Directive as implemented in the Relevant Member State except that an offer to the public in that Relevant Member State of any shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than 43,000,000 and (3) an annual net turnover of more than 50,000,000, as shown in its last annual or consolidated accounts;

by the underwriters to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the underwriters for any such offer; or

in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall result in a requirement for the publication by the Issuer or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer to the public in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, as the same may be varied in that member state by any measure implementing the Prospectus Directive in that member state and the expression Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

Notice to Investors in the United Kingdom

Each underwriter has represented and agreed that (a) it has only communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or the FSMA, received by it in connection with the issue or sale of the shares (i) to investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, or the Order, or (ii) to high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) and (d) of the Order, with all such persons together being referred to as relevant persons, and (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the our ordinary shares in, from or otherwise involving the United Kingdom. This prospectus supplement and accompanying prospectus and its contents are confidential and should not

be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to Prospective Investors in Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance

S-30

Table of Contents

(Cap. 32, Laws of Hong Kong), or (ii) to professional investors within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a prospectus within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Singapore

This prospectus supplement and accompanying prospectus have not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement, accompanying prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:
 - (1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
 - (2) where no consideration is or will be given for the transfer;
 - (3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Notice to Prospective Investors in Switzerland

The prospectus and accompanying prospectus do not constitute an issue prospectus pursuant to Article 652a or Article 1156 of the Swiss Code of Obligations, and the shares will not be listed on the SIX Swiss Exchange. Therefore, the prospectus supplement and accompanying prospectus may not comply with the disclosure standards of the Swiss Code of Obligations and/or the listing rules (including any prospectus schemes) of the SIX Swiss Exchange. Accordingly, the shares may not be offered to the public in or from Switzerland, but only to a selected and limited circle of investors, which do not subscribe to the shares with a view to distribution.

S-31

Table of Contents

Notice to Prospective Investors in Qatar

The shares described in this prospectus supplement and accompanying prospectus have not been, and will not be, offered, sold or delivered, at any time, directly or indirectly in the State of Qatar in a manner that would constitute a public offering. This prospectus supplement and accompanying prospectus have not been, and will not be, registered with or approved by the Qatar Financial Markets Authority or Qatar Central Bank and may not be publicly distributed. This prospectus supplement and accompanying prospectus are intended for the original recipient only and must not be provided to any other person. It is not for general circulation in the State of Qatar and may not be reproduced or used for any other purpose.

Notice to Prospective Investors in Saudi Arabia

No offering, whether directly or indirectly, will be made to an investor in the Kingdom of Saudi Arabia unless such offering is in accordance with the applicable laws of the Kingdom of Saudi Arabia and the rules and regulations of the Capital Market Authority, including the Capital Market Law of the Kingdom of Saudi Arabia. The shares will not be marketed or sold in the Kingdom of Saudi Arabia by us or the underwriters.

This prospectus supplement and accompanying prospectus may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Office of Securities Regulation issued by the Capital Market Authority. The Saudi Arabian Capital Market Authority does not make any representation as to the accuracy or completeness of this prospectus supplement and accompanying prospectus and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this prospectus supplement and accompanying prospectus. Prospective purchasers of the shares offered hereby should conduct their own due diligence on the accuracy of the information relating to the shares. If you do not understand the contents of this prospectus supplement and accompanying prospectus, you should consult an authorized financial advisor.

Notice to Prospective Investors in the United Arab Emirates

This offering has not been approved or licensed by the Central Bank of the United Arab Emirates (UAE), Securities and Commodities Authority of the UAE and/or any other relevant licensing authority in the UAE including any licensing authority incorporated under the laws and regulations of any of the free zones established and operating in the territory of the UAE, in particular the Dubai Financial Services Authority (DFSA), a regulatory authority of the Dubai International Financial Centre (DIFC). This offering does not constitute a public offer of securities in the UAE, DIFC and/or any other free zone in accordance with the Commercial Companies Law, Federal Law No 8 of 1984 (as amended), DFSA Offered Securities Rules and NASDAQ Dubai Listing Rules, accordingly, or otherwise. The shares may not be offered to the public in the UAE and/or any of the free zones.

The shares may be offered and issued only to a limited number of investors in the UAE or any of its free zones who qualify as sophisticated investors under the relevant laws and regulations of the UAE or the free zone concerned.

Notice to Investors in Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (the Financial Instruments and Exchange Law) and each underwriter has agreed that it will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and

Exchange Law and any other applicable laws, regulations and ministerial guidelines of Japan.

S-32

Table of Contents

LEGAL MATTERS

The validity of the ordinary shares offered pursuant to this prospectus supplement and accompanying prospectus will be passed upon for us by Rajah & Tann Singapore LLP with respect to Singapore law. Certain other legal matters relating to this offering will be passed upon for us by Bryan Cave LLP, Washington, DC. The underwriters have been represented by Latham & Watkins LLP, Menlo Park, California.

EXPERTS

The consolidated financial statements of SunEdison Semiconductor Limited as of December 31, 2014 and 2013, and for each of the years in the three-year period ended December 31, 2014, have been incorporated by reference herein from SunEdison Semiconductor Limited's Annual Report on Form 10-K for the year ended December 31, 2014, in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

Our website address is www.sunedisonsemi.com. The information on our website, however, is not, and should not be deemed to be, a part of this prospectus supplement and accompanying prospectus.

This prospectus supplement and accompanying prospectus are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement. Statements in this prospectus supplement and accompanying prospectus about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement at the SEC's Public Reference Room in Washington, D.C. or through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to incorporate by reference information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus supplement, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement modifies or replaces that statement.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, between the date of this prospectus supplement and the

termination of the offering of the securities described in this prospectus supplement. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the

S-33

Table of Contents

future, that are not deemed filed with the SEC, including our share price performance graph or any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

our Annual Report on Form 10-K for the fiscal year ended December 31, 2014, filed on March 2, 2015;

our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2015, filed on May 7, 2015;

our Current Reports on Form 8-K filed on January 23, 2015, February 3, 2015, February 10, 2015, April 6, 2015, April 29, 2015, and June 24, 2015; and

the description of our ordinary shares contained in our registration statement on Form 8-A filed with the SEC on May 19, 2014, including any amendment or report filed for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus supplement and deemed to be part of this prospectus supplement from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus supplement or the accompanying prospectus (other than exhibits, unless they are specifically incorporated by reference in this prospectus supplement or the accompanying prospectus) by writing or telephoning us at the following address:

SunEdison Semiconductor Limited

501 Pearl Drive

St. Peters, MO 63376

Attn: General Counsel

(636) 474-5000

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus supplement or the accompanying prospectus.

Neither we, nor the selling shareholders, have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We and the selling shareholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement and the accompanying prospectus is accurate as of the date on its respective cover, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise.

S-34

Table of Contents

PROSPECTUS

15,935,829 Ordinary Shares

SunEdison Semiconductor Limited

This prospectus relates to the offer and sale from time to time of up to 15,935,829 ordinary shares, no par value, of SunEdison Semiconductor Limited by the selling shareholders identified in this prospectus or in supplements to this prospectus. See Selling Shareholders. The registration of the ordinary shares to which this prospectus relates does not require the selling shareholders to sell any of their ordinary shares.

We will not receive any proceeds from the sale of the ordinary shares by the selling shareholders. The selling shareholders from time to time may offer and sell the ordinary shares held by them directly or through underwriters, agents or broker-dealers on terms to be determined at the time of sale, as described in more detail in this prospectus. For more information, see Plan of Distribution.

Our ordinary shares are traded on the NASDAQ Global Select Market under the symbol SEMI. On May 29, 2015, the last reported sale price of our ordinary shares was \$24.18 per share.

Investing in our ordinary shares involves risks. Before making a decision to invest in our ordinary shares, you should refer to the risk factors included in our periodic reports, in prospectus supplements relating to specific offerings and in other information that we file with the Securities and Exchange Commission, or SEC. See Risk Factors on page 6 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 23, 2015.

Table of Contents

TABLE OF CONTENTS

<u>ABOUT THIS PROSPECTUS</u>	1
<u>CAUTIONARY STATEMENT CONCERNING FORWARD LOOKING STATEMENTS</u>	2
<u>THE COMPANY</u>	3
<u>RISK FACTORS</u>	6
<u>ENFORCEMENT OF CIVIL LIABILITIES UNDER UNITED STATES FEDERAL SECURITIES LAWS</u>	6
<u>SELLING SHAREHOLDERS</u>	7
<u>DESCRIPTION OF CERTAIN INDEBTEDNESS</u>	18
<u>DESCRIPTION OF SHARE CAPITAL</u>	20
<u>COMPARISON OF SHAREHOLDER RIGHTS</u>	27
<u>PLAN OF DISTRIBUTION</u>	39
<u>LEGAL MATTERS</u>	40
<u>EXPERTS</u>	40
<u>WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE</u>	40

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities Exchange Commission, or SEC, using a shelf registration process. Under the shelf registration process, the selling shareholders may, from time to time, offer and sell the ordinary shares described in this prospectus and in any accompanying prospectus supplement in one or more transactions. This prospectus provides you with a general description of the ordinary shares the selling shareholders may offer. Each time the selling shareholders sell our ordinary shares using this prospectus, to the extent necessary, we will provide a prospectus supplement that will contain specific information about the terms of that offering, including the number of ordinary shares being offered, the manner of distribution, the identity of any underwriters or other counterparties and other specific terms related to the offering. The prospectus supplement may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you should rely on the prospectus supplement. Before purchasing any ordinary shares, you should carefully read both this prospectus and the applicable prospectus supplement, together with the additional information described under the heading **Where You Can Find More Information; Incorporation by Reference**.

Neither we, nor the selling shareholders, have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We and the selling shareholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and the applicable prospectus supplement to this prospectus is accurate as of the date on its respective cover, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates.

As used in this prospectus, unless the context otherwise indicates, the reference to (i) our business, we, our, us, the Company or similar terms refer to the semiconductor materials business as operated as a business segment of SunEdison, Inc. or SunEdison, for periods prior to the Transactions (as described below in **The Company Structure and Formation**), and to SunEdison Semiconductor Limited, together with, where appropriate, its consolidated subsidiaries, for periods after the completion of the Transactions, and (ii) S\$ refers to SunEdison Semiconductor Limited exclusive of its subsidiaries. References in this prospectus to S\$ refer to Singapore dollars.

The name and mark, SunEdison, Inc., and other trademarks, trade names and service marks of SunEdison, Inc. appearing in this prospectus are the property of SunEdison, Inc. SunEdison Semiconductor Limited and other trademarks, trade names and service marks of SunEdison Semiconductor Limited appearing in this prospectus are the property of SunEdison Semiconductor Limited. This prospectus also contains additional trade names, trademarks and service marks belonging to SunEdison, Inc. and to other companies. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

For investors outside the United States: Neither we nor any of the underwriters have taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who have come into possession of this prospectus in a jurisdiction outside the United States are required to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

Table of Contents

CAUTIONARY STATEMENT CONCERNING FORWARD LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of the federal securities laws. All statements other than statements of historical fact included in this prospectus are forward-looking statements. These statements relate to analyses and other information, which are based on forecasts of future results and estimates of amounts not yet determinable. These statements also relate to our future prospects, developments and business strategies. These forward-looking statements are identified by the use of terms and phrases such as anticipate, believe, could, estimate, expect, intend, may, plan, predict, project, will and similar terms and phrases, including references to assumptions. However, these words are not the exclusive means of identifying such statements. These statements include, but are not limited to, statements about:

demand and/or pricing of our products or the pricing environment in the future;

the appropriateness of our tax positions and the timing of our tax audits;

the timing of our various manufacturing ramps or the cessation or continuation of production at certain facilities;

the anticipated growth of our business; the effects of economic factors on our market capitalization;

our expectation that we will have the financial resources and liquidity needed to meet our business requirements;

the ultimate impact our legal proceedings may have on us;

the charges we expect to incur, the timing of completion, the savings we expect to realize, the number of employees who will be affected and our execution of our announced restructurings and the number of employees who will be affected;

our expectations regarding our investments in research and development;

our expectations regarding our future cash flow generation; the timing of reaching full commercial capabilities of the SMP, Ltd. facility, or joint venture to produce high purity polysilicon, including electronic grade polysilicon;

the requirements of and our compliance with the terms governing our indebtedness;

our ability to compete effectively in the markets we serve; and

our working capital and other capital requirements.

These forward-looking statements are based on management's current expectations, estimates, forecasts, and projections about our business and the industry in which we operate and management's beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this prospectus may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under "Risk Factors" and elsewhere in or incorporated by reference in this prospectus. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See "Where You Can Find More Information; Incorporation By Reference."

Table of Contents

THE COMPANY

We are a global leader in the development, manufacture and sale of silicon wafers to the semiconductor industry. Wafers are used as the base substrate for nearly all semiconductor devices, which in turn provide the foundation for the entire electronics industry. Our business was established in 1959 and was known during most of our history as MEMC Electronic Materials, Inc., or MEMC. We became a stand-alone public company upon the completion of our initial public offering on May 28, 2014, or our IPO. We have developed a broad product portfolio, an extensive global manufacturing footprint, process technology expertise and supply chain flexibility, while increasing our capital efficiency and maintaining a lean operating culture.

Throughout our over 50 years of operations, we have pioneered a number of semiconductor industry firsts, including the development of the dislocation-free Czochralski silicon crystal growth process and the chemical-mechanical planarization process, as well as the initial production and commercialization of 100mm and 200mm semiconductor wafers. More recently, we have been a leader in the development of advanced substrates such as epitaxial wafers and wafers for the silicon-on-insulator market, which enable advanced computing and communications applications.

We primarily sell our products to all of the major semiconductor manufacturers in the world, including integrated device manufacturers and pure-play semiconductor foundries, and to a lesser extent, leading companies that specialize in wafer customization. During 2014, our largest customers were Samsung Electronics Co., Ltd., or Samsung Electronics, Taiwan Semiconductor Manufacturing Company and STMicroelectronics. We operate facilities in major semiconductor manufacturing regions throughout the world, including Taiwan, Malaysia, South Korea, Italy, Japan and the United States. We have chosen to locate our manufacturing facilities in regions that offer both low operating costs and close proximity to our customers to facilitate collaboration on product development activities and shorten product delivery times.

Our principal executive offices are located at 11 Lorong 3 Toa Payoh, Singapore 319579, and our telephone number is (65) 6681-9300. Our website address is www.sunedisonsemi.com. The information on our website, however, is not, and should not be deemed to be, a part of this prospectus.

Structure and Formation

Prior to the completion of our IPO, SSL was a wholly owned subsidiary of SunEdison. Prior to or simultaneously with the completion of our IPO, we and SunEdison engaged in a series of transactions that resulted in the transfer of the ownership of the semiconductor materials business to SSL, facilitated our IPO and enabled us to raise necessary capital to pay SunEdison for such asset transfers and repay our existing indebtedness, including intercompany indebtedness and certain trade accounts owed to SunEdison. We collectively refer to the transactions undertaken as part of our initial formation as summarized below throughout this prospectus as the Formation Transactions:

In exchange for aggregate consideration consisting of 23.6 million ordinary shares, intercompany notes in an aggregate principal amount of \$273.5 million and the assumption by us of all liabilities related to the semiconductor materials business, SunEdison contributed the following assets to us:

effective as of December 31, 2013, SunEdison contributed all of the outstanding capital stock of its subsidiaries that own and operate its semiconductor materials business, other than a 40% interest held by a subsidiary of SunEdison in MEMC Korea Company, or MKC, and all of the assets primarily

related to its semiconductor material business held by SunEdison or its subsidiaries to SSL;

in January 2014, SunEdison caused one of its subsidiaries to contribute its 40% interest in MKC to us;
and

Table of Contents

in connection with the completion of our IPO, SunEdison contributed to us a 35% interest in SMP Ltd., or SMP, that SunEdison acquired from Samsung Fine Chemicals for a cash purchase price of 143.9 billion South Korean won, or approximately \$140.7 million at currency exchange rates as of the date of the transaction, May 27, 2014.

We entered into transition services, intellectual property licensing, tax sharing and other commercial agreements with SunEdison and certain of its subsidiaries. See Selling Shareholders-Material Relationships. In connection with the completion of our IPO, Samsung Fine Chemicals Co., Ltd., or Samsung Fine Chemicals, and Samsung Electronics purchased 7,200,000 and 2,425,578, respectively, of our ordinary shares in separate private placements at a price per share equal to the IPO price of \$13.00 per share. Throughout this prospectus, we collectively refer to these purchasers as the Samsung Purchasers and these purchases as the Samsung Private Placements. Samsung Fine Chemicals is a joint venture partner of a subsidiary of SunEdison in SMP. Samsung Electronics is one of our customers and was our joint venture partner in MKC. As consideration for the issuance of the ordinary shares, (i) Samsung Fine Chemicals made an aggregate cash investment in us of \$93.6 million and (ii) Samsung Electronics transferred to us its 20% interest in MKC. In connection with the Samsung Private Placements, we also entered into a wafer purchase and sale agreement with Samsung Electronics.

As a result of the Formation Transactions described above, SMP is owned 35% by us, 50% by a subsidiary of SunEdison and 15% by Samsung Fine Chemicals, and MKC is 100% owned by us. SMP owns a polysilicon manufacturing facility in South Korea and MKC owns a manufacturing facility in South Korea that produces 200mm and 300mm semiconductor wafers. Construction of the SMP polysilicon manufacturing facility was recently completed. The facility is in the initial stages of polysilicon production but has not reached full commercial capabilities at this time. We anticipate using polysilicon from the facility in late 2015 and expect to begin purchasing substantial volume in 2016. We believe this investment in SMP will create financial and strategic value for us by introducing a source of polysilicon that we partially own, and which we expect will provide competitive prices and reduce the risk of supply interruptions. The Samsung Private Placements also resulted in us having 100% ownership and control of the silicon wafer manufacturing operation at the MKC manufacturing facility, which we believe will give us additional flexibility to respond quickly to changes in the silicon wafer industry.

We collectively refer to the transactions undertaken to finance the Formation Transactions and otherwise provide us with future liquidity as summarized below throughout this prospectus as the Financing Transactions:

We used approximately \$198.1 million of net proceeds after deducting issuance costs from borrowings under a senior secured term loan from financial institutions and \$75.4 million of net proceeds from the Samsung Private Placements, to repay in full the intercompany notes issued to SunEdison in connection with the asset transfers contemplated as part of the Formation Transactions.

We used approximately \$9.6 million of the net proceeds from the Samsung Private Placements to repay existing third party indebtedness that was associated with the semiconductor materials business.

We retained approximately \$99.0 million of net proceeds from our IPO, together with the remaining \$2.3 million of net proceeds from the Samsung Private Placements, as cash on our balance sheet, which provided us with additional liquidity and flexibility in our capital structure.

We entered into a senior secured revolving credit facility that provides for up to \$50.0 million of borrowings for working capital purposes.

For ease of reference, we sometimes collectively refer to our IPO, the Formation Transactions, the Financing Transactions and the Samsung Private Placements throughout this prospectus as the Transactions.

Table of Contents

Prior Secondary Offering

On January 20, 2015, a secondary public offering of 17,250,000 ordinary shares by the selling shareholders, or the Secondary Offering, was completed. As a result of the Secondary Offering, SunEdison's ownership was reduced from 56.8% of our outstanding ordinary shares to 25.6%, and Samsung Fine Chemicals and Samsung Electronics ownership was reduced from 17.4% and 5.8% of our outstanding ordinary shares, respectively, to 9.4% and 3.4%, respectively. We did not receive any of the proceeds from the sale of these ordinary shares.

Table of Contents

RISK FACTORS

Investment in our ordinary shares offered pursuant to this prospectus and the applicable prospectus supplement involves risks. You should carefully consider the risk factors incorporated by reference into this prospectus from our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K that we have filed or that we file after the date of this prospectus, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement before acquiring any ordinary shares. The occurrence of any of these risks might cause you to lose all or part of your investment.

ENFORCEMENT OF CIVIL LIABILITIES UNDER UNITED STATES FEDERAL SECURITIES LAWS

We are incorporated under the laws of the Republic of Singapore, and certain of our directors are residents outside the United States. Moreover, a majority of our consolidated assets are located outside the United States. Although we are incorporated outside the United States, we have agreed to accept service of process in the United States through our agent designated for that purpose. Nevertheless, since a majority of the consolidated assets owned by us are located outside the United States, any judgment obtained in the United States against us may not be collectible within the United States. There is no treaty between the United States and Singapore providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters and a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the federal securities laws, would, therefore, not be automatically enforceable in Singapore. It is not clear whether a Singapore court may impose civil liability on us or our directors and officers who reside in Singapore in a suit brought in the Singapore courts against us or such persons with respect to a violation solely of the federal securities laws of the United States. In making a determination as to enforceability of a foreign judgment, the Singapore courts would have regard to whether the judgment was final and conclusive, given by a court of competent jurisdiction, and was expressed to be for a fixed sum of money. In general, such foreign judgments would be enforceable in Singapore unless they were procured by fraud, or the proceedings in which such judgments were obtained were not conducted in accordance with principles of natural justice, or the enforcement thereof would be contrary to public policy. Accordingly, there can be no assurance that the Singapore courts would enforce against us, our directors or our officers resident in Singapore judgments obtained in the United States which are predicated upon the civil liability provisions of the federal securities laws of the United States. In addition, holders of book-entry interests in our shares will be required to exchange such interests for certificated shares and to be registered as shareholders in our shareholder register in order to have standing to bring a shareholder suit and, if successful, to enforce a foreign judgment against us, our directors or our executive officers in the Singapore courts. A holder of book-entry interests in our shares may become a registered shareholder of our company by exchanging its interest in our shares for certificated shares and being registered in our shareholder register. The administrative process of becoming a registered shareholder could result in delays prejudicial to any legal proceeding or enforcement action.

Table of Contents

SELLING SHAREHOLDERS

This prospectus relates to the possible resale by the selling shareholders to be identified in a prospectus supplement of up to 15,935,829 of our ordinary shares that were issued and outstanding, prior to the original date of filing of the registration statement of which this prospectus forms a part. SunEdison acquired the 10,608,904 ordinary shares included in this prospectus in May 2014 as part of the consideration it received in connection with the Formation Transactions. The Samsung Purchasers originally acquired the 5,326,925 ordinary shares included in this prospectus in May 2014 pursuant to the Samsung Private Placements. SunEdison and the Samsung Purchasers previously sold a portion of the ordinary shares acquired in the Formation Transactions and the Samsung Private Placements, respectively, in the Secondary Offering.

Selling shareholders may use this prospectus in connection with resales of the ordinary shares. The applicable prospectus supplement will identify the selling shareholders and the maximum number of shares being offered by such selling shareholder, among other things. The selling shareholders will receive all the proceeds from the sale of our ordinary shares. We will not receive any proceeds from sales of ordinary shares by the selling shareholders.

Material Relationships

Relationship with SunEdison

We and SunEdison have entered into certain agreements that effected the separation of our business from SunEdison and provide a framework for our ongoing relationship with SunEdison. We entered into these agreements at a time when we were a wholly owned subsidiary of SunEdison. Accordingly, some of the terms and provisions of these agreements may be less favorable to us than terms and provisions we could have obtained in arm's length negotiations with unaffiliated third parties. The following is a summary of certain material terms of such agreements with SunEdison.

The agreements summarized below have been filed as exhibits to our filings with the SEC, and the summaries of these agreements set forth the terms of the agreements that we believe are material. These summaries are qualified in their entirety by reference to the full text of such agreements.

Separation Agreement

In connection with the completion of our IPO, we entered into a separation agreement with SunEdison. This separation agreement governs certain pre-offering transactions between SunEdison and us, as well as aspects of the relationship between SunEdison and us following our IPO and the Transactions, which are not otherwise governed by the other agreements set forth below. The separation agreement provides further assurances and covenants between SunEdison and us to ensure that the separation of our business from SunEdison was executed pursuant to our intent and that commercially reasonable efforts will be taken to do all things reasonably necessary to consummate and make effective the pre-offering transactions and the Transactions. The separation agreement provides for mutually agreed exchange of information, confidentiality, dispute resolution methods and limitations of liability.

Transition Services Agreement

In connection with the completion of our IPO, we entered into a transition services agreement with SunEdison in which we and SunEdison agreed to mutually provide each other certain corporate, general and administrative services following the completion of our IPO for the term set forth for such service in each annex to the agreement. The material terms of this agreement are discussed below.

Under the agreement, we and SunEdison agreed to mutually provide each other certain corporate, general and administrative services, including services related to information technology and telecommunications,

Table of Contents

payroll, benefits and human resources administration, taxes, real estate and facilities management, office management, intellectual property management and research and development. To the extent either we or SunEdison identify any additional services that are needed to transition the respective businesses in connection with our IPO, then we and SunEdison agreed to cooperate in good faith to negotiate the terms of such additional services.

The quality of transition services to be provided pursuant to the agreement must be substantially similar to those provided internally to each party's subsidiaries and affiliates, and, where applicable, substantially consistent with the quality and scope of such services provided prior to the effective date of the agreement. In addition, each party is required to use commercially reasonable efforts, at the recipient party's expense, to obtain any third-party consents, licenses, or approvals that are required for the performance of services, and to the extent such third-party consents, licenses or approvals are not obtained then either party can immediately terminate the affected service. Additionally, each party may use its reasonable discretion in prioritizing requests for services among its own subsidiaries and affiliates and those of the other party, provided that each party communicates any scheduling issues to the other party and uses commercially reasonable efforts to accommodate requests for services. Either party may engage subcontractors to provide services covered by the transition services agreement, and neither party is required to add or retain staff, equipment, facilities or other resources in order to provide any transition services unless otherwise agreed.

Each party warrants that it shall use reasonable care in providing transition services to the other party and that such services will be provided in accordance with applicable laws, rules and regulations. The provider of any service has no liability with respect to furnishing such service except to the extent resulting from the provider's gross negligence or willful misconduct. In no event will either party be liable for any indirect, incidental, special, punitive, exemplary or consequential damages, lost profits, loss of goodwill or lost opportunities relating to the transition services agreement, and in no event will the provider's liability with respect to its furnishing of services exceed the aggregate amount of fees paid to the provider (excluding any direct charges) under the transition services agreement.

Each party agreed to use commercially reasonable efforts to transition each service being provided under the agreement to its own internal organization or to obtain alternate third-party sources to provide such services within 24 months after the completion of our IPO. The agreement expires on the 24 month anniversary of our IPO, unless otherwise agreed by the parties, or upon the expiration of all services provided under the agreement. Either party may terminate the agreement prior to the expiration date upon 45 days' prior written notice to the other party or immediately upon the other party's insolvency. In addition, either party may terminate the agreement if the other party commits a material breach of the agreement and fails to remedy such breach within 30 days after written notice from the non-breaching party.

In the event a third party obtains a controlling interest in us, or in the event we or any of our affiliates are merged or consolidated with a third party, SunEdison has the right to terminate this agreement upon 10 days' written notice provided within 30 days of such change of control event. Notwithstanding the above, in the event a third party that is active in the same field as SunEdison's solar energy business gains a controlling interest in us or any of our affiliates, SunEdison has the right to terminate the agreement and all services thereunder upon 30 days' written notice. Under the agreement, controlling interest means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of us, whether through the ownership of voting securities, by contract or otherwise.

Under the transition services agreement, the provider of a service generally charges the recipient party an agreed upon monthly service fee during the term of such service as set forth in the agreement, as well any direct charges for external costs associated with such service, including third party legal, accounting and advisor fees, costs associated with any telecommunications contracts or information service licenses and insurance costs. In addition, any fees based on full time employee calculations are adjusted semi-annually upon the agreement of the parties. Except as provided in the agreement, the fee for each service is subject to an automatic five percent

Table of Contents

increase on January 1 of each year following the effective date of the agreement. In 2014, SunEdison paid aggregate fees to us for the services covered by the transition services agreement of approximately \$5.7 million, and we paid SunEdison aggregate fees for the services covered by the transition services agreement of approximately \$1.0 million.

The payments that we make to SunEdison pursuant to the transition services agreement are not necessarily indicative of, and it is not practical for us to estimate, the level of expenses we might incur in procuring these services from alternative sources.

Under the transition services agreement, each party is obligated to maintain the confidentiality of confidential information of the other party for a period of 10 years following the termination of the transition services agreement.

Intellectual Property Licensing Agreements

Under the intellectual property agreements we entered into in connection with the Transactions, SunEdison has licensed to us certain of its retained intellectual property rights applicable to manufacturing semiconductor wafers, including certain rights related to continuous Czochralski, or CCZ, and diamond wire cutting, excluding fluidized bed reactor polysilicon technology, or FBR, and high-pressure FBR. These agreements are described below.

Patent and Technology Cross-License Agreement

In connection with the completion of our IPO, we entered into a patent and technology cross-license agreement with SunEdison. Under the agreement, we agreed to license to SunEdison substantially all of our patents, patent applications, software, trade secrets, know-how and other intellectual property that have application in SunEdison's solar energy business, and SunEdison licensed to us substantially all of its patents, patent applications, software, trade secrets, know-how and other intellectual property that have application in our semiconductor wafer business. The licensed intellectual property includes intellectual property within the applicable field of use that each party owns or has a right to grant an exclusive license under during the period from the closing of our IPO until the earlier of (i) the fifth anniversary of the closing of our IPO and (ii) a change in control of such party involving a competitor of the other party, provided that our field of use is limited to the semiconductor industry and the production of semiconductor wafers. The intellectual property licensed by SunEdison to us under the agreement excludes all intellectual property related to CCZ, diamond coated wire, FBR and high-pressure FBR, with such arrangements to be set forth in separate agreements as described below.

The licenses granted by each party under the agreement are exclusive, worldwide, perpetual, non-transferable (except by assignment with the other party's written consent), royalty-free licenses to use the above-described intellectual property rights within such party's respective field of use. Each party may grant sub-licenses of the intellectual property licensed to it under the agreement only with the other party's prior written consent, provided such consent may not be unreasonably withheld, conditioned or delayed. Each party owns all improvements, derivative works, enhancements and other modifications developed by such party with respect to the intellectual property licensed to it under the agreement (unless such improvements are developed under the technology joint development agreement described below, in which case ownership is governed by the technology joint development agreement), provided that such party is obligated to disclose such improvements to the other party during the term of the agreement and, upon the other party's request, grant to the other party a royalty free, non-exclusive, worldwide, perpetual, non-transferable (except by assignment with the other party's consent) license to use such improvements in the other party's field of use.

Each party has the first right, at its own expense, to control an enforcement action relating to intellectual property licensed to it under the agreement with a primary application in such party's field of use. If such party does not initiate and control an enforcement action with respect to infringement, misappropriation or other

Table of Contents

violation of any intellectual property licensed to it under this agreement within 90 days of receipt of a request from the other party to assume control over such action, then the other party has the right to control the enforcement action, provided that if it does not do so within 90 days, this right reverts back to the initial party.

The agreement continues in effect until the expiration of the last item of licensed intellectual property (which expiration, in the case of patents, is the expiration of the statutory term (including all extensions and renewals) of such patents, and in the case of know-how and trade secrets, is the date on which such know-how and trade secrets are no longer non-public). The agreement may be terminated early by the parties' mutual written agreement. In addition, either party may terminate the agreement if the other party commits a material breach of the agreement and fails to remedy such breach within 60 days after written notice from the non-breaching party.

CCZ and Diamond Coated Wire License Agreement

In connection with the completion of our IPO, we entered into a patent and technology license agreement with SunEdison regarding CCZ silicon crystal growth and diamond coated wire intellectual property. The material terms of this agreement are discussed below.

Under the agreement, SunEdison licensed to us and certain of our subsidiaries in the United States and Italy its U.S. and foreign patents and patent applications and its technology (including discoveries, conceptions, ideas, improvements, enhancements and inventions and data) relating to CCZ silicon crystal growth and diamond coated wire technology, provided that our use of such licensed intellectual property is limited to the semiconductor industry and the production of semiconductor wafers. The agreement prohibits us from using the licensed intellectual property for the manufacture of polysilicon, the manufacture of materials used in the solar photovoltaic industry, or for balance of system hardware or software used in solar systems. Additionally, the agreement prohibits SunEdison from licensing the applicable intellectual property to any third party for use in the production of semiconductor wafers and similar uses in the semiconductor industry.

The licenses granted under the agreement are non-exclusive, perpetual, non-transferable (except in limited circumstances) royalty-free licenses within the territories of the United States and Italy. We generally are prohibited from granting sub-licenses of the intellectual property licensed to us under the agreement without the prior written consent of SunEdison, provided such consent may not to be unreasonably withheld, conditioned or delayed. However, we do not need prior written consent to grant sublicenses to certain of our vendors for purposes of the commercialization of the licensed intellectual property so long as such vendors have been used or otherwise approved by SunEdison, and, in the case of a sublicense granted in territories other than the United States and Italy, such sublicense is made at least one year after the effective date of the agreement. Unless otherwise agreed by SunEdison in its sole discretion, SunEdison exclusively owns all improvements and other intellectual property developed by us with respect to the intellectual property licensed under the agreement. Any such improvements will be included within the licensed intellectual property and subject to the license described above. We are obligated to share with SunEdison on a monthly basis all of our research and development, test results and performance data relating to our use of CCZ and diamond coated wire.

The agreement has a term of five years, provided that the parties may mutually agree in writing to extend the term. The agreement may be terminated early by the parties' mutual written agreement. Either party may terminate the agreement if the other party commits a material breach of the agreement and fails to remedy such breach within 60 days after written notice from the non-breaching party. SunEdison may also terminate the agreement within 60 days of a third party obtaining a controlling interest in us. Under the agreement, controlling interest means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of us, whether through the ownership of voting securities, by contract or otherwise.

In the event of a termination other than for cause, the licenses granted to us under the agreement will continue on a perpetual basis solely with respect to the licensed intellectual property in existence as of the time of

Table of Contents

such termination. However, in the event a third party active in the manufacture of polysilicon, the manufacture of solar products or related activities in the solar energy field gains a controlling interest in us, then SunEdison may terminate immediately all licenses under the agreement other than the license related to improvements to the licensed intellectual property, which license will be perpetual regardless of the manner in which the agreement is terminated or the termination of all other licenses.

If, as a result of any third party claim of infringement or misappropriation pertaining to any of the licensed intellectual property, we are enjoined from using the licensed intellectual property, or if SunEdison reasonably believes that the licensed intellectual property is likely to become the subject of a third party claim of infringement or misappropriation, SunEdison, at its option and expense, is permitted to (i) procure the right for us to continue to use the licensed intellectual property, (ii) replace or modify the licensed intellectual property so that it becomes non-infringing and remains functionally equivalent or (iii) terminate the license with respect to the affected intellectual property.

The agreement includes a non-competition covenant prohibiting us from engaging in any business or activity that is competitive with the business or activities of SunEdison, which includes the design, materials, processes, products, and procedures related to the generation, storage, transmission, distribution, control or monitoring of electrical power and electrical energy obtained from photovoltaic conversion of solar radiation and other renewable energy sources.

We have agreed in the agreement to indemnify SunEdison and its affiliates and their respective employees, officers and directors for any liabilities or damages suffered by them arising out of (i) our use of the licensed intellectual property and (ii) any use, sale or other disposition by us of products made by utilizing such licensed intellectual property.

Technology Joint Development Agreement

In connection with the completion of our IPO, we entered into a technology joint development agreement with SunEdison, which provides a framework for joint development and other collaborative activities between us and SunEdison. The material terms of this agreement are discussed below.

Under the agreement, the parties may agree to conduct one or more joint development programs, the specific terms and conditions of which will be set forth in a separate statement of work for each joint development program. Each statement of work will designate which party will be the sole owner of the intellectual property and technology developed under the program, provided that SunEdison will be the sole owner of any such intellectual property or technology that SunEdison reasonably determines is necessary or useful to the development, application or use of CCZ or diamond coated wire in any field. The other party's rights in such intellectual property and other technology developed in connection with any joint development program will be governed by the patent and technology cross-license agreement or the CCZ and diamond coated wire patent and technology license agreement, as applicable.

The agreement provides that in the event any employee of one party is seconded to the other party, the intellectual property and other technology developed outside of a joint development program by such employee in the course of his or her duties as a seconded employee will be exclusively owned by the party for whom the seconded employee is performing duties at the time such intellectual property or technology is created or developed. Any such intellectual property or technology will be governed by the patent and technology cross-license agreement or the CCZ and diamond coated wire patent and technology license agreement, as applicable.

Employees of each party may also share workspace, laboratory space and other co-located facilities in the normal course of business. If such proximity of employees results in the creation of intellectual property or other technology

jointly developed outside of a joint development program by at least one employee, agent or contractor of each party, the agreement provides that the ownership of such intellectual property or technology is governed by principles of U.S. patent law and is subject to applicable license agreements between us and SunEdison.

Table of Contents

The agreement has an initial term of five years, provided that the parties may mutually agree in writing to extend the term for any period prior to the expiration of the initial term. The agreement may be terminated early by the parties mutual written agreement. Either party may terminate the agreement if the other party commits a material breach of the agreement and fails to remedy such breach within 60 days after written notice from the non-breaching party.

In the event a third party obtains a controlling interest in us, or in the event we or any of our affiliates are merged or consolidated with a third party, SunEdison has the right to terminate this agreement upon 10 days written notice provided within 30 days of such change of control event. Notwithstanding the above, in the event a third party that is active in the same field as SunEdison's solar energy business gains a controlling interest in us or any of our affiliates, SunEdison has the right to terminate this agreement upon 30 days written notice. Under the agreement, controlling interest means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of us, whether through the ownership of voting securities, by contract or otherwise.

Trademark License

SunEdison also granted to us a royalty-free license to use certain of SunEdison's trademarks for a period of time following the completion of our IPO.

Tax Matters Agreement

We entered into a tax matters agreement with SunEdison immediately prior to our IPO that governs the parties respective rights, responsibilities and obligations with respect to tax liabilities and benefits, tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings and other matters regarding taxes. In general, under the agreement:

We are responsible for, and shall be entitled to any refund in respect of: (i) any foreign taxes (including any related interest, penalties, or audit adjustments) imposed on us and our subsidiaries for all periods, whether before or following the completion of our IPO (including, with respect to such foreign taxes for a period before the completion of our IPO, any audit adjustments made following the completion of our IPO), and (ii) any U.S. federal, state, and local taxes (including any related interest, penalties, or audit adjustments) imposed on us and our subsidiaries for all periods following the completion of our IPO. SunEdison is responsible for, and shall be entitled to any refund in respect of any U.S. federal, state, and local taxes (including any related interest, penalties, or audit adjustments) imposed on us and our subsidiaries for all periods preceding the completion of our IPO (including any audit adjustments with respect to such taxes as are made following the completion of our IPO). We also are responsible for any liability owed to any governmental entity as a result of our failure, following the completion of our IPO, to satisfy any terms and conditions imposed on us under any tax incentive arrangement entered into by and among us, SunEdison and such government entity.

SunEdison is also responsible for, and shall be entitled to any refund in respect of: (i) any U.S. federal, state, and local taxes (including any related interest, penalties, or audit adjustments) for all periods preceding the completion of our IPO (including any audit adjustments with respect to such taxes as are made following the completion of our IPO); (ii) any U.S. federal, state, and local taxes (including any related interest and penalties or audit adjustments) imposed on SunEdison and its subsidiaries (excluding us and our

subsidiaries) for all periods following the completion of our IPO; and (iii) any foreign taxes (including any related interest, penalties, or audit adjustments) imposed on SunEdison and its subsidiaries (excluding us and our subsidiaries), whether for a period before or following the completion of our IPO (including, with respect to such foreign taxes for a period before the completion of our IPO, any audit adjustments made following the completion of our IPO). SunEdison is also responsible for any liability owed to any governmental entity as a result of its failure, following the completion of IPO, to satisfy any terms and conditions imposed on it under any tax incentive arrangement entered into by and among us, SunEdison and such government entity.

Table of Contents

SunEdison, in good faith consultation with us, is responsible for determining the allocation of tax attributes, including net operating losses and unused foreign tax credits, between SunEdison and its subsidiaries, on the one hand, and us and our subsidiaries on the other.

We are responsible for preparing and filing any tax returns that include only us and our subsidiaries.

SunEdison is responsible for preparing and filing any tax returns that include only SunEdison and its subsidiaries (excluding us and our subsidiaries), as well as any tax returns that include SunEdison or one or more of its subsidiaries together with us or one or more of our subsidiaries.

We agreed not to file any adjustment or refund requests with respect to any return that includes SunEdison or one or more of its subsidiaries together with us or one or more of our subsidiaries, and further agreed not to carry back any losses to any such returns without SunEdison's consent.

We have the exclusive authority to control tax contests that relate to the tax returns we file, provided that SunEdison has the right to participate in that portion of any tax contest that could have a material adverse effect on SunEdison and its subsidiaries (excluding us and our subsidiaries).

SunEdison has the exclusive authority to control tax contests that relate to the tax returns it files, provided that we have the right to participate in that portion of any tax contest that could have a material adverse effect on us and our subsidiaries.

Neither party's obligations under the agreement are limited in amount or subject to any cap. The agreement also assigns responsibilities for administrative matters, such as the filing of returns, payment of taxes due, retention of records and conduct of audits, examinations or similar proceedings. In addition, the agreement provides for cooperation and information sharing with respect to tax matters.

Manufacturing, Laboratory and Office Space Lease

On February 5, 2015, we entered into a Manufacturing, Laboratory and Office Space Lease, or the Lease, with SunEdison for the lease by us to SunEdison of certain space for manufacturing, laboratory and related office purposes located at our facility in St. Peters, Missouri. The total leased area, including building space and outside land, is approximately 216,765 square feet. The Lease calls for specified rent payments applicable to each of eight different portions of the premises. The monthly rent for the portions ranges from \$641.67 to \$96,667 depending on the area and use of the portion that is leased. The Lease has a term of two years, provided that the Lease may be terminated for certain portions of the leased premises prior to the expiration of the two-year term.

Registration Rights Agreement with SunEdison

We entered into a registration rights agreement with SunEdison in connection with the completion of our IPO, pursuant to which we agreed that, upon the request of SunEdison, we will use our reasonable best efforts to effect the registration under applicable federal and state securities laws of our ordinary shares held by SunEdison following our IPO. The registration rights agreement includes the following material terms. As used herein, SunEdison includes any of its affiliates (other than us) who may hold our ordinary shares.

Demand Registration. SunEdison is able to request up to 10 demand registrations under the Securities Act of 1933, as amended, or the Securities Act, of all or any portion of our shares covered by the agreement and we are obligated, subject to limited exceptions, to register such shares as requested by SunEdison. This offering is a demand registration by SunEdison. SunEdison is able to request that we complete up to two demand registrations and four underwritten offerings with a shelf registration in a twelve month period, subject to a \$20 million minimum offering size unless such offering represents all remaining unregistered shares covered by the agreement. SunEdison is able to designate the terms of each offering effected pursuant to a demand registration, which may take any form, including a shelf registration or an underwritten offering.

Table of Contents

Piggy-back Registration. If we at any time intend to file on our behalf or on behalf of any of our other security holders a registration statement in connection with a public offering of any of our securities on a form and in a manner that would permit the registration for offer and sale of our ordinary shares held by SunEdison, SunEdison has the right to include in that offering our ordinary shares that it holds, subject to certain limitations.

Indemnification. Generally, the agreement contains indemnification and contribution provisions by us for the benefit of SunEdison and, in limited situations, by SunEdison for the benefit of us with respect to the information provided by SunEdison included in any registration statement, prospectus or related document.

Transfer. If SunEdison transfers shares covered by the agreement, it will be able to transfer the benefits of the registration rights agreement to transferees who acquire at least 5% of the number of our ordinary shares beneficially owned by SunEdison immediately following the completion of our IPO, provided that each transferee agrees to be bound by the terms of the registration rights agreement.

Term. The registration rights will remain in effect with respect to any shares covered by the agreement until:

such shares have been sold pursuant to an effective registration statement under the Securities Act;

such shares have been sold to the public pursuant to Rule 144 under the Securities Act;

such shares may be sold to the public pursuant to Rule 144 under the Securities Act without being subject to the volume restrictions in such rule; or

such shares have been sold in a transaction in which the transferee is not entitled to the benefits of the registration rights agreement.

Polysilicon Purchases

During 2014, we purchased our requirements for polysilicon, the principal raw material used in our manufacturing process, primarily from SunEdison. These purchases were made on a purchase order basis, and not pursuant to the terms of a contract. The total amount of our polysilicon purchases from SunEdison in 2014 and the first quarter of 2015 were approximately \$65.9 million and \$17.2 million, respectively. We expect to continue to purchase polysilicon from SunEdison on a purchase order basis or pursuant to short-term agreements until SMP achieves commercial capabilities to produce electronic grade polysilicon.

Intermediate Product Sales

We sell certain intermediate products, such as polysilicon, trichlorosilane gas, ingots, and scrap wafers, to SunEdison on a purchase order basis. During 2014, our sales of intermediate products to SunEdison totaled approximately \$2.4 million.

Allocation of St. Peters, Missouri Facility Costs

During 2014, SunEdison occupied certain manufacturing, laboratory and office space at our St. Peters, Missouri facility for which we allocated to SunEdison their pro rata share of the cost of such space. During 2014, we allocated approximately \$3.6 million to SunEdison for these costs.

Amount Due To and From SunEdison

As a result of all of the transactions with SunEdison described under Relationship with SunEdison, at December 31, 2014, we owed SunEdison approximately \$9.4 million and SunEdison owed us approximately \$4.3 million.

Table of Contents***Relationship with Samsung Purchasers***

In connection with our IPO, Samsung Fine Chemicals and Samsung Electronics purchased 7,200,000 and 2,425,278 ordinary shares, respectively, for \$93.6 million and \$31.5 million, respectively, in separate private placements at a price per share equal to the public offering price of \$13.00. Samsung Fine Chemicals is a joint venture partner of a subsidiary of SunEdison in SMP. Samsung Electronics is one of our customers and our joint venture partner in MKC. As consideration for the issuance of the ordinary shares, (i) Samsung Fine Chemicals made an aggregate cash investment in us of \$93.6 million and (ii) Samsung Electronics transferred to us its 20% interest in MEMC Korea Company, or MKC. The sale of those shares was not registered under the Securities Act.

We agreed to indemnify the Samsung Purchasers for breaches of our representations and warranties and covenants contained in the applicable share purchase agreements. In each of the purchase agreements, our indemnification obligation is subject to a cushion equal to 1% of the value of the shares issued under the purchase agreement, in which case we would only be liable for losses in excess of such amount, and a cap equal to 5% of the value of the shares issued under the purchase agreement. However, for breaches of certain fundamental representations, the cap is equal to 100% of the value of the shares issued under the purchase agreement. The value of the shares was determined by multiplying the number of shares issued to the applicable Samsung Purchaser by the IPO price in our IPO.

As a result of the Formation Transactions, including the transfer to us by SunEdison of a 35% interest in SMP, and the Samsung Private Placements, SMP is owned 35% by us, 50% by a subsidiary of SunEdison and 15% by Samsung Fine Chemicals, and MKC is 100% owned by us.

SMP Joint Venture

Prior to the completion of our IPO, SunEdison contributed to us the 35% interest in SMP it had previously acquired from Samsung Fine Chemicals, and as a result of this contribution, SMP is owned 35% by us, 50% by a subsidiary of SunEdison and 15% by Samsung Fine Chemicals. In connection with this contribution, we entered into a joinder and amendment agreement whereby we became a party to and undertook our pro rata share of the obligations of the SMP joint venture agreement. Pursuant to this joint venture agreement, the joint venture parties formed SMP to construct, own and operate a facility in South Korea to produce high purity polysilicon, including electronic grade polysilicon, which is expected to have an initial, annual production capacity of approximately 13,500 metric tons. Construction of the SMP polysilicon manufacturing facility was recently completed. The facility is in the initial stages of polysilicon production but has not reached full commercial capabilities at this time. We anticipate using polysilicon from the facility in late 2015 and expect to begin purchasing substantial volume in 2016. Once operational, SMP is required to sell to the joint venture partners their pro rata share (based on their respective ownership interests) of SMP's polysilicon production at prices negotiated and mutually agreed upon between SMP and the joint venture partners based on a standard cost plus a markup established by an independent professional transfer consultant engaged by SMP. Until February 15, 2019, we and our joint venture partners have agreed not to transfer our interests in SMP to any party other than our respective affiliates. After February 15, 2019, if any joint venture partner desires to transfer its interest in SMP to any party other than one of its affiliates, each other joint venture partner will have a right of first refusal to purchase such interest.

Registration Rights Agreements with the Samsung Purchasers

We entered into a registration rights agreement with each of the Samsung Purchasers in connection with the Samsung Private Placements, pursuant to which we agreed to use our reasonable best efforts, in certain events, to effect the registration under applicable federal and state securities laws of our ordinary shares purchased by the Samsung Purchasers under their respective share purchase agreements. Each registration rights agreement includes the

following material terms.

Table of Contents

Demand Registration. Until the termination of the registration rights in accordance with the terms of the respective agreement (as summarized below in Term), each of the Samsung Purchasers will be able to make five demands that we register under the Securities Act all or any portion of our shares covered by their respective agreement and we are obligated, subject to limited exceptions, to register such shares as requested by such Samsung Purchaser, provided that we are not obligated to effect more than two demand registrations under such agreements in any 12 month period, further subject to a \$20 million minimum offering size unless such offering represents all remaining unregistered shares covered by the agreement. A demand registration may take any form, including an underwritten offering and a shelf registration, and there shall be no limitations on the number of underwritten offerings pursuant to a shelf registration, provided that we are not obligated to effect more than two underwritten offerings under each of the agreements in any 12 month period, further subject to a \$20 million minimum offering size.

Piggy-back Registration. If we at any time intend to file on our behalf or on behalf of any of our other security holders a registration statement in connection with a public offering of any of our securities on a form and in a manner set forth in each of the agreements with the Samsung Purchasers, the Samsung Purchasers will have the right to include in that offering ordinary shares held by them, subject to certain limitations.

Indemnification. Generally, the agreements contain indemnification and contribution provisions by us for the benefit of each of the Samsung Purchasers and, in limited situations, by each of the Samsung Purchasers for the benefit of us with respect to the information provided by such Samsung Purchaser included in any registration statement, prospectus or related document.

Transfer. The Samsung Purchasers are able to transfer the benefits of their respective registration rights agreement to transferees of our ordinary shares who are their respective subsidiaries or affiliates, provided that each transferee agrees to be bound by the terms of the registration rights agreement.

Term. The registration rights will remain in effect with respect to any shares covered by the agreement until:

such shares have been sold pursuant to an effective registration statement under the Securities Act;

such shares have been sold to the public pursuant to Rule 144 under the Securities Act;

such shares may be sold to the public pursuant to Rule 144 under the Securities Act without being subject to the volume restrictions in such rule and all or a material part of the registration rights provided to SunEdison are no longer exercisable, have expired or have otherwise been terminated;
or

such shares have been sold in a transaction in which the transferee is not entitled to the benefits of the applicable registration rights agreement.

Wafer Purchase and Sale Agreement

On March 20, 2014, we entered into a wafer purchase and sale agreement with Samsung Electronics. Pursuant to the agreement, beginning on July 1, 2014 and for the term of the agreement, Samsung Electronics will purchase from us, and we will supply to Samsung Electronics, specified minimum quantities of polished and prime silicon wafers

manufactured by us. Such minimum quantity requirements will not apply if: (i) the silicon wafers provided by us do not meet the requisite product specifications, (ii) we invoice Samsung Electronics at a price that was not previously agreed to by us and Samsung Electronics or (iii) we fail to deliver the committed quantity of silicon wafers in accordance with the applicable delivery schedule. In the event of a shortage of supply, we must allocate supplies of silicon wafers to Samsung Electronics and its affiliates and our other customers in a manner that is fair and reasonable.

On the last business day of each calendar month, Samsung Electronics may provide us with a rolling forecast of its expected order volumes of silicon wafers. Any purchase order issued by Samsung Electronics generally must conform to the rolling forecast, subject to certain permissible deviations. We must accept or reject any purchase order within five days of receipt. Samsung Electronics may cancel a purchase order at any time at its convenience upon written notice to us. Upon a cancellation, Samsung Electronics will be liable for the silicon

Table of Contents

wafers already manufactured or in the process of manufacture, but will not be liable for any commitments in excess of such amounts. Unless otherwise mutually agreed to by the parties, we are required to invoice Samsung Electronics for each shipment of silicon wafers upon the delivery of such shipment to Samsung Electronics.

We must seek approval from Samsung Electronics prior to making any revision to the silicon wafers being supplied pursuant to the agreement that would affect their operation, interchangeability, appearance, life cycle or engineering quality approvals. We agreed to provide certain warranties with respect to our products, including that the product supplied by us will not infringe or misappropriate any third party intellectual property and that such products will be free of any defects in design, material and workmanship and will conform to the specifications for such products. In the event an epidemic failure occurs following any order acceptance, in addition to the standard warranty remedies Samsung Electronics has under the agreement, Samsung Electronics may return all products in the same manufacturing lot that is subject to the epidemic failure, and, at Samsung Electronics' discretion, we are required to reimburse all of Samsung Electronics' actual and reasonable out-of-pocket expenses relating to such epidemic failure. An epidemic failure is defined under the agreement as a defect from which the same root cause has been established which affects more than a specified percentage of the products supplied to Samsung Electronics for a specified period of time, so long as such failure is not attributable to a failure to use such products in conformity with the product specifications.

The wafer purchase and sale agreement has a term of three years ending on July 1, 2017. Either party may terminate the agreement if the other party commits a material breach of the agreement and fails to remedy such breach within 30 days after written notice from the non-breaching party. In addition, Samsung Electronics has the right to terminate the agreement upon seven days written notice in the event of our non-compliance with any applicable environmental, health and safety laws or regulations, or immediately upon our insolvency.

We agreed to indemnify Samsung Electronics and its affiliates and their respective directors, officers, employees, agents, customers and distributors for any liabilities or damages arising out of: (i) any alleged or actual intellectual property infringement or misappropriation claims raised by a third party, (ii) the delivery, condition, manufacture, purchase, use, sale, import, distribution or other transfer of semiconductor wafers supplied by us except to the extent solely caused by Samsung Electronics' gross negligence, (iii) a breach of any agreement, covenant, representation or warranty made by us in the agreement, (iv) any damage to property and injuries to any persons resulting from, arising out of or in connection with any semiconductor wafers purchased under the agreement or (v) our negligence, gross negligence, bad faith or intentional or willful misconduct in the performance of our obligations under the agreement.

Under the wafer purchase and sale agreement, each party is obligated to maintain the confidentiality of confidential information of the other party during the term of the agreement and for five years thereafter. Additionally, we are required to keep the price and quantity terms of the agreement, the contents of any purchase order and the manufacturing processes relating to any product supplied to Samsung Electronics confidential.

Other Transactions

SunEdison entered into an agreement with Mr. Ahmad Chatila, the President and Chief Executive Officer and a director of SunEdison, pursuant to which Mr. Chatila elected to receive, and SunEdison agreed to cause us to issue to Mr. Chatila, an aggregate number of our ordinary shares equal in value to \$1,000,000 at our IPO price (before required tax withholdings) in lieu of SunEdison paying him that amount in cash as part of his 2013 annual bonus. As a result, we issued 40,346 ordinary shares to Mr. Chatila. The number of ordinary shares that we issued to Mr. Chatila reduced, on a share-for-share basis, the number of ordinary shares that we would have otherwise issued to SunEdison in connection with the Formation Transactions. The issuance of these shares was not registered under the Securities Act.

Table of Contents

DESCRIPTION OF CERTAIN INDEBTEDNESS

Set forth below is a description of our credit facilities, which we entered into in connection with the closing of our IPO.

Senior Secured Credit Facilities

On May 27, 2014, we and our direct subsidiary, SunEdison Semiconductor B.V., or the Borrower, entered into a credit agreement with Goldman Sachs Bank USA, as administrative agent, sole lead arranger, and sole syndication agent, and, together with Macquarie Capital (USA) Inc., as joint bookrunners, Citibank, N.A., as letter of credit issuer, and the lender parties thereto, or the Credit Facility. The Credit Facility provides for: (i) a senior secured term loan facility in an aggregate principal amount up to \$210.0 million, or the Term Facility; and (ii) a senior secured revolving credit facility in an aggregate principal amount up to \$50.0 million, or the Revolving Facility. Under the Revolving Facility, the Borrower may obtain (i) letters of credit and bankers' acceptances in an aggregate stated amount up to \$15.0 million; and (ii) swing line loans in an aggregate principal amount up to \$15.0 million. The Term Facility has a five-year term, ending May 27, 2019, and the Revolving Facility has a three-year term, ending May 27, 2017. The full amount of the Term Facility was drawn on May 27, 2014. As of March 31, 2015, no amounts were outstanding under the Revolving Facility, but \$3.2 million of third party letters of credit were outstanding which reduced the available borrowing capacity. The principal amount of the Term Facility is required to be repaid in quarterly installments of \$525,000 beginning September 30, 2014 with the remaining balance paid at maturity.

The Term Facility was issued at a discount of 1.00%, or \$2.1 million, which will be amortized as an increase in interest expense over the term of the Term Facility.

The Borrower's obligations under the Credit Facility are guaranteed by SSL and certain of its direct and indirect subsidiaries. The Borrower's obligations and the guaranty obligations of SSL and its subsidiaries are secured by first-priority liens on and security interests in certain present and future assets of SSL, the Borrower, and the subsidiary guarantors, including pledges of the capital stock of certain of SSL's subsidiaries.

Borrowings under the Credit Facility bear interest (i) at a base rate plus 4.50% per annum or (ii) at a reserve-adjusted eurocurrency rate plus 5.50% per annum. The minimum eurocurrency base rate for the Term Facility shall at no time be less than 1.00% per annum. Interest is paid quarterly in arrears, and at the maturity date of each facility for loans bearing interest with reference to the base rate. Interest is paid on the last day of selected interest periods (which are one, three and six months), and at the maturity date of each facility for loans bearing interest with reference to the reserve-adjusted eurocurrency rate (and at the end of every three months, in the case of any interest period longer than three months). A fee equal to 5.50% per annum is payable by the Borrower, quarterly in arrears, in respect of the daily amount available to be drawn under outstanding letters of credit and bankers' acceptances.

The Credit Facility contains customary representations, covenants, and events of default typical for credit arrangements of comparable size, including our maintenance of a consolidated leverage ratio of not greater than: (i) 3.0 to 1.0 for the fiscal quarter ending June 30, 2015; and (ii) 2.5 to 1.0 for the fiscal quarters ending on and after September 30, 2015. The Credit Facility also contains a number of customary affirmative and negative covenants that, among other things, limit or restrict the ability of us and our subsidiaries to, in each case, subject to certain exceptions:

incur additional indebtedness and guarantee indebtedness;

pay dividends on or make distributions in respect of capital stock or make certain other restricted payments or investments;

enter into certain agreements that restrict distributions from restricted subsidiaries;

sell or otherwise dispose of assets, including capital stock of subsidiaries;

Table of Contents

enter into transactions with affiliates;

create or incur liens;

merge, consolidate or sell substantially all of our assets;

make acquisitions or other investments; and

make certain payments on indebtedness.

The Credit Facility also contains customary events of default, including, among others, nonpayment of principal and, subject to a grace period, interest, fees or other amounts; material inaccuracy of a representation or warranty when made; violation of a covenant, subject to in some cases grace periods; cross-default to material indebtedness; certain bankruptcy events; and a change of control. The cross-default clause is applicable to defaults on other indebtedness in excess of \$30 million. Our ability to borrow under the Credit Facility is dependent on, among other things, our compliance with the financial ratios described above. Failure to comply with these ratios or the other provisions of the Credit Facility, subject in some cases to grace periods, could, absent a waiver or an amendment from the lenders under such agreement, restrict the availability of the Revolving Facility and permit the acceleration of all outstanding borrowings under the Credit Facility.

Table of Contents

DESCRIPTION OF SHARE CAPITAL

Copies of our memorandum and articles of association are filed as exhibits to the registration statement of which this prospectus forms a part. Material provisions of our memorandum and articles of association and relevant sections of Singapore law are summarized below. The following summary is qualified in its entirety by the provisions of our memorandum and articles of association.

General

For the purposes of this section, references to **shareholders** mean those shareholders whose names and number of shares are entered in our shareholder register. Only persons who are registered in our shareholder register are recognized under Singapore law as shareholders of our company. As a result, only registered shareholders have legal standing to institute shareholder actions against us or otherwise seek to enforce their rights as shareholders. Holders of book-entry interests in our shares will be required to be registered shareholders as reflected in our shareholder register in order to institute or enforce any legal proceedings or claims against us, our directors or our executive officers relating to shareholder rights. A holder of book-entry securities may become a registered shareholder by exchanging its interest in our shares for certificated shares and being registered in our shareholder register.

The Companies (Amendment) Act 2014 was adopted in October 2014 and provides for certain amendments to be made to the Singapore Companies Act. The amendments introduced by way of the Companies (Amendment) Act 2014 are not as yet effective and will be implemented in two phases. The first phase of amendments to certain provisions of the Singapore Companies Act will become effective as of July 1, 2015, with the remaining provisions expected to come into effect in the first quarter of 2016.

Ordinary Shares

We currently have only one class of issued shares, which have identical rights in all respects and rank equally with one another. Our ordinary shares have no par value and there is no authorized share capital under Singapore law. There is a provision in our articles of association to enable us to issue shares with preferential, deferred or other special rights or restrictions (except as to voting rights, which are fixed at one vote for each share) as our directors may determine, subject to the provisions of the Singapore Companies Act and our articles of association. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to allow public companies such as our company to issue shares with different voting rights (including special, limited or conditional voting rights), subject to, among others, our shareholders having adopted a special resolution approving such issuance.

All shares presently issued are fully paid and existing shareholders are not subject to any calls on shares. Although Singapore law does not recognize the concept of **non-assessability** with respect to newly-issued shares, we note that any purchaser of our shares who has fully paid up all amounts due with respect to such shares will not be subject under Singapore law to any personal liability to contribute to the assets or liabilities of our company in such purchaser's capacity solely as a holder of such shares. We believe that this interpretation is substantively consistent with the concept of **non-assessability** under most, if not all, U.S. state corporations laws. All shares are in registered form. We cannot, except in the circumstances permitted by the Singapore Companies Act, grant any financial assistance for the acquisition or proposed acquisition of our own shares. Except as described in **Voting Rights** and **Anti-Takeover Effects** under the Singapore Takeover Code below, there are no limitations imposed by Singapore law or by our memorandum and articles of association on the rights of shareholders not resident in Singapore to hold or vote our ordinary shares.

Table of Contents

Voting Rights

Voting at any meeting of shareholders is by show of hands unless a poll has been demanded prior to or as a result of the show of hands by either: (i) the chairman (being a person entitled to vote thereat) or (ii) at least one shareholder present in person or by proxy or by attorney or, in the case of a corporation, by a representative entitled to vote thereat, in each case representing in the aggregate not less than 10% of the total voting rights of all shareholders having the right to vote at the general meeting, provided that no poll shall be demanded in respect of an election of a chairman or relating to any adjournment of such meeting. On a poll every shareholder who is present in person or by proxy or by attorney, or in the case of a corporation, by a representative, has one vote for every share held by such shareholder. Proxies need not be shareholders. Only those shareholders who are registered in our shareholder register will be entitled to vote at any meeting of shareholders. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to lower the threshold of 10% of the total voting rights for the eligibility for shareholders to demand a poll to 5%.

Dividends

Subject to any preferential rights of holders of any outstanding preference shares, holders of our ordinary shares will be entitled to receive dividends and other distributions in cash, stock or property as may be declared by our company from time to time. We may, by ordinary resolution, declare dividends at a general meeting of shareholders, but we are restricted from paying dividends in excess of the amount recommended by our board of directors. Because we are a holding company, our ability to pay dividends on our ordinary shares is limited by restrictions on the ability of our subsidiaries to pay dividends or make distributions to us, including restrictions under the terms of the agreements governing our indebtedness. In addition, pursuant to Singapore law and our articles of association, no dividends may be paid except out of profits. See Description of Certain Indebtedness.

Capitalization and Other Rights

Our board of directors may, with the approval of our shareholders at a general meeting, capitalize any profits and distribute the same as shares credited as paid-up to our shareholders. Subject to the provisions of the Singapore Companies Act and our articles of association, our board of directors may also issue rights to take up additional ordinary shares to our shareholders in proportion to their respective ownership. Such rights are subject to any condition attached to such issue and the regulations of any stock exchange on which our shares are listed, as well as U.S. federal and blue sky securities laws applicable to such issue.

Upon our liquidation, dissolution or winding up, the liquidator may, with the authority of a special resolution, divide amongst all shareholders in specie or in kind the whole or any part of our assets and may for such purpose set such value as the liquidator thinks fair upon any one or more classes of property to be divided as between the shareholders or between different classes of shareholders.

New Shares

Under the Singapore Companies Act, new shares may be issued only with the prior approval of our shareholders in a general meeting. General approval may be sought from our shareholders in a general meeting for the issue of shares. Approval, if granted, will lapse at the earlier of:

the conclusion of the next annual general meeting;

the expiration of the period within which the next annual general meeting is required by law to be held (i.e., within 15 months from the last annual general meeting); or

the subsequent revocation or modification of approval by our shareholders acting at a duly noticed and convened meeting.

Prior to the completion of our IPO, SunEdison, as our sole shareholder, granted such approval in a general meeting. Such approval will lapse in accordance with the preceding paragraph if our shareholders do not grant a new approval at our annual general meeting.

Table of Contents

Subject to the provisions of the Singapore Companies Act and our articles of association, our board of directors may allot or grant options over or otherwise dispose of new shares to such persons on such terms and conditions and at such time as our shareholders may in general meeting approve.

Shareholder Register

Only persons who are registered in our shareholder register are recognized under Singapore law as shareholders of our company. We will not, except as required by applicable law, recognize any equitable, contingent, future or partial interest in any ordinary share or other rights for any ordinary share other than the absolute right thereto of the registered holder of that ordinary share. We may close our register of shareholders for any time or times, provided that our shareholder register may not be closed for more than 30 days in the aggregate in any calendar year. We typically will close our shareholder register to determine shareholders' entitlement to receive dividends and other distributions.

Anti-Takeover Effects under the Singapore Takeover Code

The Singapore Takeover Code regulates, among other things, the acquisition of voting shares of Singapore-incorporated public companies. Any person acquiring, whether by a series of transactions over a period of time or not, either on his or her own or together with parties acting in concert with such person, 30% or more of our voting shares, or, if such person holds, either on his or her own or together with parties acting in concert with such person, between 30% and 50% (both amounts inclusive) of our voting shares, and if such person (or parties acting in concert with such person) acquires additional voting shares representing more than 1% of our voting shares in any six-month period, must, except with the consent of the Securities Industry Council in Singapore, extend a mandatory takeover offer for the remaining voting shares in accordance with the provisions of the Singapore Takeover Code. Responsibility for ensuring compliance with the Singapore Takeover Code rests with parties (including company directors) to a take-over or merger and their advisors.

Parties acting in concert comprise individuals or companies who, pursuant to an agreement or understanding (whether formal or informal), cooperate, through the acquisition by any of them of shares in a company, to obtain or consolidate effective control of that company. Certain persons are presumed (unless the presumption is rebutted) to be acting in concert with each other. They are as follows:

a company, its parent company, subsidiaries and affiliates, the associated companies of any of the company and its related companies, companies whose associated companies include any of these companies and any person who has provided financial assistance (other than a bank in the ordinary course of business) to any of the foregoing for the purchase of voting rights;

a company with any of its pension funds and employee share schemes;

a company with any of its directors (together with their close relatives, related trusts and companies controlled by any of the directors, their close relatives and related trusts);

a person with any investment company, unit trust or other fund whose investment such person manages on a discretionary basis but only in respect of the investment account which such person manages;

a financial or other professional adviser, including a stockbroker, with its clients in respect of shares held by (i) the adviser and persons controlling, controlled by or under the same control as the adviser and (ii) all the funds managed by the adviser on a discretionary basis, where the shareholdings of the adviser and any of those funds in the client total 10% or more of the client's equity share capital;

directors of a company (including their close relatives, related trusts and companies controlled by any of such directors, their close relatives and related trusts) which is subject to an offer or where the directors have reason to believe a bona fide offer for the company may be imminent;

partners; and

Table of Contents

an individual and (i) such person's close relatives, (ii) such person's related trusts, (iii) any person who is accustomed to act in accordance with such person's instructions, (iv) companies controlled by the individual, such person's close relatives, such person's related trusts or any person who is accustomed to act in accordance with such person's instructions and (v) any person who has provided financial assistance (other than a bank in the ordinary course of business) to any of the foregoing for the purchase of voting rights.

A mandatory offer must be in cash or be accompanied by a cash alternative at not less than the highest price paid by the offeror or parties acting in concert with the offeror during the offer period and within the six months preceding the acquisition of shares that triggered the mandatory offer obligation.

Under the Singapore Takeover Code, where effective control of a company is acquired or consolidated by a person, or persons acting in concert, a general offer to all other shareholders is normally required. An offeror must treat all shareholders of the same class in an offeree company equally. A fundamental requirement is that shareholders in the company subject to the takeover offer must be given sufficient information, advice and time to consider and decide on the offer. These legal requirements may impede or delay a takeover of our company by a third-party.

While public companies that are not listed on a Singapore exchange may apply to the Securities Industry Council in Singapore for a waiver with respect to compliance with the Singapore Takeover Code, we currently do not intend to seek such a waiver.

Election of Directors

We may, by ordinary resolution, remove any director before the expiration of his or her period of office, notwithstanding anything in our articles of association or in any agreement between us and such director. We may also, by an ordinary resolution, appoint another person in place of a director removed from office pursuant to the foregoing.

Subject to the Singapore Companies Act, any director shall retire at the next annual general meeting of our shareholders and shall then be eligible for re-election at that meeting.

Our board of directors shall have the power, at any time and from time to time, to appoint any person to be a director either to fill a casual vacancy or as an additional director so long as the total number of directors shall not at any time exceed the maximum number fixed by or in accordance with our articles of association.

General Meetings of Shareholders

We are required to hold an annual general meeting each year and not more than 15 months after the holding of the last preceding annual general meeting. The directors may convene an extraordinary general meeting whenever they think fit and they must do so upon the written request of shareholders representing not less than 10% of the total voting rights of all shareholders having the right to vote at a general meeting.

A shareholder is entitled to attend and speak and vote at any general meeting. Unless otherwise required by law or by our articles of association, voting at general meetings is by ordinary resolution, requiring the affirmative vote of a majority of the shares present in person or represented by proxy at the meeting and entitled to vote on the resolution. An ordinary resolution suffices, for example, for appointments of directors. A special resolution, requiring an affirmative vote of not less than three-fourths of the shares present in person or represented by proxy at the meeting and entitled to vote on the resolution, is necessary for certain matters under Singapore law, such as an alteration of our articles of association. Proxies need not be shareholders of our company. Only registered shareholders of our company will be entitled to vote at any meeting of shareholders.

Table of Contents

Minority Rights

The rights of minority shareholders of Singapore companies are protected under Section 216 of the Singapore Companies Act, which gives the Singapore courts a general power to make any order, upon application by any shareholder of a company, as they think fit to remedy any of the following situations:

the affairs of a company are being conducted or the powers of the board of directors are being exercised in a manner oppressive to, or in disregard of the interests of, one or more of the shareholders; or

a company takes an action, or threatens to take an action, or the shareholders pass a resolution, or propose to pass a resolution, which unfairly discriminates against, or is otherwise prejudicial to, one or more of the shareholders, including the applicant.

Singapore courts have wide discretion as to the remedy they may grant, and the remedies listed in the Singapore Companies Act itself are not exclusive. In general, Singapore courts may:

direct or prohibit any act or cancel or modify any transaction or resolution;

regulate the conduct of the affairs of a company in the future;

authorize civil proceedings to be brought in the name of, or on behalf of, a company by a person or persons and on such terms as the court may direct;

provide for the purchase of a minority shareholder's shares by the other shareholders or by a company and, in the case of a purchase of shares by a company, a corresponding reduction of its share capital;

provide that the memorandum of association or the articles of association of a company be amended; or

provide that a company be wound up.

Corporate Opportunity

Our memorandum and articles of association provide that we renounce any interest or expectancy in, or in being offered an opportunity to participate in, any business opportunity in the solar energy field, including the manufacture of solar wafers, that may from time to time be presented to SunEdison or any of its officers, directors, agents, shareholders, members, partners, affiliates and subsidiaries (other than us and our subsidiaries) and that may be a business opportunity for SunEdison, even if the opportunity is one that we might reasonably have pursued or had the ability or desire to pursue if granted the opportunity to do so. Further, our memorandum and articles of association provide that no such person will be liable to us for breach of any fiduciary or other duty, as a director or officer or otherwise, by reason of the fact that such person, acting in good faith, pursues or acquires any such business

opportunity, directs any such business opportunity to another person or fails to present any such business opportunity, or information regarding any such business opportunity, to us unless, in the case of any such person who is our director or officer, any such business opportunity is expressly offered to such director or officer solely in his or her capacity as our director or officer. Neither SunEdison nor any of its representatives has any duty to refrain from engaging directly or indirectly in business activities or lines of business other than the growth, processing and manufacture of semiconductor crystals for use as a substrate for semiconductor wafer production, the processing and manufacture of semiconductor wafers for the semiconductor industry, and similar uses solely within the semiconductor industry.

Limitation of Liability of Directors and Officers

Subject to the Singapore Companies Act and every other Act for the time being in force concerning companies and affecting us, our articles of association provide that each of our directors and officers and those of our subsidiaries and affiliates shall be entitled to be indemnified by us against any liability incurred by him or her arising out of or in connection with any acts, omissions or conduct, actual or alleged, by such individual acting in his or her capacity as director or officer of our company, except to such extent as would not be permitted under applicable Singapore laws or which would otherwise result in such indemnity being void in accordance with the provisions of the Singapore Companies Act.

Table of Contents

We may indemnify our directors and officers in respect of costs, charges, fees and other expenses that may be incurred by them in defending any proceedings (whether civil or criminal) relating to anything done or omitted or alleged to be done or omitted by such person (acting in his or her capacity as a director, officer or employee of our company), in which judgment is given in his or her favor, or in which he or she is acquitted, or in which the courts have granted relief pursuant to the provisions of the Singapore Companies Act or other applicable statutes, provided that such indemnity shall not extend to any liability which by law would otherwise attach to him or her in respect of any negligence, default, breach of duty or breach of trust in relation to our company or which would otherwise result in such indemnity being voided under applicable Singapore laws. No director or officer of our company shall be liable for any acts, omissions, neglects, defaults or other conduct of any other director or officer, and to the extent permitted by Singapore law, our company shall contribute to the amount paid or payable by a director in such proportion as is appropriate to reflect the relative fault of such director, taking into consideration any other relevant equitable considerations, including acts of other directors or officers and our company, and the relative fault of such parties in respect thereof.

In addition, no director, managing director or other officer shall be liable for the acts, receipts, neglects or defaults of any other director or officer, or for joining in any receipt or other act for conformity, or for any loss or expense incurred by us, through the insufficiency or deficiency of title to any property acquired by order of the directors for us or for the insufficiency or deficiency of any security upon which any of our moneys are invested or for any loss or damage arising from the bankruptcy, insolvency or tortious act of any person with whom any moneys, securities or effects are deposited, or any other loss, damage or misfortune which happens in the execution of his duties, unless the same happens through his own negligence, default, breach of duty or breach of trust.

Section 172 of the Singapore Companies Act prohibits a company from indemnifying its officers (including directors acting in an executive capacity) or auditors against liability, which by law would otherwise attach to them for any negligence, default, breach of duty or breach of trust of which they may be guilty relating to us. However, a company is not prohibited from (a) purchasing and maintaining for any such individual insurance against any such liability, or (b) indemnifying such individual against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favor or in which he is acquitted, or in connection with any application under Section 76A(13) or 391 or any other provision of the Singapore Companies Act in which relief is granted to him by the court. It is expected that the restriction in Section 172 of the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to enable a company to indemnify its officers against third party liability, except in circumstances where such liability is for any criminal or regulatory fines or penalties, or where such liability is incurred in respect of (i) criminal proceedings in which he or she is convicted or (ii) civil proceedings commenced by the company or a related company against him in which judgment has been entered in favor of the company or its related company.

We have entered into indemnification agreements with each of our directors and officers. These agreements require us to indemnify these individuals to the fullest extent permitted under Singapore law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them in respect of which they are permitted to be indemnified, subject to our company reserving its rights to recover the full amount of such advances in the event that he or she is subsequently found to have been negligent or otherwise have breached his or her trust or fiduciary duties to our company or to be in default thereof, or where the Singapore courts have declined to grant relief, as provided in the Singapore Companies Act.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, provision of our articles of association, agreement, vote of shareholders or disinterested directors or otherwise.

We maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

Table of Contents

Transfer Agent and Registrar

The transfer agent and registrar for our ordinary shares is Computershare Trust Company, N.A. Its address is 250 Royall Street, Canton, Massachusetts 02021.

Listing

Our ordinary shares are listed on the NASDAQ Global Select Market under the symbol SEMI.

Table of Contents

COMPARISON OF SHAREHOLDER RIGHTS

We are incorporated under the laws of Singapore. The following discussion summarizes material differences between the rights of holders of our ordinary shares and the rights of holders of the common stock of a typical corporation incorporated under the laws of the state of Delaware which result from differences in governing documents and the laws of Singapore and Delaware.

This discussion does not purport to be a complete statement of the rights of holders of our ordinary shares under applicable law in Singapore and our articles of association or the rights of holders of the common stock of a typical corporation under applicable Delaware law and a typical certificate of incorporation and bylaws.

The Singapore Companies Act contains the default articles that apply to a Singapore-incorporated company to the extent they are not excluded or modified by a company's articles of association. They provide examples of the common provisions adopted by companies in their articles of association. However, as is the usual practice for companies incorporated in Singapore, we have specifically excluded the application of these provisions in our articles of association, which we refer to below as our articles.

Delaware

Singapore

Board of Directors

A typical certificate of incorporation and bylaws would provide that the number of directors on the board of directors will be fixed from time to time by a vote of the majority of the authorized directors. Under Delaware law, a board of directors can be divided into classes and cumulative voting in the election of directors is only permitted if expressly authorized in a corporation's certificate of incorporation.

The memorandum and articles of association of companies will typically state the minimum number of directors as well as provide that directors may be appointed or removed by shareholders via ordinary resolution passed at a general meeting, provided that the number of directors following such increase or reduction is within the maximum and minimum number of directors provided in our articles and the Singapore Companies Act, respectively. Our articles provide that the minimum number of directors will be one.

Limitation on Personal Liability of Directors

A typical certificate of incorporation provides for the elimination of personal monetary liability of directors for breach of fiduciary duties as directors to the fullest extent permissible under the laws of Delaware, except for liability (i) for any breach of a director's loyalty to the corporation or its shareholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law (relating to the liability of directors for unlawful payment of a dividend or an unlawful stock purchase or redemption) or (iv) for any transaction from which the director derived an improper personal benefit. A

typical certificate of incorporation would also provide that if the Delaware General Corporation Law is amended so as to allow further elimination of, or limitations on, director liability, then the liability of directors will be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law as so amended.

Pursuant to the Singapore Companies Act, any provision (whether in the articles of association, contract or otherwise) exempting or indemnifying a director against any liability for negligence, default, breach of duty or breach of trust will be void.

Our articles provide that subject to the provisions of the Singapore Companies Act, directors of our company will be indemnified against any liability incurred by such person in defending any proceedings, whether civil or criminal, which relate to anything done or omitted or alleged to be done or omitted by such person as an officer or employee of the company and in which judgment is given in their favor or in which such person is acquitted or in connection with any application under the Singapore Companies Act or any other Singapore statute in which relief is granted to such person by the court unless the same should happen through their own negligence, default, breach of duty or breach of trust.

Our company shall indemnify each of our directors to the extent permitted under applicable Singapore laws and shall procure indemnity insurance for each of our directors.

Table of Contents

Interested Shareholders

Section 203 of the Delaware General Corporation Law generally prohibits a Delaware corporation from engaging in specified corporate transactions (such as mergers, stock and asset sales, and loans) with an interested shareholder for three years following the time that the shareholder becomes an interested shareholder. Subject to specified exceptions, an interested shareholder is a person or group that owns 15% or more of the corporation's outstanding voting stock (including any rights to acquire stock pursuant to an option, warrant, agreement, arrangement or understanding, or upon the exercise of conversion or exchange rights, and stock with respect to which the person has voting rights only), or is an affiliate or associate of the corporation and was the owner of 15% or more of the voting stock at any time within the previous three years.

A Delaware corporation may elect to opt out of, and not be governed by, Section 203 through a provision in either its original certificate of incorporation, or an amendment to its original certificate or bylaws that was approved by majority shareholder vote.

There are no comparable provisions in Singapore with respect to public companies which are not listed on the Singapore Exchange Securities Trading Limited.

Removal of Directors

A typical certificate of incorporation and bylaws provide that, subject to the rights of holders of any preferred stock, directors may be removed at any time by the affirmative vote of the holders of at least a majority, or in some instances a supermajority, of the voting power of all of the then outstanding shares entitled to vote generally in the election of directors, voting together as a single class. A certificate of incorporation could also provide that such a right is only exercisable when a director is being removed for cause (removal of a director only for cause is the default rule in the case of a classified board).

According to the Singapore Companies Act, directors of a Singapore public company may be removed before expiration of their term of office with or without cause by ordinary resolution (i.e., a resolution which is passed by a simple majority of those shareholders present and voting in person or by proxy). Notice of the intention to move such a resolution has to be given to the company not less than 28 days before the meeting at which it is moved. The company shall then give notice of such resolution to its shareholders not less than 14 days before the meeting. Where any director removed in this manner was appointed to represent the interests of any particular class of shareholders or debenture holders, the resolution to remove such director will not take effect until such director's successor has been appointed.

Table of Contents

Filling Vacancies on the Board of Directors

A typical certificate of incorporation and bylaws provide that, subject to the rights of the holders of any preferred stock, any vacancy, whether arising through death, resignation, retirement, disqualification, removal, an increase in the number of directors or any other reason, may be filled by a majority vote of the remaining directors, even if such directors remaining in office constitute less than a quorum, or by the sole remaining director. Any newly elected director usually holds office for the remainder of the full term expiring at the annual meeting of shareholders at which the term of the class of directors to which the newly elected director has been elected expires.

The articles of a Singapore public company typically provide that the directors have the power to appoint any person to be a director, either to fill a vacancy or as an addition to the existing directors, provided that the total number of directors will not at any time exceed the maximum number (if any) fixed in the articles. Any newly elected director shall hold office until the next following annual general meeting, where such director will then be eligible for re-election. Our articles provide that our directors may appoint any person to be a director as an additional director or to fill a vacancy.

Amendment of Governing Documents

Under the Delaware General Corporation Law, amendments to a corporation's certificate of incorporation require the approval of shareholders holding a majority of the outstanding shares entitled to vote on the amendment. If a class vote on the amendment is required by the Delaware General Corporation Law, a majority of the outstanding stock of the class is required, unless a greater proportion is specified in the certificate of incorporation or by other provisions of the Delaware General Corporation Law. Under the Delaware General Corporation Law, the board of directors may amend bylaws if so authorized in the charter. The shareholders of a Delaware corporation also have the power to amend bylaws.

Our memorandum and articles may be altered by special resolution (i.e., a resolution passed by at least a three-fourths majority of the shares entitled to vote, present in person or by proxy at a meeting for which not less than 21 days written notice is given). Our board of directors has no right to amend our memorandum or articles.

It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to include provisions whereby the constitutional documents of a company shall no longer be referred to as its memorandum and articles of association, but as its constitution.

Meetings of Shareholders

Annual and Special Meetings

Typical bylaws provide that annual meetings of shareholders are to be held on a date and at a time fixed by the board of directors. Under the Delaware General Corporation Law, a special meeting of shareholders may be called by the board of directors or by any other person authorized to do so in the certificate of incorporation or the bylaws.

Annual General Meetings

All companies are required to hold an annual general meeting once every calendar year. The first annual general meeting must be held within 18 months of the company's incorporation and subsequently, not more than 15 months may elapse between annual general meetings.

Extraordinary General Meetings

Any general meeting other than the annual general meeting is called an extraordinary general meeting. Two or more shareholders holding not less than 10% of the total issued and outstanding voting rights of our company (excluding treasury shares) may require our directors to convene an extraordinary general meeting. In addition, the articles usually also provide that general meetings may be convened in accordance with the Singapore Companies Act by the directors.

Table of Contents

Quorum Requirements

Under the Delaware General Corporation Law, a corporation's certificate of incorporation or bylaws can specify the number of shares which constitute the quorum required to conduct business at a meeting, provided that in no event shall a quorum consist of less than one-third of the shares entitled to vote at a meeting.

Quorum Requirements

Our articles provide that shareholders entitled to vote, holding in aggregate not less than a majority of the total voting rights of all shareholders having the right to vote at a general meeting, shall constitute a quorum. If within half an hour from the time appointed for the general meeting a quorum is not present, the general meeting if convened on requisition of the shareholders shall be dissolved. In any other case, it shall stand adjourned to the same day in the next week at the same time and place, or to such other day and at such other time and place as the board of directors may determine. If at such adjourned general meeting a quorum is not present within fifteen minutes from the time appointed for such general meeting, such general meeting shall be dissolved.

Indemnification of Officers, Directors and Employees

Under the Delaware General Corporation Law, subject to specified limitations in the case of derivative suits brought by a corporation's shareholders in its name, a corporation may indemnify any person who is made a party to any third-party action, suit or proceeding on account of being a director, officer, employee or agent of the corporation (or was serving at the request of the corporation in such capacity for another corporation, partnership, joint venture, trust or other enterprise) against expenses, including attorney's fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with the action, suit or proceeding through, among other things, a majority vote of a quorum consisting of directors who were not parties to the suit or proceeding, if the person:

acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation or, in some circumstances, at least not opposed to its best interests; and

in a criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Delaware corporate law permits indemnification by a corporation under similar circumstances for expenses (including attorneys' fees) actually and reasonably incurred by such persons in connection with the defense or settlement of a derivative action or suit, except that no indemnification may be made in respect of any claim, issue or matter as to which the person is adjudged to be liable to the corporation unless the Delaware Court

Section 172 of the Singapore Companies Act prohibits a company from indemnifying its officers (including directors acting in an executive capacity) or auditors against liability, which by law would otherwise attach to them for any negligence, default, breach of duty or breach of trust of which they may be guilty relating to the company.

The Singapore Companies Act does not prevent a company from:

procuring and maintaining any director and officer liability insurance in respect of any negligence, default, breach of duty or breach of trust in relation to the company; or

indemnifying such director or officer against any liability incurred in defending any proceedings (whether civil or criminal) in which judgment is given in such director or officer's favor or in which he or she is acquitted; or

indemnifying such director or officer against any liability incurred by such director or officer in connection with any application under specified sections of the Singapore Companies Act in which relief is granted to such officer or auditor by a court.

In cases where a director is sued by the company, the Singapore Companies Act gives the court the power to relieve directors either wholly or partially from the consequences of their negligence, default, breach of duty or breach of trust. In order for relief to be

Table of Contents

of Chancery or the court in which the action or suit was brought determines upon application that the person is fairly and reasonably entitled to indemnity for the expenses which the court deems to be proper.

To the extent a director, officer, employee or agent is successful in the defense of such an action, suit or proceeding, the corporation is required by Delaware corporate law to indemnify such person for reasonable expenses incurred thereby. Expenses (including attorneys' fees) incurred by such persons in defending any action, suit or proceeding may be paid in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of that person to repay the amount if it is ultimately determined that that person is not entitled to be so indemnified.

obtained, it must be shown that (i) the director acted reasonably and honestly; and (ii) it is fair, having regard to all the circumstances of the case.

However, Singapore case law has indicated that such relief will not be granted to a director who has benefited as a result of his or her breach of trust.

Our articles provide that subject to the provisions of the Singapore Companies Act, our company will indemnify our directors and officers to the extent permissible under applicable Singapore laws and as would not otherwise result in such indemnity being void. Accordingly, we are liable to indemnify our directors (including any managing director) and officers provided that such indemnity shall not extend to any liability which by law would otherwise attach to him or her in respect of any negligence, default, breach of duty or breach of trust attributable to such director or officer in relation to our company or which would otherwise result in such indemnity being voided under applicable Singapore laws.

It is expected that the restriction in Section 172 of the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to enable a company to indemnify its officers against third party liability, except in circumstances where such liability is for any criminal or regulatory fines or penalties, or where such liability is incurred in respect of (i) criminal proceedings in which he or she is convicted or (ii) civil proceedings commenced by the company or a related company against him in which judgment has been entered in favor of the company or its related company.

Shareholder Approval of Business Combinations

Generally, under the Delaware General Corporation Law, completion of a merger, consolidation, or the sale, lease or exchange of substantially all of a corporation's assets or dissolution requires approval by the board of directors and by a majority (unless the certificate of incorporation requires a higher percentage) of outstanding stock of the corporation entitled to vote.

The Singapore Companies Act mandates that specified corporate actions require approval by the shareholders in a general meeting, notably:

notwithstanding anything in the company's memorandum or articles, directors are not permitted to carry into effect any proposals for disposing of the whole or substantially the whole of the company's undertaking or property unless those proposals have been approved by shareholders in a general meeting;

Table of Contents

The Delaware General Corporation Law also requires a special vote of shareholders in connection with a business combination with an interested shareholder as defined in section 203 of the Delaware General Corporation Law. See Interested Shareholders above.

subject to the memorandum of each amalgamating company, an amalgamation proposal must be approved by the shareholders of each amalgamating company via special resolution at a general meeting; and

notwithstanding anything in the company's memorandum or articles, the directors may not, without the prior approval of shareholders, issue shares, including shares being issued in connection with corporate actions.

Shareholder Action Without A Meeting

Under the Delaware General Corporation Law, unless otherwise provided in a corporation's certificate of incorporation, any action that may be taken at a meeting of shareholders may be taken without a meeting, without prior notice and without a vote if the holders of outstanding stock, having not less than the minimum number of votes that would be necessary to authorize such action, consent in writing. It is not uncommon for a corporation's certificate of incorporation to prohibit such action.

There are no equivalent provisions in respect of public companies which are not listed on the Singapore Exchange Securities Trading Limited. As a result, shareholder action by written consent is not permitted.

Shareholder Suits

Under the Delaware General Corporation Law, a shareholder may bring a derivative action on behalf of the corporation to enforce the rights of the corporation. An individual also may commence a class action suit on behalf of himself or herself and other similarly situated shareholders where the requirements for maintaining a class action under the Delaware General Corporation Law have been met. A person may institute and maintain such a suit only if such person was a shareholder at the time of the transaction which is the subject of the suit or his or her shares thereafter devolved upon him or her by operation of law.

Additionally, under Delaware case law, the plaintiff generally must be a shareholder not only at the time of the transaction which is the subject of the suit, but also through the duration of the derivative suit. The Delaware General Corporation Law also requires that the derivative plaintiff make a demand on the directors of the corporation to assert the corporate claim before the suit may be prosecuted by the derivative plaintiff, unless such demand would be futile.

Standing

Only registered shareholders of our company reflected in our shareholder register are recognized under Singapore law as shareholders of our company. As a result, only registered shareholders have legal standing to institute shareholder actions against us or otherwise seek to enforce their rights as shareholders. Holders of book-entry interests in our shares will be required to exchange their book-entry interests for certificated shares and to be registered as shareholders in our shareholder register in order to institute or enforce any legal proceedings or claims against us, our directors or our executive officers relating to shareholder rights. A holder of book-entry interests may become a registered shareholder of our company by exchanging its interest in our shares for certificated shares and being registered in our shareholder register.

Derivative actions

The Singapore Companies Act has a provision that provides a mechanism enabling shareholders to apply to the court for leave to bring a derivative action on behalf of the company. Derivative actions are also allowed as a common law action.

Table of Contents

Applications are generally made by shareholders of the company or individual directors, but courts are given the discretion to allow such persons as they deem proper to apply (e.g., beneficial owner of shares) in the appropriate circumstances.

It should be noted that this provision of the Singapore Companies Act is primarily used by minority shareholders to bring an action in the name and on behalf of the company or intervene in an action to which the company is a party for the purpose of prosecuting, defending or discontinuing the action on behalf of the company. Prior to commencing a derivative action, notice is required to be given to the directors of the company of the party's intention to commence such action.

Class actions

The concept of class action suits, which allows individual shareholders to bring an action seeking to represent the class or classes of shareholders, does not exist in Singapore. However, it is possible as a matter of procedure for a number of shareholders to lead an action and establish liability on behalf of themselves and other shareholders who join in or who are made parties to the action. These shareholders are commonly known as lead plaintiffs.

Distributions and Dividends; Repurchases and Redemptions

The Delaware General Corporation Law permits a corporation to declare and pay dividends out of statutory surplus or, if there is no surplus, out of net profits for the fiscal year in which the dividend is declared and/or for the preceding fiscal year as long as the amount of capital of the corporation following the declaration and payment of the dividend is not less than the aggregate amount of the capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets.

Under the Delaware General Corporation Law, any corporation may purchase or redeem its own shares, except that generally it may not purchase or redeem these shares if the capital of the corporation is impaired at the time or would become impaired as a result of the redemption. A corporation may, however, purchase or redeem out of capital shares that are entitled upon any distribution of its assets to

The Singapore Companies Act provides that no dividends can be paid to shareholders except out of profits.

The Singapore Companies Act does not provide a definition on when profits are deemed to be available for the purpose of paying dividends and this is accordingly governed by case law.

Our articles provide that no dividend can be paid otherwise than out of profits.

Acquisition of a company's own shares

The Singapore Companies Act generally prohibits a company from acquiring its own shares subject to certain exceptions. Any contract or transaction by which a company acquires or transfers its own shares is void. However, provided that it is expressly permitted to do so by its articles and subject to the

Table of Contents

a preference over another class or series of its shares if the shares are to be retired and the capital reduced.

special conditions of each permitted acquisition contained in the Singapore Companies Act, a company may:

redeem redeemable preference shares (the redemption of these shares will not reduce the capital of the company). Preference shares may be redeemed out of capital if all the directors make a solvency statement in relation to such redemption in accordance with the Singapore Companies Act;

whether listed on a securities exchange or not, make an off-market purchase of its own shares in accordance with an equal access scheme authorized in advance at a general meeting;

if it is not listed on a securities exchange, make a selective off-market purchase of its own shares in accordance with an agreement authorized in advance at a general meeting by a special resolution where persons whose shares are to be acquired and their associated persons have abstained from voting; and

whether listed on a securities exchange or not, make an acquisition of its own shares under a contingent purchase contract which has been authorized in advance at a general meeting by a special resolution.

A company may also purchase its own shares by an order of a Singapore court.

The total number of ordinary shares that may be acquired by a company in a relevant period may not exceed 10% of the total number of ordinary shares in that class as of the date of the last annual general meeting of the company or as of the date of the resolution to acquire the shares, whichever is higher. Where, however, a company has reduced its share capital by a special resolution or a Singapore court made an order to such effect, the total number of ordinary shares in any class shall be taken to be the total number of ordinary shares in that class as altered by the special resolution or the order of the court. Payment must be made out of the company's distributable profits or capital, provided that the company is solvent.

The Companies (Amendment) Act 2014 introduces amendments which would, when effective, increase the 10% limit applicable to acquisitions by companies of their own shares to 20%.

Table of Contents

Financial assistance for the acquisition of shares

A company may not give financial assistance to any person whether directly or indirectly for the purpose of, or in connection with,

the acquisition or proposed acquisition of shares in the company or units of such shares; or

the acquisition or proposed acquisition of shares in its holding company or units of such shares.

Financial assistance may take the form of a loan, the giving of a guarantee, the provision of security, the release of an obligation, the release of a debt or otherwise.

However, it should be noted that a company may provide financial assistance for the acquisition of its shares or shares in its holding company if it complies with the requirements (including approval by special resolution) set out in the Singapore Companies Act. We have obtained the requisite shareholder approvals to waive the provision of financial assistance by our company with respect to the Transactions in connection with our issuance of ordinary shares to SunEdison as partial consideration for its transfer of its semiconductor materials business to us. We obtained such waiver as a matter of prudence as the issuance of such ordinary shares could potentially be deemed an acquisition of shares within the meaning of the financial assistance restrictions of the Singapore Companies Act, due to the utilization by our company of the senior secured term loan facility to finance the remaining portion of the consideration for such asset transfer.

Pursuant to the terms of the registration rights agreements between our company, the Samsung Purchasers and SunEdison, we are liable to pay for all registration-related expenses (including the expenses of counsel appointed by SunEdison and the Samsung Purchasers) as specified therein. The payment of such expenses would potentially constitute financial assistance for the acquisition of our shares which is restricted under Singapore law. Accordingly, SunEdison has agreed to be responsible and pay for all expenses in respect of this Offering.

Our articles provide that subject to the provisions of the Singapore Companies Act, we may purchase or otherwise acquire our own shares upon such terms and subject to such conditions as we may deem fit.

Table of Contents

These shares may be held as treasury shares or cancelled as provided in the Singapore Companies Act or dealt with in such manner as may be permitted under the Singapore Companies Act. On cancellation of the shares, the rights and privileges attached to those shares will expire.

Transactions with Officers or Directors

Under the Delaware General Corporation Law, some contracts or transactions in which one or more of a corporation's directors has an interest are not void or voidable because of such interest provided that some conditions, such as obtaining the required approval and fulfilling the requirements of good faith and full disclosure, are met. Under the Delaware General Corporation Law, either (a) the shareholders or the board of directors must approve in good faith any such contract or transaction after full disclosure of the material facts or (b) the contract or transaction must have been fair as to the corporation at the time it was approved. If board approval is sought, the contract or transaction must be approved in good faith by a majority of disinterested directors after full disclosure of material facts, even though less than a majority of a quorum.

Under the Singapore Companies Act, directors are not prohibited from dealing with the company, but where they have an interest in a transaction with the company, that interest must be disclosed to the board of directors. In particular, every director who is in any way, whether directly or indirectly, interested in a transaction or proposed transaction with the company must, as soon practicable after the relevant facts have come to such director's knowledge, declare the nature of such director's interest at a board of directors' meeting.

In addition, a director who holds any office or possesses any property which directly or indirectly might create interests in conflict with such director's duties as director is required to declare the fact and the nature, character and extent of the conflict at a meeting of directors.

The Singapore Companies Act extends the scope of this statutory duty of a director to disclose any interests by pronouncing that an interest of a member of a director's family (including spouse, son, adopted son, step-son, daughter, adopted daughter and step-daughter) will be treated as an interest of the director.

There is, however, no requirement for disclosure where the interest of the director consists only of being a member or creditor of a corporation which is interested in the proposed transaction with the company if the interest may properly be regarded as immaterial. Where the proposed transaction relates to any loan to the company, no disclosure need be made where the director has only guaranteed the repayment of such loan, unless the articles of association provide otherwise.

Further, where the proposed transaction is to be made with or for the benefit of a related company (i.e. the holding company, subsidiary or subsidiary of a common holding company) no disclosure need be made of the fact that the director is also a director of that company, unless the articles of association provide otherwise.

Subject to specified exceptions, the Singapore Companies Act prohibits a Singapore company from making a loan to its directors or to directors of a related corporation, or giving a guarantee or security in connection with such a

Table of Contents

loan. Companies are also prohibited from making loans to its directors' spouse or children (whether adopted or naturally or step-children), or giving a guarantee or security in connection with such a loan.

Dissenters' Rights

Under the Delaware General Corporation Law, a shareholder of a corporation participating in some types of major corporate transactions may, under varying circumstances, be entitled to appraisal rights pursuant to which the shareholder may receive cash in the amount of the fair market value of his or her shares in lieu of the consideration he or she would otherwise receive in the transaction.

There are no equivalent provisions in Singapore under the Singapore Companies Act.

Cumulative Voting

Under the Delaware General Corporation Law, a corporation may adopt in its bylaws that its directors shall be elected by cumulative voting. When directors are elected by cumulative voting, a shareholder has the number of votes equal to the number of shares held by such shareholder times the number of directors nominated for election. The shareholder may cast all of such votes for one director or among the directors in any proportion.

There is no equivalent provision in respect of companies incorporated in Singapore.

Anti-Takeover Measures

Under the Delaware General Corporation Law, the certificate of incorporation of a corporation may give the board the right to issue new classes of preferred stock with voting, conversion, dividend distribution, and other rights to be determined by the board at the time of issuance, which could prevent a takeover attempt and thereby preclude shareholders from realizing a potential premium over the market value of their shares.

In addition, Delaware law does not prohibit a corporation from adopting a shareholder rights plan, or a poison pill, which could prevent a takeover attempt and also preclude shareholders from realizing a potential premium over the market value of their shares.

The articles of a Singapore public company typically provide that the company may allot and issue new shares of a different class with preferential, deferred, qualified or other special rights (except as to voting rights, which are fixed at one vote for each share) as its board of directors may determine with the prior approval of the company's shareholders in a general meeting. Subject to the requirements under the Singapore Companies Act and our articles, our shareholders may grant to our board the general authority to issue such preference shares until the next general meeting. See Description of Share Capital Ordinary Shares elsewhere in this prospectus.

It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to allow public companies such as our company to issue shares with different voting rights (including special, limited or conditional voting rights), subject to, among others, our shareholders having adopted a special resolution approving such issuance.

Table of Contents

Under the Singapore Takeover Code, if, in the course of an offer, or even before the date of the offer, the board of the offeree company has reason to believe that a *bona fide* offer is imminent, the board must not, except pursuant to a contract entered into earlier, take any action, without the approval of shareholders at a general meeting, on the affairs of the offeree company that could effectively result in any *bona fide* offer being frustrated or the shareholders being denied an opportunity to decide on its merits.

See Description of Share Capital Anti-Takeover Effects under the Singapore Takeover Code elsewhere in this prospectus for a description of the Singapore Takeover Code.

Table of Contents

PLAN OF DISTRIBUTION

The selling shareholders may sell ordinary shares, or the securities, from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed from time to time in one or more transactions:

at a fixed price or prices, which may be changed;

at market prices prevailing at the time of sale;

at prices related to such prevailing market prices; or

at negotiated prices.

Each time that any of the selling shareholders sell securities covered by this prospectus, we or the selling shareholders will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including the offering price of the securities and the proceeds to the selling shareholders, if applicable.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, the selling shareholders, or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting

discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing

Table of Contents

securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

For investors outside the United States: Neither we nor any of the underwriters have taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who have come into possession of this prospectus in a jurisdiction outside the United States are required to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

LEGAL MATTERS

The validity of the ordinary shares offered under this prospectus will be passed upon for us by Rajah & Tann Singapore LLP, with respect to Singapore law. Additional legal matters may be passed upon for us, the selling shareholders or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of SunEdison Semiconductor Limited as of December 31, 2014 and 2013, and for each of the years in the three-year period ended December 31, 2014, have been incorporated by reference herein from SunEdison Semiconductor Limited's Annual Report on Form 10-K for the year ended December 31, 2014, in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

Edgar Filing: SunEdison Semiconductor Ltd - Form 424B4

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

Table of Contents

Our website address is www.sunedisonsemi.com. The information on our website, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement at the SEC's Public Reference Room in Washington, D.C. or through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to incorporate by reference information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus modifies or replaces that statement.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, between the date of this prospectus and the termination of the offering of the securities described in this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed filed with the SEC, including our share price performance graph or any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

our Annual Report on Form 10-K for the fiscal year ended December 31, 2014, filed on March 2, 2015;

our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2015, filed on May 7, 2015;

our Current Reports on Form 8-K filed on January 23, 2015, February 3, 2015, February 10, 2015, April 6, 2015 and April 29, 2015; and

the description of our ordinary shares contained in our registration statement on Form 8-A filed with the SEC on May 19, 2014, including any amendment or report filed for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus (other than exhibits, unless they are specifically incorporated by reference in the documents) by writing or telephoning us at the following address:

Table of Contents

SunEdison Semiconductor Limited

501 Pearl Drive

St. Peters, MO 63376

Attn: General Counsel

(636) 474-5000

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus and any accompanying prospectus supplement.

We have authorized no one to provide you with any information that differs from that contained in this prospectus. Accordingly, you should not rely on any information that is not contained in this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of the front cover of this prospectus.

Table of Contents

15,935,828 Shares

SunEdison Semiconductor Limited

Ordinary Shares

PRELIMINARY PROSPECTUS SUPPLEMENT

Deutsche Bank Securities

Goldman, Sachs & Co.

Barclays

Credit Suisse

Morgan Stanley

BBVA

KeyBanc Capital Markets

Macquarie Capital

RBC Capital Markets

Wells Fargo Securities

