SUNPOWER CORP
Form 10-K
February 14, 2019
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

TANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 30, 2018
OR
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-34166

SunPower Corporation
(Exact Name of Registrant as Specified in Its Charter)

Delaware	94-3008969
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
77 Rio Robles, San Jose, California	95134
(Address of Principal Executive Offices and Zip Code)	(Zip Code)

(408) 240-5500
(Registrant's Telephone Number, Including Area Code)

_____

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

Title of each class	Name of each exchange on which registered
Common Stock $0.001 par value	Nasdaq Global Select Market
Preferred Stock Purchase Rights	Nasdaq Global Select Market

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Securities registered pursuant to Section 12(g) of the Act: None

_____

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes T No o
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes T No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. T

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):
Large accelerated filer x Accelerated filer o Non-accelerated filer o Smaller reporting company o

Emerging growth company o
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).
Yes o No T

The aggregate market value of the voting stock held by non-affiliates of the registrant on June 29, 2018 (the last business day of the registrant's most recently completed second fiscal quarter) was $469 million. Such aggregate market value was computed by reference to the closing price of the common stock as reported on the Nasdaq Global Select Market on June 29, 2018. For purposes of determining this amount only, the registrant has defined affiliates as including Total Solar International SAS, formerly known as Total Energies Nouvelles Activités USA and Total Gas & Power USA, SAS and the executive officers and directors of the registrant on June 29, 2018.

The total number of outstanding shares of the registrant’s common stock as of February 8, 2019 was 141,383,535.

DOCUMENTS INCORPORATED BY REFERENCE

Parts of the registrant’s definitive proxy statement for the registrant’s 2019 annual meeting of stockholders are incorporated by reference in Items 10, 11, 12, 13, and 14 of Part III of this Annual Report on Form 10-K.

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INTRODUCTORY NOTES

Trademarks

The following terms, among others, are our trademarks and may be used in this report: SunPower®, Maxeon®, Oasis®, OasisGEO™, EnergyLink™, InvisiMount™, Tenesol®, Greenbotics®, Customer Cost of Energy™ ("CCOE™"), SunPower Spectrum™, Helix™, Equinox™, Signature™, SolarBridge®, and The Power of One™. Other trademarks appearing in this report are the property of their respective owners.

Unit of Power

When referring to our solar power systems, our facilities' manufacturing capacity, and total sales, the unit of electricity in watts for kilowatts ("KW"), megawatts ("MW"), and gigawatts ("GW") is direct current ("DC"), unless otherwise noted as alternating current ("AC").

Levelized Cost of Energy ("LCOE")

LCOE is an evaluation of the life-cycle energy cost and life-cycle energy production of an energy producing system. It allows alternative technologies to be compared to different scales of operation, investment or operating time periods. It captures capital costs and ongoing system-related costs, along with the amount of electricity produced, and converts them into a common metric. Key drivers for LCOE reduction for photovoltaic products include panel efficiency, capacity factors, reliable system performance, and the life of the system.

Customer Cost of Energy ("CCOE")

Our customers are focused on reducing their overall cost of energy by intelligently integrating solar and other distributed generation, energy efficiency, energy management, and energy storage systems with their existing utility-provided energy. The CCOE measurement is an evaluation of a customer's overall cost of energy, taking into account the cost impact of each individual generation source (including the utility), energy storage systems, and energy management systems. The CCOE measurement includes capital costs and ongoing operating costs, along with the amount of electricity produced, stored, saved, or re-sold, and converts all of these variables into a common metric. The CCOE metric allows a customer to compare different portfolios of generation sources, energy storage, and energy management, and to tailor towards optimization.

Cautionary Statement Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that do not represent historical facts and the assumptions underlying such statements. We use words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "predict," "project," "potential," "will," "would," "should," and similar expressions to identify forward-looking statements. Forward-looking statements in this Annual Report on Form 10-K include, but are not limited to, our plans and expectations regarding future financial results, expected operating results, business strategies, the sufficiency of our cash and our liquidity, projected costs and cost reduction measures, development of new products and improvements to our existing products, the impact of recently adopted accounting pronouncements, our manufacturing capacity and manufacturing costs, the adequacy of our agreements with our suppliers, our ability to monetize our solar projects, legislative actions and regulatory compliance, competitive positions, management's plans and objectives for future operations, our ability to obtain financing, our ability to comply with debt covenants or cure any defaults, our ability to repay our obligations as they come due, our ability to

continue as a going concern, our ability to complete certain strategic transactions, trends in average selling prices, the success of our joint ventures and acquisitions, expected capital expenditures, warranty matters, outcomes of litigation, our exposure to foreign exchange, interest and credit risk, general business and economic conditions in our markets, industry trends, the impact of changes in government incentives, expected restructuring charges, risks related to privacy and data security, and the likelihood of any impairment of project assets, long-lived assets, and investments. These forward-looking statements are based on information available to us as of the date of this Annual Report on Form 10-K and current expectations, forecasts and assumptions and involve a number of risks and uncertainties that could cause actual results to differ materially from those anticipated by these forward-looking statements. Such risks and uncertainties include a variety of factors, some of which are beyond our control. Please see "Item 1A. Risk Factors" herein and our other filings with the Securities and Exchange Commission ("SEC") for additional information on risks and uncertainties that could cause actual results to differ. These forward-looking statements should not be relied upon as representing our views as of any subsequent date, and we are under no obligation to, and expressly disclaim any responsibility to, update or alter our forward-looking statements, whether as a result of new information, future events or otherwise.

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The following information should be read in conjunction with the Consolidated Financial Statements and the accompanying Notes to Consolidated Financial Statements included in this Annual Report on Form 10-K. Our fiscal year ends on the Sunday closest to the end of the applicable calendar year. All references to fiscal periods apply to our fiscal quarter or year, which end on the Sunday closest to the calendar month end.

PART I

ITEM 1. BUSINESS

Corporate History

SunPower has been a leader in the solar industry for over 30 years, originally incorporated in California in 1985 and reincorporated in Delaware during 2004 in connection with our initial public offering. In November 2011, our stockholders approved the reclassification of all outstanding former class A common stock and class B common stock into a single class of common stock listed on the Nasdaq Global Select Market under the symbol "SPWR." In fiscal 2011, we became a majority owned subsidiary of Total Solar International SAS, formerly known as Total Gas & Power USA, SAS and Total Energies Nouvelles Activités USA ("Total"), a subsidiary of Total S.A. ("Total S.A.").

Company Overview

We are a leading global energy company dedicated to changing the way our world is powered. We deliver complete solar solutions to residential, commercial, and power plant customers worldwide by offering:

- cutting-edge solar module technology and solar power systems that are designed to generate electricity over a system life typically exceeding 25 years;
- integrated storage and software solutions that enable customers to effectively manage and optimize their CCOE energy usage and expenses;
- installation, construction, and ongoing maintenance and monitoring services; and
- financing solutions that provide customers with a variety of options for purchasing or leasing high efficiency solar products at competitive energy rates.

Our global reach is enhanced by Total S.A.'s long-standing presence in many countries where significant solar installation goals are being established.

Recent Developments

Divestment of Microinverter Business

On August 9, 2018, we completed the sale of certain assets and intellectual property related to the production of microinverters to Enphase Energy, Inc. ("Enphase") in exchange for $25.0 million in cash and 7.5 million shares of Enphase common stock (the “Closing Shares”), pursuant to an Asset Purchase Agreement (the "Purchase Agreement") entered into on June 12, 2018. We received the Closing Shares and $15.0 million cash payment upon closing, and received the final $10.0 million cash payment of the purchase price on December 10, 2018.

For additional information, refer to "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 4. Business Combination and Divestitures."

Acquisition of SolarWorld Americas

On April 16, 2018, we entered into a Sale and Purchase Agreement (the "Sale and Purchase Agreement") pursuant to which we agreed to purchase all of SolarWorld AG's shares of stock in SolarWorld Americas Inc. ("SolarWorld Americas"), and SolarWorld Industries Deutschland GmbH’s partnership interest in SolarWorld Industries America LP. On August 21, 2018, we terminated the Sale and Purchase Agreement and entered into an Asset Purchase Agreement with SolarWorld Americas, pursuant to which we agreed to purchase certain assets of SolarWorld Americas in exchange for consideration of $26.0 million, subject to certain closing and post-closing adjustments and other contingent payments. In connection with the termination of

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the Sale and Purchase Agreement, we have recognized an expense of $20.0 million for the quarter ended September 30, 2018 in sales, general and administrative expense. On October 1, 2018, we completed the acquisition of certain assets of SolarWorld Americas, including its Hillsboro, Oregon facility and a significant portion of its manufacturing workforce of more than 200 employees. The purchase consideration consisted of $26.0 million in cash and additional contingent consideration of approximately $4.1 million.

For additional information, refer to "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 4. Business Combination and Divestitures."

Formation of SunStrong Capital Holdings, LLC ("SunStrong") Joint Venture and Transfer of Interest in Residential Lease Portfolio

On November 5, 2018, we entered into a joint venture with HA SunStrong Capital LLC (“HA SunStrong Parent”), an affiliate of Hannon Armstrong Sustainable Infrastructure Capital, Inc. ("Hannon Armstrong"), to acquire, operate, finance, and maintain a portfolio of residential rooftop or ground-mounted solar photovoltaic electric generating systems ("Solar Assets"). Pursuant to the terms of the Purchase and Sale Agreement (the “PSA"), we sold to HA SunStrong Parent, in exchange for consideration of $10.0 million, membership units representing a 49.0% membership interest in SunStrong, formerly our wholly-owned subsidiary that historically held and controlled the assets and liabilities comprising our residential lease business (the "Residential Lease Portfolio"). Following the closing of the PSA, we deconsolidated certain entities involved in our Residential Lease Portfolio, as part of our previously announced decision to sell a portion of our interest in the Residential Lease Portfolio, and retained membership units representing a 51% membership interest in SunStrong.

In connection with the joint venture, we entered into various agreements including an operating agreement for SunStrong and a management agreement with respect to the Solar Assets, among others.

In connection with the closing of the PSA, SunStrong assumed all current and future debt service obligations associated with the subordinated mezzanine loan of $110.5 million and long-term loans to finance solar power systems and leases under our previous residential lease program.

On November 28, 2018, SunStrong closed the sale to external investors of its $400 million Solar Asset Backed Notes, Series 2018-1 ("Notes"). The Notes were priced at a fixed interest rate of 5.68 percent per annum and received a rating of A (sf) from KBRA and a Green Bond Assessment of GB1, the highest rating, by Moody’s Investor Services. The anticipated repayment date is in November 2028, with a rated final maturity date in November 2048. The Notes were issued by a special purpose entity, SunStrong 2018-1 Issuer, LLC, an indirectly wholly-owned subsidiary of SunStrong. SunPower received a special distribution of approximately $12.9 million from the proceeds generated by the sale of the Notes.

On November 5, 2018, SunStrong Capital Acquisition OF, LLC, a wholly-owned subsidiary of SunStrong (“Mezzanine Loan 2 Borrower”), and SunStrong Capital Lender 2 LLC, a subsidiary of Hannon Armstrong, entered into a loan agreement under which, Mezzanine Loan 2 Borrower may borrow a subordinated, mezzanine loan of up to $32.0 million (the “Mezzanine Loan 2”). The borrowing facilities provided by the Mezzanine Loan 2 have been determined in consideration of the residential lease assets for which we have either completed construction or have the obligation to complete construction after November 5, 2018.

For additional information, refer to "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 4. Business Combination and Divestitures, Note 7. Leasing, Note 11. Equity Investments, and Note 12. Debt and Credit Sources."

Segments Overview

In the fourth quarter of 2018, in connection with our efforts to improve operational focus and transparency, drive overhead accountability into segment operating results, and increase strategic agility across the value chain from our upstream business' core strength in manufacturing and technology and our downstream business' core strength in offering complete solutions in residential and commercial markets, we reorganized our segment reporting to an upstream and downstream structure. Previously, we operated under three end-customer segments comprised of our (i) Residential Segment, (ii) Commercial Segment, and (iii) Power Plant Segment. Historically, the Residential Segment referred to sales of solar energy solutions to residential end-customers, the Commercial Segment referred to sales of energy solutions to commercial and public entity end-customers, and the Power Plant Segment referred to our large-scale solar products and systems and component sales.

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Under the new segmentation, the SunPower Energy Services Segment ("SunPower Energy Services" or "Downstream") refers to sales of solar energy solutions in the North America region previously included in the legacy Residential Segment and Commercial Segment (collectively previously referred to as "Distributed Generation" or "DG") including direct sales of turn-key engineering, procurement and construction ("EPC") services, sales to our third-party dealer network, sales of energy under power purchase agreements ("PPAs"), storage solutions, cash sales and long-term leases directly to end customers, and sales to resellers. SunPower Energy Services Segment also includes sales of our global Operations and Maintenance ("O&M") services. The SunPower Technologies Segment ("SunPower Technologies" or "Upstream") refers to our technology development, worldwide solar panel manufacturing operations, equipment supply to resellers, commercial and residential end-customers outside of North America ("International DG"), and worldwide power plant project development and project sales. Upon reorganization, some support functions and responsibilities have been shifted to each segment, including financial planning and analysis, legal, treasury, tax and accounting support and services, among others.

The reorganization provides our management with a comprehensive financial overview of our key businesses. The application of this structure permits us to align our strategic business initiatives and corporate goals in a manner that best focuses our businesses and support operations for success.

Our Chief Executive Officer, as the chief operating decision maker (“CODM”), reviews our business, manages resource allocations and measures performance of our activities based on financial information for the SunPower Energy Services Segment and SunPower Technologies Segment.

Reclassifications of prior period segment information have been made to conform to the current period presentation. These changes do not affect our previously reported Consolidated Financial Statements.

SunPower Energy Services

North America Residential

Residential Systems

We offer a complete set of residential solutions that deliver value to homeowners and our dealer partners. We have developed the capability to deliver AC panels with factory-integrated microinverters. The AC system architecture, as compared with DC systems, facilitates direct panel installation, eliminating the need to mount or assemble additional components on the roof or the side of a building, driving down system costs, improving overall system reliability, and providing improved, cleaner design aesthetics. As part of our complete solution approach, we offer our Equinox residential market product, a fully-integrated solar platform utilizing Maxeon cells, AC microinverter, and EnergyLink monitoring hardware to combine solar power production and energy management, allowing residential installers to quickly and easily complete their system installations and to ensure always-on connectivity so homeowners can easily access their data anytime, anywhere. The Equinox platform is also sold with our EnergyLink software analytics, which provides our customers with detailed information about their energy consumption and production, enabling them to further reduce their energy costs.

Concurrent with the sale of certain assets and intellectual property related to the production of microinverters to Enphase on August 9, 2018, we entered into a Master Supply Agreement (the “MSA”) pursuant to which, with certain exceptions, we have agreed to exclusively procure module-level power electronics (“MLPE”) and alternating current (“AC”) cables from Enphase to meet all of our needs for MLPE and AC cables for the manufacture and distribution of AC modules and discrete MLPE system solutions for the U.S. residential market, including our current Equinox solution and any AC module-based successor products. We have also agreed not to pair any third-party MLPE or AC

cables with any of our modules for use in the grid-tied U.S. residential market where an Enphase MLPE is qualified and certified for such module. The initial term of the MSA is through December 31, 2023, and the MSA term will automatically be extended for successive two-year periods unless either party provides written notice of non-renewal.

We offer the SunPower InvisiMount residential mounting system in our product portfolio. The InvisiMount system is designed specifically for use with our panels and reduces installation time through pre-assembled parts and integrated grounding. The InvisiMount system is well-suited for residential sloped roof applications and provides design flexibility and enhanced aesthetics by delivering a unique, "floating" appearance.

We support our hardware development with investments in our proprietary set of advanced monitoring applications (the "SunPower Monitoring System") and our EnergyLink customer portal, which enable customers to gain visibility into their solar

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system production and household energy consumption. This software is available for use on the web or through the SunPower mobile application on smartphones and tablets.

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Sales Channels, Residential Leasing Program, and other Financing Options

We sell our residential solar energy solutions to end customers through a variety of means, including cash sales directly to end customers, sales to resellers, including our third-party dealer network, and sales of our operations and maintenance (“O&M”) services.

We offer financing programs that are designed to offer customers a variety of options to obtain high efficiency solar products and systems, including loans arranged through our third-party lending partners, in some cases for no money down, or by leasing high efficiency solar systems at competitive energy rates. Since its launch in 2011, our residential lease program, in partnership with third-party investors, provides U.S. customers SunPower systems under 20-year lease agreements that include system maintenance and warranty coverage, including warranties on system performance. SunPower residential lease customers have the option to purchase their leased solar systems upon the sale or transfer of their home. These financing options enhance our ability to provide individually-tailored solar solutions to a broad range of residential customers.

As part of our strategic goals to de-lever our balance sheet and simplify our financial statements, we announced during the fourth quarter of 2017 our decision to monetize our interest in more than 400 MW of residential lease assets that historically have been consolidated in our balance sheets. On November 5, 2018, we sold a portion of our interest in certain entities that have historically held the assets and liabilities comprising our residential lease business to an affiliate of Hannon Armstrong Sustainable Infrastructure Capital, Inc.

For additional information, refer to "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 4. Business Combination and Divestitures, Note 7. Leasing, Note 11. Equity Investments, and Note 12. Debt and Credit Sources."

Historically, we had the ability to sell portfolios of residential system leases to 8point3 Energy Partners LP ("8point3 Energy Partners"), a joint Yieldco vehicle formed by us and First Solar, Inc. ("First Solar") in which we had an ownership stake. In fiscal 2017, following a review of our strategic alternatives, we decided to explore a divestiture jointly with First Solar. On February 5, 2018, 8point3 Energy Partners entered into an Agreement and Plan of Merger (the “8point3 Merger Agreement”) with CD Clean Energy and Infrastructure V JV, LLC, an equity fund managed by Capital Dynamics, Inc. and certain other co-investors (collectively, “Capital Dynamics” and the transaction, the "Divestiture Transaction"), and we entered into a Support Agreement which obligated us to support the Divestiture Transaction. On June 19, 2018, we completed the sale of our equity interest in 8point3 Energy Partners. As a result of this transaction, we received, after the payment of fees and expenses, merger proceeds of approximately $359.9 million in cash and no longer directly or indirectly own any equity interests in 8point3 Energy Partners.

For additional information on transactions with, and the divestiture of our interest in 8point3 Energy Partners, refer to "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 11. Equity Investments."

North America Commercial

Commercial Roof, Carport, and Ground Mounted Systems

As part of our complete solution product approach, we offer our Helix commercial market product. The Helix system is a pre-engineered, modular solution that combines our industry-leading solar module technology with integrated plug-and-play power stations, cable management systems, and mounting hardware that is built to last and fast to install, enabling customers to scale their solar programs quickly with minimal business disruption. The Helix platform

is standardized across rooftop, carport, and ground installations and designed to lower system cost while improving performance. The Helix platform is also bundled with our Smart Energy software analytics, which provides our customers with information about their energy consumption and production, enabling them to further reduce their energy costs.

We also offer a variety of commercial solutions designed to address a wide range of site requirements for commercial rooftop, parking lot, and open space applications, including a portfolio of solutions utilizing framed panels and a variety of internally or externally developed mounting methods for flat roof and high tilt roof applications. Our commercial flat rooftop systems are designed to be lightweight and to interlock, enhancing wind resistance and providing for secure, rapid installations.

We offer parking lot structures designed specifically for SunPower panels, balance of system components, and inverters and in fiscal 2015 expanded our capability to design and install innovative solar structures and systems for carport applications. These systems are typically custom design-build projects that utilize standard templates and design best practices to create a

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solution tailored to unique site conditions. SunPower's highest efficiency panels are especially well suited to stand-alone structures, such as those found in parking lot applications, because our systems require less steel and other materials per unit of power or energy produced as compared with our competitors.

Sales Channels and Financing Options

We sell our commercial solar energy solutions to commercial and public entity end customers through a variety of means, including direct sales of turn-key engineering, procurement and construction ("EPC") services, selling energy to customers under power purchase agreements ("PPAs"), sales to our third-party dealer network and sales of our O&M services.

Operations & Maintenance

Our solar power systems are designed to generate electricity over a system life typically exceeding 25 years. We offer our customers various levels of post-installation O&M services with the objective of optimizing our customers' electrical energy production over the life of the system. The terms and conditions of post-installation O&M services may provide for remote monitoring of system production and performance, including providing performance reports, preventative maintenance, including solar module cleanings, corrective maintenance, and rapid-response outage restoration, including repair or replacement of all system components covered under warranty or major maintenance agreements.

We incorporate leading information technology platforms to facilitate the management of our solar power systems operating globally. Real-time flow of data from our customers' sites is aggregated centrally where an engine applies advanced solar specific algorithms to detect and report potential performance issues. Our work management system routes any anomalies to the appropriate responders to help ensure timely resolution. Our performance model, PVSim, was developed over the last 20 years and has been audited by independent engineers. Solar panel performance coefficients are established through independent third-party testing. The SunPower Monitoring System also provides customers real-time performance status of their solar power system, with access to historical or daily system performance data through our customer website (www.sunpowermonitor.com). The SunPower Monitoring System is available through applications on Apple® and Android™ devices. Some customers choose to install "digital signs" or kiosks to display system performance information from the lobby of their facility. We believe these displays enhance our brand and educate the public and prospective customers about solar power.

We typically provide a system output performance warranty, separate from our standard solar panel product warranty, to customers that have subscribed to our post-installation O&M services. In connection with system output performance warranties, we agree to pay liquidated damages in the event the system does not perform to the stated specifications, with certain exclusions. The warranty excludes system output shortfalls attributable to force majeure events, customer curtailment, irregular weather, and other similar factors. In the event that the system output falls below the warrantied performance level during the applicable warranty period, and provided that the shortfall is not caused by a factor that is excluded from the performance warranty, the warranty provides that SunPower will pay the customer an amount based on the value of the shortfall of energy produced relative to the applicable warrantied performance level. For leased systems, we provide a system output performance warranty with similar terms and conditions as that for non-leased systems.

We calculate our expectation of system output performance based on a particular system’s design specifications, including the type of panels used, the type of inverters used, site irradiation measures derived from historical weather data, our historical experience as a manufacturer, EPC services provider, and project developer as well as other unique design considerations such as system shading. The warrantied system output performance level varies by system

depending on the characteristics of the system and the negotiated agreement with the customer, and the level declines over time to account for the expected degradation of the system. Actual system output is typically measured annually for purposes of determining whether warrantied performance levels have been met.

Our primary remedy for the system output performance warranty is our ongoing O&M services which enable us to quickly identify and remediate potential issues before they have a significant impact on system performance. We also have remedies in the form of our standard product warranties and third-party original equipment manufacturer warranties that cover certain components, such as inverters, to prevent potential losses under our system output performance warranties or to minimize further losses.

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SunPower Energy Services Technology

Balance of System Components

"Balance of system components" are components of a solar power system other than the solar panels, and include mounting structures, charge controllers, grid interconnection equipment, and other devices, depending on the specific requirements of a particular system and project.

Inverters

Every solar power system needs an inverter to transform the direct current electricity collected from the solar panels into utility-grade AC power that is ready for use. We sell inverters manufactured by third parties, some of which are SunPower-branded. We also have integrated microinverter technology that converts DC generated by a single solar photovoltaic panel into AC directly on the panel. Subsequent to the sale of our microinverter business in August 2018, we exclusively procure microinverters for the manufacture and distribution of AC modules and discrete MLPE system solutions for the U.S. residential market from Enphase. Panels with these factory-integrated microinverters perform better in shaded applications compared to conventional string inverters and allow for optimization and monitoring at the solar panel level, enabling maximum energy production by the solar system.

Smart Energy

We see “Smart Energy” as a way to harness our world’s energy potential by connecting the most powerful and reliable solar systems on the market with an increasingly vast array of actionable data that can help our customers make smarter decisions about their energy use. Our Smart Energy initiative is designed to add layers of intelligent control to homes, buildings and grids—all personalized through easy-to-use customer interfaces. In order to enhance the portfolio of Smart Energy solutions we offer, we continue to invest in integrated technology solutions to help customers manage and optimize their CCOE measurement.

We have also negotiated several agreements with residential and commercial energy storage providers to integrate storage technology into our residential and commercial solar solutions. By combining storage with energy management, we lower our customers' cost of energy through improvements in self-consumption, rate arbitrage, demand management, and grid and market participation. We continue to work to make combined solar and storage solutions broadly commercially available.

We continue to work with Enphase to develop next generation microinverters for use with our high efficiency solar panels in order to enhance our portfolio of Smart Energy solutions. Panels with these factory-integrated microinverters can convert direct current generated by the solar panel into alternating current, enabling optimization and monitoring at the solar panel level to ensure maximum energy production by the solar system.

SunPower Technologies

SunPower Solutions

In 2017, SunPower established the SunPower Solutions division to deliver products and services to utility-scale photovoltaic ("PV") customers around the world. SunPower Solutions enables developers, independent power producers and EPCs to benefit from SunPower's extensive experience over the past decade developing, financing, constructing, operating and maintaining solar power plants. In the fourth quarter of fiscal 2018, this division was assigned to our SunPower Technologies Segment. We remain focused on transitioning from project development to

equipment supply through SunPower Solutions.

The SunPower Solutions division sells SunPower's high performance P-Series, Maxeon 2 (formally known as E-Series), and Maxeon 3 (formally known as X-Series) panels to non-U.S. customers. SunPower's family of utility power plant PV panels deliver higher efficiency and energy yield with lower degradation than competing panels.

Project Development and Financing

Our project development business refers to sales of our large-scale solar systems, including power plant project development and project sales and EPC services for power plant construction. Our utility-scale solar power systems are typically purchased by an investor or financing company and operated as central-station solar power plants.

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We are able to utilize various means to finance our utility-scale power plant development and construction projects, which include arranging tax equity financing structures and utilizing non-recourse project debt facilities in conjunction with project sales.

We believe that we possess a technological advantage as the leading manufacturer of back-contact, back-junction cells that enables our panels to produce more electricity, last longer and resist degradation more effectively. We believe that our technology allows us to deliver:

- superior performance, including the ability to generate up to 45% more power per unit area than conventional solar cells;
- superior aesthetics, with our uniformly black surface design that eliminates highly visible reflective grid lines and metal interconnection ribbons;
- superior reliability, as confirmed by multiple independent reports and internal reliability data;
- superior energy production per rated watt of power, as confirmed by multiple independent reports; and
- solar power systems that are designed to generate electricity over a system life typically exceeding 25 years.

With industry-leading conversion efficiencies, we continuously improve our Maxeon solar cells and believe they perform better and are tested more extensively to deliver maximum return on investment when compared with the products of our competitors.

Solar Panels

Solar panels are solar cells electrically connected together and encapsulated in a weatherproof panel. Solar cells are semiconductor devices that convert sunlight into direct current electricity. Our solar cells are designed without highly reflective metal contact grids or current collection ribbons on the front of the solar cell, which provides additional efficiency and allows our solar cells to be assembled into solar panels with a more uniform appearance. Our Maxeon 3 solar panels, made with our Maxeon Gen 3 solar cells, have demonstrated panel efficiencies exceeding 22% in high-volume production. In fiscal 2016, one of our standard production modules set a world record for aperture area efficiency as tested by the National Renewable Energy Laboratory. We believe our Maxeon 3 solar panels are the highest efficiency solar panels available for the mass market, and we continue to focus on increasing cell efficiency even as we produce solar cells with over 25% efficiency in a lab setting. Because our solar cells are more efficient relative to conventional solar cells, when our solar cells are assembled into panels, the assembly cost per watt is less because more power is incorporated into a given size panel. Higher solar panel efficiency allows installers to mount a solar power system with more power within a given roof or site area and can reduce per watt installation costs. Our suite of SunPower solar panels provides customers a variety of features to fit their needs, including the SunPower Signature black design which allows the panels to blend seamlessly into the rooftop. We offer panels that can be used both with inverters that require transformers as well as with the highest performing transformer-less inverters to maximize output. Both our Maxeon 3 and Maxeon 2 panels have proven performance with low levels of degradation, as validated by third-party performance tests. Since fiscal 2016, we launched a line of solar panels under the Performance Series ("P-Series") product name. These products utilize a proprietary manufacturing process to assemble conventional silicon solar cells into panels with increased efficiency and reliability compared with conventional panels. Designed to target a new set of customers and global markets, we expect P-Series panels to contribute to the growth of both of SunPower’s business segments.

In 2018, we continued the ramp up of our next-generation solar cells and panels with our Next Generation Technology ("NGT" or Maxeon 5), which offer efficiency of approximately 25%, roughly in line with our Maxeon 3 solar panels. When fully ramped, we expect the Maxeon 5 panels to compete with the mono-PERC solar panels, but with superior levelized cost of energy due to higher performance and durability. During the fourth quarter of 2018, we certified our first Maxeon 5 product, a 72-cell format panel rated at 450 watts, and expect delivery to initial customers in the first quarter of 2019. We eventually plan to transform all of our legacy Maxeon 2 production capacity to Maxeon 5. We are also actively pursuing a variety of partnerships and other options to enable further NGT expansion to gigawatt scale.

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Warranties

SunPower provides a combined 25-year standard solar panel product and power warranty for defects in materials and workmanship. The solar product warranty also warrants that Maxeon 2 and Maxeon 3 panels will provide 98% of the panel's minimum peak power ("MPP") rating for the first year, declining due to expected degradation by no more than 0.25% per year for the following 24 years, such that the power output at the end of year 25 will be at least 92% of the panel's MPP rating. Our P-Series panels are warranted to provide 97% of the panel's MPP rating for the first year, declining due to expected degradation by no more than 0.6% per year for the following 24 years, such that the power output at the end of year 25 will be at least 82.6% of the panel's MPP rating. Our warranty provides that we will repair or replace any defective solar panels during the warranty period. We also pass through long-term warranties from the original equipment manufacturers of certain system components to customers for periods ranging from five to 20 years. In addition, we generally warrant our workmanship on installed systems for periods ranging up to 25 years.

Research and Development

We engage in extensive research and development efforts to improve solar cell efficiency through the enhancement of our existing products, development of new techniques, and by reductions in manufacturing cost and complexity. Our research and development group works closely with our manufacturing facilities, our equipment suppliers and our customers to improve our solar cell design and to lower solar cell, solar panel and system product manufacturing and assembly costs. In addition, we have dedicated employees who work closely with our current and potential suppliers of crystalline silicon, a key raw material used in the manufacture of our solar cells, to develop specifications that meet our standards and ensure the high quality we require, while at the same time controlling costs. Under our Research & Collaboration Agreement with Total, our majority stockholder, we have established a joint committee to engage in long-term research and development projects with continued focus on maintaining and expanding our technology position in the crystalline silicon domain and ensuring our competitiveness. Refer to "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Research and Development."

Supplier Relationships, Manufacturing, and Panel Assembly

We purchase polysilicon, ingots, wafers, solar cells, balance of system components, and inverters from various manufacturers on both a contracted and a purchase order basis. We have contracted with some of our suppliers for multi-year supply agreements. Under such agreements, we have annual minimum purchase obligations and in certain cases prepayment obligations. Refer to "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Contractual Obligations" for further information regarding the amount of our purchase obligations in fiscal 2019 and beyond. Under other supply agreements, we are required to make prepayments to vendors over the terms of the arrangements. As of December 30, 2018, advances to suppliers totaled $172 million. We may be unable to recover such prepayments if the credit conditions of these suppliers materially deteriorate or if we are otherwise unable to fulfill our obligations under these supply agreements. For further information regarding our future prepayment obligations, refer to "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 10. Commitments and Contingencies—Advances to Suppliers." We currently believe our supplier relationships and various short- and long-term contracts will afford us the volume of material and services required to meet our planned output over the next several years. For more information about risks related to our supply chain, including without limitation risks relating to announced tariffs on solar cells and modules imported into the U.S., refer to "Item 1A. Risk Factors—Risks Related to Our Supply Chain."

We are working with our suppliers and partners along all steps of the value chain to reduce costs by improving manufacturing technologies and expanding economies of scale. Crystalline silicon is the principal commercial material for solar cells and is used in several forms, including single-crystalline, or monocrystalline silicon,

multi-crystalline, or polycrystalline silicon, ribbon and sheet silicon, and thin-layer silicon. Our solar cell value chain starts with high purity silicon called polysilicon. Polysilicon is created by refining quartz or sand.

Polysilicon is melted and grown into crystalline ingots and sawed into wafers by business partners specializing in those processes. The wafers are processed into solar cells in our manufacturing facilities located in the Philippines and Malaysia. During fiscal 2017, we completed the construction of the solar cell manufacturing facility that we own and operate in the Philippines which has an annual capacity of 450 MW. The solar cell manufacturing facility we own and operate in Malaysia has a total rated annual capacity of over 700 MW.

We use our solar cells to manufacture our Maxeon 3 and Maxeon 2 solar panels at our solar panel assembly facilities located in Mexico and France, while we source solar cells from third parties for use in our P-Series solar panels at our solar

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panel assembly facility in Mexico and in Hillsboro, Oregon starting in 2019. Our solar panel manufacturing facilities have a combined total rated annual capacity of over 1.4 GW.

We source the solar panels and balance of system components based on quality, performance, and cost considerations both internally and from third-party suppliers. We typically assemble proprietary components, while we purchase generally available components from third-party suppliers. The balance of system components, along with the EPC cost to construct the project, can comprise as much as two-thirds of the cost of a solar power system. Therefore, we focus on standardizing our products with the goal of driving down installation costs, such as with our Equinox and Helix systems.

Customers

Effective in the fourth quarter of 2018, we now operate in two segments: (i) SunPower Energy Services Segment and (ii) SunPower Technologies Segment. Our scope and scale allow us to deliver solar solutions across all segments, ranging from consumer homeowners to the largest commercial and governmental entities in the world. Our customers typically include investors, financial institutions, project developers, electric utilities, independent power producers, commercial and governmental entities, production home builders, residential owners and small commercial building owners. We leverage a combination of direct sales as well as a broad partner ecosystem to efficiently reach our global customer base.

We work with development, construction, system integration, and financing companies to deliver our solar power products and solutions to wholesale sellers, retail sellers, and retail users of electricity. In the United States, commercial and electric utility customers typically choose to purchase solar electricity under a PPA with an investor or financing company that buys the system from us. End-user customers typically pay the investors and financing companies over an extended period of time based on energy they consume from the solar power systems, rather than paying for the full capital cost of purchasing the solar power systems. Our utility-scale solar power systems are typically purchased by an investor or financing company, and operated as central-station solar power plants. In addition, our third-party dealer network and our new homes division have deployed thousands of SunPower rooftop solar power systems to residential customers. See "Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Revenue" for our significant customers.

Competition

The market for solar electric power technologies is competitive and continually evolving. In the last year, we faced increased competition, resulting in price reductions in the market and reduced margins, which may continue and could lead to loss of market share. Our solar power products and systems compete with many competitors in the solar power market, including, but not limited to:

- SunPower Energy Services Segment: Canadian Solar Inc., Hanwha QCELLS Corporation, JA Solar Holdings Co., Kyocera Corporation, LG Corporation, Jinko Solar, NRG Energy, Inc., Panasonic Corporation, Sharp Corporation, SunRun, Inc., Tesla, Inc., Trina Solar Ltd., Vivint, Inc., LONGi Solar, REC Group, Hyundai Heavy Industries Co. Ltd., and Yingli Green Energy Holding Co. Ltd., First Solar, Inc.

- SunPower Technologies: Hanwha QCELLS Corporation, JA Solar Holdings Co., Trina Solar Ltd., Yingli Green Energy Holding Co., Ltd., Jinko Solar, First Solar Inc., Canadian SolarInc., LONGi Solar, Tongwei Co. Ltd., Array Technologies, Inc., Soltec, NEXTracker, Inc., Convert Italia, Arctech, Inc.

We also face competition from resellers that have developed related offerings that compete with our product and service offerings, or have entered into strategic relationships with other existing solar power system providers. We compete for limited government funding for research and development contracts, customer tax rebates and other programs that promote the use of solar, and other renewable forms of energy with other renewable energy providers and customers.

In addition, universities, research institutions, and other companies have brought to market alternative technologies, such as thin-film solar technology, which compete with our PV technology in certain applications. Furthermore, the solar power market in general competes with other energy providers such as electricity produced from conventional fossil fuels supplied by utilities and other sources of renewable energy such as wind, hydro, biomass, solar thermal, and emerging distributed generation technologies such as micro-turbines, sterling engines and fuel cells.

In the large-scale on-grid solar power systems market, we face direct competition from a number of companies, including those that manufacture, distribute, or install solar power systems as well as construction companies that have expanded into the renewable sector. In addition, we will occasionally compete with distributed generation equipment suppliers.

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We believe that the key competitive factors in the market for solar power systems include:

- total system price;
- LCOE evaluation;
- CCOE evaluation;
- power efficiency and performance;
- aesthetic appearance of solar panels and systems;
- speed and ease of installation through modular solutions such as our Helix system;
- strength of distribution relationships;
- availability of third-party financing and investments;
- established sales channels to customers;
- timeliness of new product introductions;
- bankability, strength, and reputation of our company; and
- warranty protection, quality, and customer service.

We believe that we can compete favorably with respect to each of these elements, although we may be at a disadvantage in comparison to larger companies with broader product lines, greater technical service and support capabilities, and financial resources. For more information on risks related to our competition, please see the risk factors set forth under the caption "Item 1A. Risk Factors" including "Risks Related to Our Sales Channels—The increase in the global supply of solar cells and panels, and increasing competition, may cause substantial downward pressure on the prices of such products and cause us to lose sales or market share, resulting in lower revenues, earnings, and cash flows."

Intellectual Property

We rely on a combination of patent, copyright, trade secret, trademark, and contractual protections to establish and protect our proprietary rights. "SunPower" and the "SunPower" logo are our registered trademarks in countries throughout the world for use with solar cells, solar panels, energy monitoring systems, inverters, and mounting systems. We also hold registered trademarks for, among others, “SunPower Equinox,” “SunPower Giving,” “SunPower Horizons,” “SunPower Energy Services,” “SunPower Technologies,” “Bottle the Sun,” “Demand Better Solar,” “EDDiE,” “EnergyLink,” “Equinox Energy Systems and Design,” “Equinox Solar Systems and Design,” “Equinox,” “Experiential Learning. Expanding Opportunities.,” “Equinox,” “Helix,” “InvisiMount,” “Light on Land,” “Maxeon,” “Oasis,” “Oasis Geo,” “Powering a Brighter Tomorrow,” “PowerLight,” “Serengeti,” “Smart Energy,” “Smarter Solar,” “Solar Showdown,” “Sol,” “S “Solaire Generation,” “SunTile,” “SunPower Electric,” “Supo Solar,” “More Energy. For Life.,” “The Planet's Most Powerful Solar,” and “The Power of One” in certain countries. We are seeking and will continue to seek registration of the "SunPower" trademark and other trademarks in additional countries as we believe is appropriate. As of December 30,

2018, we held registrations for 26 trademarks in the United States, and had 4 trademark registration applications pending. We also held 68 trademark registrations and had 11 trademark applications pending in foreign jurisdictions. We typically require our business partners to enter into confidentiality and non-disclosure agreements before we disclose any sensitive aspects of our solar cells, technology, or business plans. We typically enter into proprietary information agreements with employees, consultants, vendors, customers, and joint venture partners.

We own multiple patents and patent applications that cover aspects of the technology in the solar cells, mounting products, and electrical and electronic systems that we currently manufacture and market. We continue to file for and receive new patent rights on a regular basis. The lifetime of a utility patent typically extends for 20 years from the date of filing with the relevant government authority. We assess appropriate opportunities for patent protection of those aspects of our technology, designs, methodologies, and processes that we believe provide significant competitive advantages to us, and for licensing opportunities of new technologies relevant to our business. As of December 30, 2018, we held 464 patents in the United States, which will expire at various times through 2037, and had 246 U.S. patent applications pending. We also held 535 patents and

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had 592 patent applications pending in foreign jurisdictions. While patents are an important element of our intellectual property strategy, our business as a whole is not dependent on any one patent or any single pending patent application. We additionally rely on trade secret rights to protect our proprietary information and know-how. We employ proprietary processes and customized equipment in our manufacturing facilities. We therefore require employees and consultants to enter into confidentiality agreements to protect them.

When appropriate, we enforce our intellectual property rights against other parties. For more information about risks related to our intellectual property, please see the risk factors set forth under the caption "Item 1A. Risk Factors" including "Risks Related to Our Intellectual Property—We depend on our intellectual property, and we may face intellectual property infringement claims that could be time-consuming and costly to defend and could result in the loss of significant rights," "Risks Related to Our Intellectual Property—We rely substantially upon trade secret laws and contractual restrictions to protect our proprietary rights, and, if these rights are not sufficiently protected, our ability to compete and generate revenue could suffer," and "Risks Related to Our Intellectual Property—We may not obtain sufficient patent protection on the technology embodied in the solar products we currently manufacture and market, which could harm our competitive position and increase our expenses."

Backlog

We believe that backlog is not a meaningful indicator of our future business prospects. In our SunPower Energy Services Segment's residential and commercial and international DG markets, we often sell large volumes of solar panels, mounting systems, and other solar equipment to third parties, which are typically ordered by our third-party dealer network and customers under standard purchase orders with relatively short delivery lead-times. Additionally, we often require project financing for development and construction of our SunPower Technologies Segment's solar power plant projects, which require significant investments before the equity is later sold by us to investors. Therefore, our solar power system project backlog would exclude sales contracts signed and completed in the same quarter and contracts still conditioned upon obtaining financing. Based on these reasons, we believe backlog at any particular date is not necessarily a meaningful indicator of our future revenue for any particular period of time.

Regulations

Public Policy Considerations

Different public policy mechanisms have been used by governments to accelerate the adoption and use of solar power. Examples of customer-focused financial mechanisms include capital cost rebates, performance-based incentives, feed-in tariffs, tax credits, and net metering. Some of these government mandates and economic incentives are scheduled to be reduced or to expire, or could be eliminated altogether. Capital cost rebates provide funds to customers based on the cost and size of a customer’s solar power system. Performance-based incentives provide funding to a customer based on the energy produced by their solar power system. Feed-in tariffs pay customers for solar power system generation based on energy produced, at a rate generally guaranteed for a period of time. Tax credits reduce a customer’s taxes at the time the taxes are due. Net metering allows customers to deliver to the electric grid any excess electricity produced by their on-site solar power systems, and to be credited for that excess electricity at or near the full retail price of electricity.

In addition to the mechanisms described above, new market development mechanisms to encourage the use of renewable energy sources continue to emerge. For example, many states in the United States have adopted renewable portfolio standards which mandate that a certain portion of electricity delivered to customers come from eligible renewable energy resources. Some states, such as California and Hawaii, have significantly expanded their renewable portfolio standards in recent years. In certain developing countries, governments are establishing initiatives to expand

access to electricity, including initiatives to support off-grid rural electrification using solar power. For more information about how we avail ourselves of the benefits of public policies and the risks related to public policies, please see the risk factors set forth under the caption "Item 1A. Risk Factors" including "Risks Related to Our Sales Channels—The reduction, modification or elimination of government incentives could cause our revenue to decline and harm our financial results," "Risks Related to Our Sales Channels—Existing regulations and policies and changes to these regulations and policies may present technical, regulatory, and economic barriers to the purchase and use of solar power products, which may significantly reduce demand for our products and services," and "Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows."

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Environmental Regulations

We use, generate, and discharge toxic, volatile, or otherwise hazardous chemicals and wastes in our research and development, manufacturing, and construction activities. We are subject to a variety of foreign, U.S. federal and state, and local governmental laws and regulations related to the purchase, storage, use, and disposal of hazardous materials. We believe that we have all environmental permits necessary to conduct our business and expect to obtain all necessary environmental permits for future activities. We believe that we have properly handled our hazardous materials and wastes and have appropriately remediated any contamination at any of our premises. For more information about risks related to environmental regulations, please see the risk factors set forth under the caption "Item 1A. Risk Factors" including "Risks Related to Our Operations—Compliance with environmental regulations can be expensive, and noncompliance with these regulations may result in adverse publicity and potentially significant monetary damages and fines."

Information concerning certain limited activities in Iran

Information concerning TOTAL’s activities related to Iran that took place in 2018 provided in this section is disclosed according to Section 13(r) of the Securities Exchange Act of 1934, as amended (“U.S. Exchange Act”). TOTAL believes that these activities are not sanctionable, including for activities previously disclosed. Total S.A. and any of its subsidiaries and affiliates are collectively referred to as the Group.

The Group’s operational activities related to Iran were stopped in 2018 following the withdrawal of the United States from the JCPOA in May 2018 and prior to the re-imposition of U.S. secondary sanctions on the oil industry as of November 5, 2018.

Statements in this section concerning affiliates intending or expecting to continue activities described below are subject to such activities continuing to be permissible under applicable international economic sanctions regimes.

a) Exploration & Production

Following the suspension of certain international economic sanctions against Iran on January 16, 2016, the Group commenced various business development activities in Iran. Total E&P South Pars S.A.S. (“TEPSP”) (a wholly-owned affiliate), CNPC International Ltd. (“CNPCI”) (a wholly-owned affiliate of China National Petroleum Company) and Petropars Ltd. (“Petropars”) (a wholly-owned affiliate of NIOC) signed a 20-year risked service contract in July 2017, (the “Risked Service Contract”) for the development and production of phase 11 of the South Pars gas field (“SP11”).TEPSP (50.1%) was the operator and a partner of the project alongside CNPCI (30%) and Petropars (19.9%). These companies entered into a joint operating agreement in July 2017 (the “JOA”) concerning, among other things, the governance of their obligations under the Risked Service Contract and the designation of TEPSP as the project’s operator.

In 2018, TEPSP continued conducting petroleum operations on behalf of the above-mentioned consortium in accordance with the terms and conditions of the Risked Service Contract and the JOA. In particular, TEPSP: (i) held several meetings with the Iranian authorities, NIOC and other Iranian state owned/controlled entities; (ii) launched tenders for award of service contracts for the purposes of the SP11 project; (iii) negotiated various agreements (such as service and/or supply agreements and bank service agreements); and (iv) performed other activities under the Risked Service Contract and the JOA.

In 2018, TEPSP completed the technical studies, which were started in November 2016, in accordance with the technical services agreement (the “TSA”) between NIOC and TEPSP, acting on behalf of the consortium.

However, as a result of the withdrawal of the U.S. from the JCPOA in May 2018, TOTAL ceased all of its activities related to the SP11 project and finalized its withdrawal from the SP11 project on October 29, 2018, at which time it transferred its participating interest and operatorship of the project to CNPCI.

The MOU entered into between TOTAL and NIOC in January 2016 to assess potential developments in Iran (including South Azadegan) was amended to include North Azadegan and to extend its duration. NIOC provided TOTAL in 2017 with technical data on the Azadegan oil field so that it could assess potential development of this field. Representatives of TOTAL held technical meetings in 2017 with representatives of NIOC and its affiliated companies and carried out a technical review of the Azadegan (South & North) oil field as well as the Iran LNG Project (a project contemplating a 10 Mt/y LNG production facility at Tombak Port on Iran's Persian Gulf coast), the results of which were partially disclosed to NIOC and relevant affiliated companies. In addition, TOTAL signed an MOU in 2017 with an international company to evaluate jointly the Azadegan oil field opportunity with NIOC. This international company decided in February 2018 to withdraw from this technical cooperation and a MOU termination agreement was formally executed with TOTAL on May 16, 2018. Technical

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studies were pursued by TOTAL until March 2018 on the Azadegan area with regular contacts with NIOC. All work and contacts with NIOC on this subject ceased at the end of March 2018.

During 2018, in connection with the activities under the aforementioned Risked Service Contract and MOUs, and to discuss other new opportunities, representatives of TOTAL attended meetings with the Iranian oil and gas ministry and several Iranian companies with ties to the government of Iran. In connection with travel to Iran in 2018 by certain employees of the Group, TOTAL made payments to Iranian authorities for visas, airport services, exit fees and similar travel-related charges. In addition, representatives of TOTAL had meetings in France with the Iranian ambassador.

Neither revenues nor profits were recognized from any of the aforementioned activities under the aforementioned Risked Service Contract and MOUs in 2018.

Maersk Oil studied two potential projects with NIOC, prior to the acquisition of Maersk Oil by TOTAL in March 2018. These studies ceased after a meeting with NIOC representatives in May 2018.

The Tehran branch office of TEPSP, opened in 2017 for the purposes of the SP11 project, ceased all operational activities prior to November 1, 2018 and will be closed and de-registered in 2019. Since November 2018, Total Iran BV maintains a local representative office in Tehran with a few employees, solely for non-operational functions. Concerning payments to Iranian entities in 2018, Total Iran BV and Elf Petroleum Iran collectively made payments of approximately IRR 31.7 billion (approximately $300,000 (Converted using the average exchange rate for fiscal year 2018, as published by Bloomberg.) to the Iranian administration for taxes and social security contributions concerning the personnel of the aforementioned representative office and residual obligations related to various prior risked service contracts. In 2019, similar types of payments are to be made in connection with maintaining the representative office in Tehran, albeit in lower amounts. None of these payments has been or is expected to be executed in U.S. dollars.

Furthermore, Total E&P UK Limited (“TEP UK”), a wholly-owned affiliate, holds a 1% interest in a joint venture for the Bruce field in the United Kingdom with Serica Energy (UK) Limited (“Serica”) (98%, operator) and BP Exploration Operating Company Limited (“BP”) (1%), following the completion of the sale of 42.25% of TEP UK’s interests in the Bruce field on November 30, 2018 pursuant to a sale and purchase agreement dated August 2, 2018 between TEP UK and Serica. Upon the closing of the transaction on November 30, 2018, all other prior joint venture partners also sold their interests in the Bruce field to Serica (BP sold 36% retaining a 1% interest; BHP Billiton Petroleum Great Britain Limited (“BHP”) sold their full 16% interest and Marubeni Oil & Gas (U.K.) Limited ((“Marubeni”) sold their full 3.75%).

The Bruce field joint venture is party to an agreement (the “Bruce Rhum Agreement”) governing certain transportation, processing and operation services provided to another joint venture at the Rhum field in the UK, co-owned by Serica (50%, operator) and the Iranian Oil Company UK Ltd (“IOC”), a subsidiary of NIOC (50%). Under the terms of the Bruce Rhum Agreement, the Rhum field owners pay a proportion of the operating costs of the Bruce field facilities calculated on a gas throughput basis. IOC’s share of costs incurred under the Bruce Rhum Agreement have been paid to TEP UK in 2018 by Naftiran Intertrade Company Limited (“NICO”), the trading branch of the National Iranian Oil Company (“NIOC”). NIOC is the parent company of IOC and an Iranian government owned corporation. In 2018, based upon TEP UK’s 1% interest in the Bruce field and income from the net cash flow sharing arrangement with Serica, gross revenue to TEP UK from IOC’s share of the Rhum field resulting from the Bruce Rhum Agreement was approximately £8 million. This sum was used to offset operating costs on the Bruce field and as such, generated no net profit to TEP UK. This arrangement is expected to continue in 2019.

In 2018, TEP UK acted as agent for BHP and Marubeni, which faced difficulty securing banking arrangements allowing them to accept payments from IOC, and, thus, received payments from IOC in relation to BHP and Marubeni's share of income from the Bruce Rhum Agreement under the terms of an agency agreement entered into in June 2018 between BHP, Marubeni and TEP UK (the "Agency Agreement"). Payments made from IOC to BHP and Marubeni in 2018 related to the periods prior to the completion of their divestment to Serica in November 2018. Total payment received on behalf of BHP and Marubeni by TEP UK under this arrangement in 2018 was approximately £7 million. This amount relates to income due to BHP and Marubeni under the Bruce Rhum Agreement for 2017 and 2018. TEP UK transferred all income received under the Agency Agreement to BHP and Marubeni and provided the service on a no profit, no loss basis. The Agency Agreement is expected to be terminated upon receipt of all payments relating to the period up to November 30, 2018.

Prior to the re-imposition of U.S. secondary sanctions on the oil industry as of November 5, 2018, TEP UK liaised directly with IOC concerning its interest in the Bruce Rhum Agreement and it received payments directly for services provided to IOC under the Bruce Rhum Agreement. In October 2018, the U.S. Treasury Department's Office of Foreign Asset Control ("OFAC") granted a new conditional license to BP and Serica authorizing the provision of services to the Rhum field, following the reinstatement of U.S. secondary sanctions. The principal condition of the OFAC license is that the Iranian government's

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shareholding in IOC is transferred into a trust in order that Iran may not derive any benefit from the Rhum field or exercise any control while the U.S. secondary sanctions are in place. A Jersey based trust has been put in place with the trustee holding IOC's shares in the Rhum field. IOC's interest is now managed by a new independent management company established by the trust and referred to as the "Rhum Management Company" ("RMC") and where necessary TEP UK liaises, and expects to continue doing so in 2019, with RMC in relation to the Bruce Rhum Agreement.

TEP UK is also party to an agreement with Serica whereby TEP UK uses reasonable endeavors to evacuate Rhum NGL from the St Fergus Terminal (the "Rhum NGL Agreement"). TEP UK provides this service - subject to Serica having title to all of the Rhum NGL to be evacuated and Serica having a valid license from OFAC for the activity - on a cost basis, but for which TEP UK charges a monthly handling fee that generates an income of approximately £35,000 per annum relating to IOC's 50% stake in the Rhum field. After costs, TEP UK realizes little profit from this arrangement.TEP UK expects to continue this activity in 2019.

Following the acquisition of Maersk Oil in 2018, the undeveloped Yeoman discovery is now wholly owned by the Group, under license P2158 granted to Maersk Oil North Sea UK Limited, recently renamed Total E&P North Sea UK Limited ("TEPNSUK"). Yeoman is situated adjacent to the Pardis discovery in which IOC held an interest, which it sold in October 2018. Prior to this divestment, non-legally binding technical and commercial discussions had taken place between TEPNSUK, IOC and the UK Government's Oil and Gas Authority during the first half of 2018 regarding a potential joint development of Yeoman and Pardis but no contractual arrangements were implemented in connection with such discussions. Also prior to this divestement, other discussions had taken place between TEPNSUK and IOC on an informal basis regarding a potential farm-in to Pardis by Maersk Oil.

Lastly, TOTAL S.A. paid approximately €8,000 to Iranian authorities related to various patents (Section 560.509 of the U.S. Iranian Transactions and Sanctions Regulations provides an authorization for certain transactions in connection with patent, trademark, copyright or other intellectual property protection in the United States or Iran, including payments for such services and payments to persons in Iran directly connected to intellectual property rights, and TOTAL believes that the activities related to the industrial property rights described in this point 3.1.9.2 are consistent with that authorization.) in 2018. Similar payments are expected to be made in 2019 for such patents.

b) Other business segments

In 2018, TOTAL S.A. paid fees of approximately €1,500 to Iranian authorities related to the maintenance and protection of trademarks and designs in Iran. Similar payments are expected to be made in 2019.

Trading & Shipping

Following the suspension of applicable EU and U.S. economic sanctions in 2016, the Group commenced the purchase of Iranian hydrocarbons through its wholly-owned affiliate TOTSA TOTAL OIL TRADING SA ("TOTSA"). In 2018, the Group continued its trading activities with Iran via TOTSA, which purchased approximately 18 Mb of Iranian crude oil for nearly €1 billion pursuant to term contracts. It is not possible to estimate the gross revenue and net profit related to these purchases because the totality of this crude oil was used to supply the Group's refineries. In addition, in 2018, approximately 1 Mb of petroleum products were sold to entities with ties to the government of Iran. These activities generated gross revenue of nearly €43 million and a net profit of approximately €1 million. The Group ceased these activities in June 2018.

Gas, Renewables & Power

Saft Groupe S.A. (“Saft”), a wholly-owned affiliate, in 2018 sold signaling and backup battery systems for metros and railways as well as products for the utilities and oil and gas sectors to companies in Iran, including some having direct or indirect ties with the Iranian government. In 2018, this activity generated gross revenue of approximately €2.5 million and net profit of approximately €0.3 million. Saft ceased this activity in 2018. Saft also attended the Iran Oil Show in 2018, where it discussed business opportunities with Iranian customers, including those with direct or indirect ties with the Iranian government. Saft ceased this activity in 2018.

Total Eren, a company in which Total Eren Holding holds an interest of 68.76% (TOTAL S.A. owns 33.86% of Total Eren Holding), had preliminary discussions during January to March 2018 for possible investments in renewable energy projects in Iran, including meetings with ministries of the Iranian government. These discussions and meetings ceased as of March 2018 and neither revenues nor profits were recognized from this activity in 2018.

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Refining & Chemicals

As of May 2018, Hutchinson SA and its affiliates no longer accepted orders from Iranian companies and ceased all activities, in general, with Iran and all Iranian companies prior to August 6, 2018.

Le Joint Français, a wholly-owned affiliate of Hutchinson SA, sold vehicular O-ring seals in 2018 to Iran Khodro, a company in which the government of Iran holds a 20% interest and which is supervised by Iran's Industrial Management Organization. This activity generated gross revenue of approximately €54,056 and net profit of approximately €8,108. Le Joint Français also sold O-ring seals in 2018 to Al Khalsan. This activity generated gross revenue of approximately €29,348 and net profit of approximately €4,402.

Paulstra S.N.C., a wholly-owned affiliate of Hutchinson SA, obtained in 2017 an order from Iran Khodro to sell vehicular anti-vibration systems over a 5-year period. This activity did not generate any gross revenue or net profit in 2018 because Paulstra did not delivery any product to Iran Khodro. The order was terminated in 2018. Paulstra S.N.C. also sold oil seals in 2018 to Iran Khodro. This activity generated gross revenue of approximately €1,078,887 and net profit of approximately €161,833.

Catelsa Caceres, a wholly-owned affiliate of Hutchinson Iberia, itself wholly-owned by Hutchinson SA, sold sealing products to Iran Khodro in 2018. This activity generated gross revenue of approximately €1,449 and net profit of approximately €217.

Hutchinson GMBH, a wholly-owned affiliate of Hutchinson SA, sold hoses for automotive vehicles to Iran Khodro in 2018. This activity generated gross revenue for approximately €257,400 and net profit of approximately €38,610. The last shipments from Hutchinson and its affiliates to Iran Khodro were in August 2018 and last payments were made in October 2018.

Hanwha Total Petrochemicals ("HTC"), a joint venture in which Total Holdings UK Limited (a wholly-owned affiliate) holds a 50% interest and Hanwha General Chemicals holds a 50% interest, purchased approximately 17 Mb of condensates from NIOC for approximately KRW 1,310 billion (approximately $1.2 billion) from January to July 2018, then HTC has stopped purchasing from NIOC. These condensates are used as raw material for certain of HTC's steam crackers. HTC also chartered fifteen tankers of condensates with National Iranian Tanker Company (NITC), a subsidiary of NIOC, for approximately KRW 24 billion (approximately $22.3 million). In November 2018, South Korea was granted a significant reduction exemption waiver (the "SRE waiver") allowing it to import Iranian condensate from NIOC for six months. For 2019, based on the SRE waiver, HTC is reviewing the feasibility to resume purchases from NIOC.

Total Research & Technology Feluy ("TRTF", a wholly-owned affiliate), Total Marketing Services ("TMS", a wholly-owned affiliate), and Total Raffinage Chimie ("TRC") paid in 2018 fees totaling approximately €1,000 to Iranian authorities related to various patents. Similar payments are expected to be made by TRTF and TRC in 2019. TMS abandoned its patent rights in Iran in 2018, thus no payments are expected by TMS in 2019.

Marketing & Services

Until December 2012, at which time it sold its entire interest, the Group held a 50% interest in the lubricants retail company Beh Tam (formerly Beh Total) along with Behran Oil (50%), a company controlled by entities with ties to the government of Iran. As part of the sale of the Group's interest in Beh Tam, TOTAL S.A. agreed to license the trademark "Total" to Beh Tam for an initial 3-year period (renewed for an additional 3 year period) for the sale by Beh Tam of lubricants to domestic consumers in Iran. Royalty payments for 2014 were received by TOTAL S.A. during

the first semester of 2018 in the amount of approximately €730,000. There remain outstanding royalty payments for 2015 through 2017 in favor of TOTAL S.A. This licensing agreement was terminated in 2018. In addition, representatives of Total Oil Asia-Pacific Pte Ltd, a wholly-owned affiliate, visited Behran Oil beginning 2018 regarding the potential purchase of 50% of the share capital of Beh Tam. Discussions on this matter ended following the announcement of the re-imposition of U.S. secondary sanctions on the oil industry.

Total Marketing Middle East FZE, a wholly-owned affiliate, sold lubricants to Beh Tam in 2018. The sale in 2018 of approximately 43 t of lubricants and special fluids generated gross revenue of approximately AED 500,000 (approximately $136,000) and net profit of approximately AED 260,000 (approximately $ 71,000) (Converted using the average exchange rate for fiscal year 2018, as published by Bloomberg). The company stopped all transactions with this customer as of August 2018.

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Total Marketing France (“TMF”), a company wholly-owned by TMS, provided in 2018 fuel payment cards to the Iranian embassy and delegation to UNESCO in France for use in the Group’s service stations. In 2018, these activities generated gross revenue of approximately €32,000 and net profit of approximately €5,000. The company expects to continue this activity in 2019.
TMF also sold jet fuel in 2018 to Iran Air as part of its airplane refueling activities in France. The sale of approximately 260 cubic meters of jet fuel generated gross revenue of approximately €130,000 and net profit of approximately €570. The company stopped all transactions with this customer prior to November 5, 2018.

Total Belgium, a wholly-owned affiliate, provided in 2018 fuel payment cards to the Iranian embassy in Brussels (Belgium) for use in the Group’s service stations. In 2018, these activities generated gross revenue of approximately €11,000 and net profit of approximately €4,000. The company expects to continue this activity in 2019.

Employees

As of December 30, 2018, we had approximately 6,600 full-time employees worldwide, of which 1,280 were located in the United States, 1,900 were located in the Philippines, 1,470 were located in Malaysia, and 1,950 were located in other countries. Of these employees, 4,485 were engaged in manufacturing, 1,075 in construction projects, 260 in research and development, 355 in sales and marketing, and 430 in general and administrative services. Although in certain countries we have works councils and statutory employee representation obligations, our employees are generally not represented by labor unions on an ongoing basis. We have never experienced a work stoppage, and we believe our relations with our employees to be good.

Seasonal Trends and Economic Incentives

Our business is subject to industry-specific seasonal fluctuations including changes in weather patterns and economic incentives, among others. Sales have historically reflected these seasonal trends with the largest percentage of total revenues realized during the last two quarters of our fiscal year. The construction of solar power systems or installation of solar power components and related revenue may decline during cold winter months. In the United States, many customers make purchasing decisions towards the end of the year in order to take advantage of tax credits or for other budgetary reasons. In addition, revenues may fluctuate due to the timing of project sales, construction schedules, and revenue recognition of certain projects, which may significantly impact the quarterly profile of our results of operations. We may also retain certain development projects on our balance sheet for longer periods of time than in preceding periods in order to optimize the economic value we receive at the time of sale in light of market conditions, which can fluctuate after we have committed to projects. Delays in disposing of projects, or changes in amounts realized on disposition, may lead to significant fluctuations to the period-over-period profile of our results of operations and our cash available for working capital needs.

Available Information

We make available our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") free of charge on our website at www.sunpower.com, as soon as reasonably practicable after they are electronically filed with or furnished to the SEC. The contents of our website are not incorporated into, or otherwise to be regarded as part of this Annual Report on Form 10-K. Copies of such material may be obtained, free of charge, upon written request submitted to our corporate headquarters: SunPower Corporation, Attn: Investor Relations, 77 Rio Robles, San Jose, California, 95134. Copies of materials we file with the SEC may also be accessed the SEC's website at www.sec.gov.

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ITEM 1A. RISK FACTORS

Our business is subject to various risks and uncertainties, including those described below and elsewhere in this Annual Report on Form 10-K, which could adversely affect our business, results of operations, and financial condition. Although we believe that we have identified and discussed below certain key risk factors affecting our business, there may be additional risks and uncertainties that are not currently known to us or that are not currently believed by us to be material that may also harm our business, results of operations, and financial condition.

Risks Related to Our Sales Channels

Our operating results are subject to significant fluctuations and are inherently unpredictable.

We do not know whether our revenue will continue to grow, or if it will continue to grow sufficiently to outpace our expenses, which we also expect to grow. As a result, we may not be profitable on a quarterly or annual basis. Our revenue and operating results are difficult to predict and have in the past fluctuated significantly from quarter to quarter. The principal reason for these significant fluctuations in our results is that we derive a substantial portion of our total revenues from our large commercial customers, consequently:

- the amount, timing and mix of sales to our large commercial customers often for a single medium or large-scale project, may cause large fluctuations in our revenue and other financial results because, at any given time, a single large-scale project can account for a material portion of our total revenue in a given quarter;
- our inability to monetize our projects as planned, or any delay in obtaining the required government support or initial payments to begin recognizing revenue under the relevant recognition criteria, and the corresponding revenue impact, may similarly cause large fluctuations in our revenue and other financial results;
- our ability to monetize projects as planned is also subject to market conditions, including fluctuations in demand based on the availability of regulatory incentives and other factors, changes in the internal rate of return expected by customers in light of market conditions, the increasing number of power plants being constructed or available for sale and competition for financing, which can make both financing and disposition more challenging and may significantly affect project sales prices;
- market conditions may deteriorate after we have committed to projects, resulting in delays in disposing of projects, or changes in amounts realized on disposition, which may lead to significant fluctuations in the period-over-period profile of our results of operations and our cash available for working capital needs;
- in the event a project is subsequently canceled, abandoned, or is deemed unlikely to occur, we will charge all prior capital costs as an operating expense in the quarter in which such determination is made, which could materially adversely affect operating results;
- a delayed disposition of a project could require us to recognize a gain on the sale of assets instead of recognizing revenue;
- our agreements with these customers may be canceled if we fail to meet certain product specifications or materially breach these agreements;
- in the event of a customer bankruptcy, our customers may seek to terminate or renegotiate the terms of current agreements or renewals; and

- the failure by any significant customer to pay for orders, whether due to liquidity issues or otherwise, could materially and adversely affect our results of operations.

Any decrease in revenue from our large commercial customers whether due to a loss or delay of projects or an inability to collect, could have a significant negative impact on our business. See also "Item 7A. Quantitative and Qualitative Disclosures About Market Risk." See also under this section "Risks Related to Our Sales Channels—Revenues from a limited number of customers and large projects are expected to continue to comprise a significant portion of our total revenues and any decrease in revenues from those customers or projects, payment of liquidated damages, or an increase in related expenses, could have a material adverse effect on our business, results of operations and financial condition."

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Sales to our residential and light commercial customers are similarly susceptible to fluctuations in volumes and revenue, as well as fluctuations in demand based on the availability of regulatory incentives and other factors. In addition, demand from our commercial and residential customers may fluctuate based on the perceived cost-effectiveness of the electricity generated by our solar power systems as compared to conventional energy sources, such as natural gas and coal (which fuel sources are subject to significant price swings from time to time), and other non-solar renewable energy sources, such as wind. Declining average selling prices immediately affect our residential and light commercial sales volumes, and therefore lead to large fluctuations in revenue.

Further, our revenue mix of materials sales versus project sales can fluctuate dramatically from quarter to quarter, which may adversely affect our margins and financial results in any given period.

Any of the foregoing may cause us to miss our financial guidance for a given period, which could adversely impact the market price for our common stock and our liquidity.

We base our planned operating expenses in part on our expectations of future revenue and a significant portion of our expenses is fixed in the short term. If revenue for a particular quarter is lower than we expect, we likely will be unable to proportionately reduce our operating expenses for that quarter, which would materially adversely affect our operating results for that quarter. See also under this section, “Risks Related to Our Sales Channels—Our business could be adversely affected by seasonal trends and construction cycles,” “Risks Related to Our Sales Channels—The reduction, modification or elimination of government incentives could cause our revenue to decline and harm our financial results,” and “Risks Related to Our Sales Channels—Existing regulations and policies and changes to these regulations and policies may present technical, regulatory, and economic barriers to the purchase and use of solar power products, which may significantly reduce demand for our products and services.”

Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows.

On January 23, 2018, the President of the United States issued Proclamation 9693, which approved recommendations to provide relief to U.S. manufacturers and impose safeguard tariffs on imported solar cells and modules, based on the investigations, findings, and recommendations of the U.S. International Trade Commission (the “International Trade Commission”) pursuant to a Section 201 petition filed by Suniva, Inc., which Solar World Americas Inc. later joined, regarding foreign-manufactured photovoltaic ("PV") solar cells and modules. Modules will be subject to a four-year tariff at a rate of 30% in the first year, declining 5% in each of the three subsequent years, to a final tariff rate of 15% in 2021. Cells are subject to a tariff-rate quota, under which the first 2.5 GW of cell imports each year will be exempt from tariffs; and cells imported after the 2.5 GW quota has been reached will be subject to the same 30% tariff as modules in the first year, with the same 5% decline in each of the three subsequent years. The tariff-free cell quota applies globally, without any allocation by country or region. The tariffs went into effect on February 7, 2018.

The tariffs could materially and adversely affect our business and results of operations. While solar cells and modules based on interdigitated back contact ("IBC") technology, like our Maxeon 3, Maxeon 2 and related products, were granted exclusion from these safeguard tariffs on September 19, 2018, our solar products based on other technologies continue to be subject to the safeguard tariffs. Although we are actively engaged in efforts to mitigate the effect of these tariffs, there is no guarantee that these efforts will be successful.

Additionally, the Office of the United States Trade Representative (“USTR”) initiated an investigation under Section 301 of the Trade Act of 1974 into the government of China’s acts, policies, and practices related to technology transfer, intellectual property, and innovation. In notices published June 20, 2018, August 16, 2018, and September 21, 2018, the USTR imposed additional import duties of up to 25% on certain Chinese products covered by the Section 301 remedy. These tariffs include certain solar power system components and finished products, including those purchased from our suppliers for use in our products and used in our business. The United States and China continue to signal the possibility of taking additional retaliatory measures in response to actions taken by the other country, which may result in changes to existing trade agreements and terms including additional tariffs on imports from China

or other countries.

In the near term, uncertainty surrounding the implications of the existing tariffs affecting the U.S. solar market, the escalating trade tensions between China and the United States, and whether specific additional solar power products may be impacted, is likely to cause market volatility, price fluctuations, supply shortages, and project delays, any of which could harm our business, and our pursuit of mitigating actions may divert substantial resources from other projects. In addition, the imposition of tariffs is likely to result in a wide range of impacts to the U.S. solar industry and the global manufacturing market, as well as our business in particular. Such tariffs could materially increase the price of our solar products and result in

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significant additional costs to us, our resellers, and our resellers' customers, which could cause a significant reduction in demand for our solar power products and greatly reduce our competitive advantage. With the uncertainties associated with the Section 201 and Section 301 trade cases, events and changes in circumstances indicated that the carrying values of our long-lived assets associated with our manufacturing operations might not be recoverable.

The execution of our growth strategy is dependent upon the continued availability of third-party financing arrangements for our solar power plants, our residential lease program, and our customers, and is affected by general economic conditions and other factors.

Our growth strategy depends on third-party financing arrangements. We often require project financing for development and construction of our solar power plant projects, which require significant investments before the equity is later sold to investors. Many purchasers of our systems projects have entered into third-party arrangements to finance their systems over an extended period of time, while many end-customers have chosen to purchase solar electricity under a power purchase agreement ("PPA") with an investor or financing company that purchases the system from us or our authorized dealers. We often execute PPAs directly with the end-user, with the expectation that we will later assign the PPA to a financier. Under such arrangements, the financier separately contracts with us to acquire and build the solar power system, and then sells the electricity to the end-user under the assigned PPA. When executing PPAs with end-users, we seek to mitigate the risk that financing will not be available for the project by allowing termination of the PPA in such event without penalty. However, we may not always be successful in negotiating for penalty-free termination rights for failure to obtain financing, and certain end-users have required substantial financial penalties in exchange for such rights. These structured finance arrangements are complex and may not be feasible in many situations.

Global economic conditions, including conditions that may make it more difficult or expensive for us to access credit and liquidity, could materially and adversely affect our business and results of operations. Credit markets are unpredictable, and if they become more challenging, we may be unable to obtain project financing for our projects, customers may be unable or unwilling to finance the cost of our products, we may have difficulties in reaching agreements with financiers to finance the construction of our solar power systems, or the parties that have historically provided this financing may cease to do so, or only do so on terms that are substantially less favorable for us or our customers, any of which could materially and adversely affect our revenue and growth in both segments of our business. Our plans to continue to grow our residential lease program may be delayed if credit conditions prevent us from obtaining or maintaining arrangements to finance the program. We are actively arranging additional third-party financing for our residential lease program; however, if we encounter challenging credit markets, we may be unable to arrange additional financing partners for our residential lease program in future periods, which could have a negative impact on our sales. In the event we enter into a material number of additional leases without obtaining corresponding third-party financing, our cash, working capital and financial results could be negatively affected. In addition, a rise in interest rates would likely increase our customers' cost of financing or leasing our products and could reduce their profits and expected returns on investment in our products. The general reduction in available credit to would-be borrowers or lessees, worldwide economic uncertainty, and the condition of worldwide housing markets could delay or reduce our sales of products to new homebuilders and authorized resellers. For more information, see "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 7. Leasing."

The availability of financing depends on many factors, including market conditions, the demand for and supply of solar projects, and resulting risks of refinancing or disposing of such projects. It also depends in part on government incentives, such as tax incentives. In the United States, with the expiration of the Treasury Grant under Section 1603 of the American Recovery and Reinvestment Act program, we have needed to identify interested financiers with sufficient taxable income to monetize the tax incentives created by our solar systems. In the long term, as we look toward markets not supported (or supported less) by government incentives, we will continue to need to identify financiers willing to finance residential solar systems without such incentives. Our failure to effectively do so could materially and adversely affect our business and results of operations. In addition, with the recent passage of comprehensive reform of the Code, the impact of revisions to various industry-specific tax incentives, such as

accelerated depreciation, and an overall reduction in corporate tax rates may lead to changes in the market and availability of tax equity investors.

The lack of project financing, due to tighter credit markets or other reasons, could delay the development and construction of our solar power plant projects, thus reducing our revenues from the sale of such projects. We may in some cases seek to pursue partnership arrangements with financing entities to assist residential and other customers to obtain financing for the purchase or lease of our systems, which would expose us to credit or other risks. We face competition for financing partners and if we are unable to continue to offer a competitive investment profile, we may lose access to financing partners or they may offer financing on less favorable terms than our competitors, which could materially and adversely affect our business and results of operations.

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If we fail to successfully execute our cost reduction roadmap, or fail to develop and introduce new and enhanced products and services, we may be unable to compete effectively, and our ability to generate revenues and profits would suffer.

Our solar panels are currently competitive in the market compared with lower cost conventional solar cells, such as thin-film, due to our products' higher efficiency, among other things. Given the general downward pressure on prices for solar panels driven by increasing supply and technological change, a principal component of our business strategy is reducing our costs to manufacture our products to remain competitive. We also focus on standardizing our products with the goal of driving down installation costs. If our competitors are able to drive down their manufacturing and installation costs or increase the efficiency of their products faster than we can, or if competitor products are exempted from tariffs and quotas and ours are not, our products may become less competitive even when adjusted for efficiency. Further, if raw materials costs and other third-party component costs were to increase, we may not meet our cost reduction targets. If we cannot effectively execute our cost reduction roadmap, our competitive position will suffer, and we could lose market share and our margins would be adversely affected as we face downward pricing pressure.
The solar power market is characterized by continually changing technology and improving features, such as increased efficiency, higher power output and enhanced aesthetics. Technologies developed by our direct competitors, including thin-film solar panels, concentrating solar cells, solar thermal electric and other solar technologies, may provide energy at lower costs than our products. We also face competition in some markets from other energy generation sources, including conventional fossil fuels, wind, biomass, and hydro. In addition, other companies could potentially develop a highly reliable renewable energy system that mitigates the intermittent energy production drawback of many renewable energy systems. Companies could also offer other value-added improvements from the perspective of utilities and other system owners, in which case such companies could compete with us even if the cost of electricity associated with any such new system is higher than that of our systems. We also compete with traditional utilities that supply energy to our potential customers. Such utilities have greater financial, technical, operational and other resources than we do. If electricity rates decrease and our products become less competitive by comparison, our operating results and financial condition will be adversely affected.
Our failure to further refine our technology, reduce cost in our manufacturing process, and develop and introduce new solar power products could cause our products or our manufacturing facilities to become less competitive or obsolete, which could reduce our market share, cause our sales to decline, and cause the impairment of our assets. This risk requires us to continuously develop new solar power products and enhancements for existing solar power products to keep pace with evolving industry standards, competitive pricing and changing customer preferences, expectations, and requirements. It is difficult to successfully predict the products and services our customers will demand. If we cannot continually improve the efficiency and prove the reliability of our solar panels as compared with those of our competitors, our pricing will become less competitive, we could lose market share and our margins would be adversely affected.
As we introduce new or enhanced products or integrate new technology and components into our products, we will face risks relating to such transitions including, among other things, the incurrence of high fixed costs, technical challenges, acceptance of products by our customers, disruption in customers' ordering patterns, insufficient supplies of new products to meet customers' demand, possible product and technology defects arising from the integration of new technology and a potentially different sales and support environment relating to any new technology. Our failure to manage the transition to newer products or the integration of newer technology and components into our products could adversely affect our business's operating results and financial condition. See also under this section, "Risks Related to Our Sales Channels—Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows."

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The increase in the global supply of solar cells and panels, and increasing competition, may cause substantial downward pressure on the prices of such products and cause us to lose sales or market share, resulting in lower revenues, earnings, and cash flows.

Global solar cell and panel production capacity has been materially increasing overall, and solar cell and solar panel manufacturers currently have excess capacity, particularly in China. Excess capacity and industry competition have resulted in the past, and may continue to result, in substantial downward pressure on the price of solar cells and panels, including SunPower products. Intensifying competition could also cause us to lose sales or market share. Such price reductions or loss of sales or market share could have a negative impact on our revenue and earnings, and could materially adversely affect our business, financial condition and cash flows. In addition, our internal pricing forecasts may not be accurate in such a market environment, which could cause our financial results to be different than forecasted. Uncertainty with respect to Chinese government policies, including subsidies or other incentives for solar projects, may cause increased, decreased, or volatile supply and/or demand for solar products, which could negatively impact our revenue and earnings. Finally, the imposition by the U.S. of tariffs and quotas could materially adversely affect our ability to compete with other suppliers and developers in the U.S. market. See also under this section, “Risks Related to Our Sales Channels—If we fail to successfully execute our cost reduction roadmap, or fail to develop and introduce new and enhanced products and services, we may be unable to compete effectively, and our ability to generate revenues and profits would suffer,” and “Risks Related to Our Sales Channels—Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows.”

The reduction, modification or elimination of government incentives could cause our revenue to decline and harm our financial results.

The market for on-grid applications, where solar power is used to supplement a customer’s electricity purchased from the utility network or sold to a utility under tariff, depends in large part on the availability and size of government mandates and economic incentives because, at present, the cost of solar power generally exceeds retail electric rates in many locations and wholesale peak power rates in some locations. Incentives and mandates vary by geographic market. Various government bodies in most of the countries where we do business have provided incentives in the form of feed-in tariffs, rebates, and tax credits and other incentives and mandates, such as renewable portfolio standards and net metering, to end-users, distributors, system integrators and manufacturers of solar power products to promote the use of solar energy in on-grid applications and to reduce dependency on other forms of energy. These various forms of support for solar power are subject to change (as, for example, occurred in 2015 with Nevada’s decision to change net energy metering; and in 2017 with California's adoption of new time-of-use rates that reduced the price paid to solar system owners for mid-day electricity production), and are expected in the longer term to decline. Even changes that may be viewed as positive (such as the extension at the end of 2015 of U.S. tax credits related to solar power) can have negative effects if they result, for example, in delaying purchases that otherwise might have been made before expiration or scheduled reductions in such credits. Governmental decisions regarding the provision of economic incentives often depend on political and economic factors that we cannot predict and that are beyond our control. The reduction, modification or elimination of grid access, government mandates or economic incentives in one or more of our customer markets would materially and adversely affect the growth of such markets or result in increased price competition, either of which could cause our revenue to decline and materially adversely affect our financial results.

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Existing regulations and policies and changes to these regulations and policies may present technical, regulatory, and economic barriers to the purchase and use of solar power products, which may significantly reduce demand for our products and services.

The market for electric generation products is heavily influenced by federal, state and local government laws, regulations and policies concerning the electric utility industry in the United States and abroad, as well as policies promulgated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of customer-owned electricity generation, and changes that make solar power less competitive with other power sources could deter investment in the research and development of alternative energy sources as well as customer purchases of solar power technology, which could in turn result in a significant reduction in the demand for our solar power products. The market for electric generation equipment is also influenced by trade and local content laws, regulations and policies that can discourage growth and competition in the solar industry and create economic barriers to the purchase of solar power products, thus reducing demand for our solar products. In addition, on-grid applications depend on access to the grid, which is also regulated by government entities. We anticipate that our solar power products and their installation will continue to be subject to oversight and regulation in accordance with federal, state, local and foreign regulations relating to construction, safety, environmental protection, utility interconnection and metering, trade, and related matters. It is difficult to track the requirements of individual states or local jurisdictions and design equipment to comply with the varying standards. In addition, the U.S., European Union and Chinese governments, among others, have imposed tariffs or are in the process of evaluating the imposition of tariffs on solar panels, solar cells, polysilicon, and potentially other components. These and any other tariffs or similar taxes or duties may increase the price of our solar products and adversely affect our cost reduction roadmap, which could harm our results of operations and financial condition. Any new regulations or policies pertaining to our solar power products may result in significant additional expenses to us, our resellers and our resellers' customers, which could cause a significant reduction in demand for our solar power products. See also under this section, "Risks Related to Our Sales Channels—Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows."

We may not achieve some or all of the expected benefits of our restructuring plans and our restructuring may adversely affect our business.

We announced a restructuring plan in February 2018 to reduce operating expenses and cost of revenue overhead in light of the known shorter-term impact of U.S. tariffs imposed on PV solar cells and modules pursuant to Section 201 of the Trade Act of 1974 and our broader initiatives to control costs and improve cash flow. While we expect to complete the plan in 2019, additional actions may be costly and disruptive to our business, and we may not be able to obtain the cost savings and benefits that were initially anticipated in connection with our restructuring. Additionally, we may experience a loss of continuity, loss of accumulated knowledge, or inefficiency during transitional periods associated with our restructuring. Reorganization and restructuring can require a significant amount of management and other employees' time and focus, which may divert attention from operating and growing our business. If we fail to achieve some or all of the expected benefits of restructuring, it could have a material adverse effect on our competitive position, business, financial condition, results of operations and cash flows. For more information about our restructuring plan, see "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 9. Restructuring."

As owners and operators of solar power systems that deliver electricity to the grid, certain of our affiliated entities may be considered public utilities for purposes of the Federal Power Act, as amended (the "FPA"), and are subject to regulation by the Federal Energy Regulatory Commission ("FERC"), as well as various local and state regulatory bodies.

Although we are not directly subject to FERC regulation under the FPA, we are considered to be a "holding company" for purposes of Section 203 of the FPA, which regulates certain transactions involving public utilities, and such

regulation could adversely affect our ability to grow the business through acquisitions. Likewise, investors seeking to acquire our public utility subsidiaries or acquire ownership interests in their securities may require prior FERC approval to do so. Such approval could result in transaction delays or uncertainties.

Public utilities under the FPA are required to obtain FERC acceptance of their rate schedules for wholesale sales of electricity and to comply with various regulations. FERC may grant our affiliated entities the authority to sell electricity at market-based rates and may also grant them certain regulatory waivers, such as waivers from compliance with FERC's accounting regulations. These FERC orders reserve the right to revoke or revise market-based sales authority if FERC subsequently determines that our affiliated entities can exercise market power in the sale of generation products, the provision of transmission services, or if it finds that any of the entities can create barriers to entry by competitors. In addition, if the entities fail to comply with certain reporting obligations, FERC may revoke their power sales tariffs. Finally, if the entities were deemed to have engaged in manipulative or deceptive practices concerning their power sales transactions, they would be

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subject to potential fines, disgorgement of profits, and/or suspension or revocation of their market-based rate authority. If our affiliated entities were to lose their market-based rate authority, such companies would be required to obtain FERC's acceptance of a cost-of-service rate schedule and could become subject to the accounting, record-keeping, and reporting requirements that are imposed on utilities with cost-based rate schedules, which would impose cost and compliance burdens on us and have an adverse effect on our results of operations. In addition to the risks described above, we may be subject to additional regulatory regimes at state or foreign levels to the extent we own and operate solar power systems in such jurisdictions.

As our sales to residential customers have grown, we have increasingly become subject to substantial financing and consumer protection laws and regulations.

As we continue to seek to expand our retail customer base, our activities with customers – and in particular, our financing activities with our residential customers – are subject to consumer protection laws that may not be applicable to our commercial and power plant businesses, such as federal truth-in-lending, consumer leasing, and equal credit opportunity laws and regulations, as well as state and local finance laws and regulations. Claims arising out of actual or alleged violations of law may be asserted against us by individuals or governmental entities and may expose us to significant damages or other penalties, including fines. In addition, our affiliations with third-party dealers may subject us to alleged liability in connection with actual or alleged violations of law by such dealers, whether or not actually attributable to us, which may expose us to significant damages and penalties, and we may incur substantial expenses in defending against legal actions related to third-party dealers, whether or not we are ultimately found liable.

We may incur unexpected warranty and product liability claims that could materially and adversely affect our financial condition and results of operations.

Our current standard product warranty for our solar panels and their components includes a 25-year warranty period for defects in materials and workmanship and for greater than promised declines in power performance. We believe our warranty offering is in line with industry practice. This long warranty period creates a risk of extensive warranty claims long after we have shipped product and recognized revenue. We perform accelerated life cycle testing that exposes our products to extreme stress and climate conditions in both environmental simulation chambers and in actual field deployments in order to highlight potential failures that could occur over the 25-year warranty period. We also employ measurement tools and algorithms intended to help us assess actual and expected performance; these attempt to compare actual performance against an expected performance baseline that is intended to account for many factors (like weather) that can affect performance. Although we conduct accelerated testing of our solar panels and components, they have not and cannot be tested in an environment that exactly simulates the 25-year warranty period and it is difficult to test for all conditions that may occur in the field. Further, there can be no assurance that our efforts to accurately measure and predict panel and component performance will be successful. We have sold products under our warranties since the early 2000s and have therefore not experienced the full warranty cycle.

In our project installations, our current standard warranty for our solar power systems differs by geography and end-customer application and usually includes a limited warranty of 10 years for defects in workmanship, after which the customer may typically extend the period covered by its warranty for an additional fee. We also typically provide a system output performance warranty, separate from our standard solar panel product warranty, to customers that have subscribed to our post-installation O&M services. The long warranty period and nature of the warranties create a risk of extensive warranty claims long after we have completed a project and recognized revenues. Warranty and product liability claims may also result from defects or quality issues in certain technology and components (whether manufactured by us or third parties) that we incorporate into our solar power systems, such as solar cells, panels, inverters, and microinverters, over which we may have little or no control. See also under this section "Risks Related to Our Supply Chain—We will continue to be dependent on a limited number of third-party suppliers for certain raw materials and components for our products, which could prevent us from delivering our products to our customers

within required time frames and could in turn result in sales and installation delays, cancellations, penalty payments and loss of market share." While we generally pass through to our customers the manufacturer warranties we receive from our suppliers, in some circumstances, we may be responsible for repairing or replacing defective parts during our warranty period, often including those covered by manufacturers' warranties, or incur other non-warranty costs. If a manufacturer disputes or otherwise fails to honor its warranty obligations, we may be required to incur substantial costs before we are compensated, if at all, by the manufacturer. Furthermore, our warranties may exceed the period of any warranties from our suppliers covering components, such as third-party solar cells, third-party panels and third-party inverters, included in our systems. In addition, manufacturer warranties may not fully compensate us for losses associated with third-party claims caused by defects or quality issues in their products. For example, most manufacturer warranties exclude certain losses that may result from a system component's failure or defect, such as the cost of de-installation, re-installation, shipping, lost electricity, lost renewable energy credits or other solar incentives, personal injury, property damage, and other

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losses. In certain cases, the direct warranty coverage we provide to our customers, and therefore our financial exposure, may exceed our recourse available against cell, panel or other manufacturers for defects in their products. In addition, in the event we seek recourse through warranties, we will also be dependent on the creditworthiness and continued existence of the suppliers to our business. In the past, certain of our suppliers have entered bankruptcy and our likelihood of a successful warranty claim against such suppliers is minimal.

Increases in the defect rate of SunPower or third-party products, including components, could cause us to increase the amount of warranty reserves and have a corresponding material, negative impact on our results of operations. Further, potential future product or component failures could cause us to incur substantial expense to repair or replace defective products or components, and we have agreed in some circumstances to indemnify our customers and our distributors against liability from some defects in our solar products. A successful indemnification claim against us could require us to make significant damage payments. Repair and replacement costs, as well as successful indemnification claims, could materially and negatively impact our financial condition and results of operations.

Like other retailers, distributors and manufacturers of products that are used by customers, we face an inherent risk of exposure to product liability claims in the event that the use of the solar power products into which solar cells, solar panels, and microinverters are incorporated results in injury, property damage or other damages. We may be subject to warranty and product liability claims in the event that our solar power systems fail to perform as expected or if a failure of our solar power systems or any component thereof results, or is alleged to result, in bodily injury, property damage or other damages. Since our solar power products are electricity-producing devices, it is possible that our systems could result in injury, whether by product malfunctions, defects, improper installation or other causes. In addition, since we only began selling our solar cells and solar panels in the early 2000s and the products we are developing incorporate new technologies and use new installation methods, we cannot predict the extent to which product liability claims may be brought against us in the future or the effect of any resulting negative publicity on our business. Moreover, we may not have adequate resources to satisfy a successful claim against us. We rely on our general liability insurance to cover product liability claims. A successful warranty or product liability claim against us that is not covered by insurance or is in excess of our available insurance limits could require us to make significant payments of damages. In addition, quality issues can have various other ramifications, including delays in the recognition of revenue, loss of revenue, loss of future sales opportunities, increased costs associated with repairing or replacing products, and a negative impact on our goodwill and reputation, any of which could adversely affect our business, operating results and financial condition.

We do not typically maintain long-term agreements with our customers and accordingly we could lose customers without warning, which could adversely affect our operating results.

Our product sales to residential dealers and components customers typically are not made under long-term agreements. We often contract to construct or sell large projects with no assurance of repeat business from the same customers in the future. Although cancellations of our purchase orders to date have been infrequent, our customers may cancel or reschedule purchase orders with us on relatively short notice. Cancellations or rescheduling of customer orders could result in the delay or loss of anticipated sales without allowing us sufficient time to reduce, or delay the incurrence of, our corresponding inventory and operating expenses. In addition, changes in forecasts or the timing of orders from these or other customers expose us to the risks of inventory shortages or excess inventory. These circumstances, in addition to the completion and non-repetition of large projects, declining average selling prices, changes in the relative mix of sales of solar equipment versus solar project installations, and the fact that our supply agreements are generally long-term in nature and many of our other operating costs are fixed, could cause our operating results to fluctuate and may result in a material adverse effect in our business, results of operations, and financial condition. In addition, since we rely partly on our network of international dealers for marketing and other promotional programs, if our dealers fail to perform up to our standards, our operating results could be adversely affected.

Our business could be adversely affected by seasonal trends and construction cycles.

Our business is subject to significant industry-specific seasonal fluctuations. Our sales have historically reflected these seasonal trends, with the largest percentage of our total revenues realized during the second half of each fiscal year. There are various reasons for this seasonality, mostly related to economic incentives and weather patterns. For example, in European countries with feed-in tariffs, the construction of solar power systems may be concentrated during the second half of the calendar year, largely due to the annual reduction of the applicable minimum feed-in tariff and the fact that the coldest winter months in the Northern Hemisphere are January through March. In the United States, many customers make purchasing decisions towards the end of the year in order to take advantage of tax credits. In addition, sales in the new home development market are often tied to construction market demands, which tend to follow national trends in construction, including declining sales during cold weather months.

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The competitive environment in which we operate often requires us to undertake customer obligations, which may turn out to be costlier than anticipated and, in turn, materially and adversely affect our business, results of operations and financial condition.

We are often required, as a condition of financing or at the request of our end customer, to undertake certain obligations such as:

- system output performance warranties;
- system maintenance;
- penalty payments or customer termination rights if the system we are constructing is not commissioned within specified timeframes or other construction milestones are not achieved;
- guarantees of certain minimum residual value of the system at specified future dates;
- system put-rights whereby we could be required to buy back a customer's system at fair value on a future date if certain minimum performance thresholds are not met; and
- indemnification against losses customers may suffer as a result of reductions in benefits received under the solar commercial investment tax credit ("ITC") under Section 48(c) of the Internal Revenue Code of 1986, as amended (the "Code"), and Treasury grant programs under Section 1603 of the American Recovery and Reinvestment Act (the "Cash Grant").

Such financing arrangements and customer obligations involve complex accounting analyses and judgments regarding the timing of revenue and expense recognition, and in certain situations these factors may require us to defer revenue or profit recognition until projects are completed or until contingencies are resolved, which could adversely affect our revenues and profits in a particular period.

Risks Related to Our Liquidity

We may be unable to generate sufficient cash flows or obtain access to external financing necessary to fund our operations and make adequate capital investments, as planned due to the general economic environment and the continued market pressure driving down the average selling prices of our solar power products, among other factors.

To develop new products, including our Next Generation Technology ("NGT" or Maxeon 5), support future growth, achieve operating efficiencies, and maintain product quality, we must make significant capital investments in manufacturing technology, facilities and capital equipment, research and development, and product and process technology. Our manufacturing and assembly activities have required and will continue to require significant investment of capital and substantial engineering expenditures. In addition, we expect to invest a significant amount of capital to develop solar power systems for sale to customers. Developing and constructing solar power projects requires significant time and substantial initial investment. The delayed disposition of such projects, or the inability to realize the full anticipated value of such projects on disposition, could have a negative impact on our liquidity. See also under this section, "Risks Related to Our Operations-Project development or construction activities may not be successful and we may make significant investments without first obtaining project financing, which could increase our costs and impair our ability to recover our investments" and "Risks Related to Our Sales Channels-Revenues from a limited number of customers and large projects are expected to continue to comprise a significant portion of our total revenues and any decrease in revenues from those customers or projects, payment of liquidated damages, or an increase in related expenses, could have a material adverse effect on our business, results of operations and financial condition," and "Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows."

Our capital expenditures and use of working capital may be greater than we anticipate if sales and associated receipt of cash proceeds are delayed, or if we decide to accelerate increases in our manufacturing capacity internally or through capital contributions to joint ventures. As we ramp our Maxeon 5 technology and begin volume production in

2019, we may pursue scale-up partnerships or other financing options to fund the NGT expansion. In addition, we could in the future make additional investments in certain of our joint ventures or could guarantee certain financial obligations of our joint ventures, which could reduce our cash flows, increase our indebtedness and expose us to the credit risk of our joint venture partners. In addition, if our financial results or operating plans deviate from our current assumptions, we may not have sufficient resources to support our business plan. See also under this section, "Risks Related to Our Liquidity—We have a significant amount of debt outstanding. Our substantial indebtedness and other contractual commitments could adversely affect our business, financial condition and results of operations, as well as our ability to meet our payment obligations under our debentures and our other debt."

Certain of our customers also require performance bonds issued by a bonding agency, or bank guarantees or letters of credit issued by financial institutions, which are returned to us upon satisfaction of contractual requirements. If there is a

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contractual dispute with the customer, the customer may withhold the security or make a draw under the security, which could have an adverse impact on our liquidity. Our uncollateralized letter of credit facility with Deutsche Bank, as of December 30, 2018, had an outstanding amount of $18.1 million. Our bilateral letter of credit agreements with The Bank of Tokyo-Mitsubishi UFJ, Ltd. (“BTMU”), Credit Agricole Corporate and Investment Bank (“Credit Agricole”), and HSBC Bank USA, National Association had an outstanding amount of $36.3 million as of December 30, 2018. Any draws under these uncollateralized facilities would require us to immediately reimburse the bank for the drawn amount. A default under the guaranteed letter of credit facility, or the acceleration of our other indebtedness greater than $25.0 million, could cause Total S.A. to declare all amounts due and payable to Total S.A. and direct the bank to cease issuing additional letters of credit on our behalf, which could have a material adverse effect on our operations.

In addition, the Revolver will mature on August 26, 2019 by its terms, and we may be unable to find adequate credit support in replacement, on acceptable terms or at all. In such case, our ability to obtain adequate amounts of debt financing, through our letter of credit facility or otherwise, may be harmed.

We manage our working capital requirements and fund our committed capital expenditures, including the development and construction of our planned solar power projects, through our current cash and cash equivalents, cash generated from operations, and funds available under our revolving credit facilities with Credit Agricole and other construction financing providers. As of December 30, 2018, $300.0 million remained undrawn under our revolving credit facility with Credit Agricole. We have the ability to borrow up to $95.0 million under this revolving credit facility pursuant to the Letter Agreement executed by us and Total S.A. on May 8, 2017 (see "Item 8. Financial Statements—Note 2. Transactions with Total and Total S.A." in the Notes to the Consolidated Financial Statements in this Annual Report on Form 10-K). As of December 30, 2018, we had $75.0 million in additional borrowing capacity under our other limited recourse construction financing facilities.

The lenders under our credit facilities and holders of our debentures may also require us to repay our indebtedness to them in the event that our obligations under other indebtedness or contracts in excess of the applicable threshold amount, are accelerated and we fail to discharge such obligations. If our capital resources are insufficient to satisfy our liquidity requirements, for example, due to cross acceleration of indebtedness, we may seek to sell additional equity investments or debt securities or obtain other debt financings. Market conditions, however, could limit our ability to raise capital by issuing new equity or debt securities on acceptable terms, and lenders may be unwilling to lend funds on acceptable terms. The sale of additional equity investments or convertible debt securities may result in additional dilution to our stockholders. Additional debt would result in increased expenses and could impose new restrictive covenants that may be different from those restrictions contained in the covenants under certain of our current debt agreements and debentures. Financing arrangements, including project financing for our solar power projects and letters of credit facilities, may not be available to us, or may not be available in amounts or on terms acceptable to us. If additional financing is not available, we may be forced to seek to sell assets or reduce or delay capital investments, any of which could adversely affect our business, results of operations and financial condition.

If we cannot generate sufficient cash flows, find other sources of capital to fund our operations and projects, make adequate capital investments to remain technologically and price competitive, or provide bonding or letters of credit required by our projects, we may need to sell additional equity investments or debt securities, or obtain other debt financings. If adequate funds from these or and other sources are not available on acceptable terms, our ability to fund our operations, develop and construct solar power projects, develop and expand our manufacturing operations and distribution network, maintain our research and development efforts, provide collateral for our projects, meet our debt service obligations, or otherwise respond to competitive pressures would be significantly impaired. Our inability to do any of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

We have a significant amount of debt outstanding. Our substantial indebtedness and other contractual commitments could adversely affect our business, financial condition, and results of operations, as well as our ability to meet our payment obligations under the debentures and our other debt.

We currently have a significant amount of debt and debt service requirements. As of December 30, 2018, we had approximately $0.9 billion of outstanding debt.

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This level of debt could have material consequences on our future operations, including:

- making it more difficult for us to meet our payment and other obligations under the debentures and our other outstanding debt;
- resulting in an event of default if we fail to comply with the financial and other restrictive covenants contained in our debt agreements (with certain covenants becoming more restrictive over time), which event of default could result in all or a significant portion of our debt becoming immediately due and payable;
- reducing the availability of our cash flows to fund working capital, capital expenditures, project development, acquisitions and other general corporate purposes, and limiting our ability to obtain additional financing for these purposes;
- subjecting us to the risk of increased sensitivity to interest rate increases on our indebtedness with variable interest rates, including borrowings under our credit agreement with Credit Agricole;
- limiting our flexibility in planning for, or reacting to, and increasing our vulnerability to, changes in our business, the industry in which we operate and the general economy; and
- placing us at a competitive disadvantage compared with our competitors that have less debt or have lower leverage ratios.

In the event, expected or unexpected, that any of our joint ventures is consolidated with our financial statements, such consolidation could significantly increase our indebtedness.

Our ability to meet our payment and other obligations under our debt instruments depends on our ability to generate significant cash flows, which, to some extent, is subject to general economic, financial, competitive, legislative and regulatory factors as well as other factors that are beyond our control. We cannot assure you that our business will generate cash flows from operations, or that future borrowings will be available to us under our existing or any future credit facilities or otherwise, in an amount sufficient to enable us to meet our payment obligations under our debentures and our other debt and to fund other liquidity needs. If we are unable to generate sufficient cash flows to service our debt obligations, we may need to refinance or restructure our debt, including our debentures, sell assets, reduce or delay capital investments, or seek to raise additional capital. There can be no assurance that we will be successful in any sale of assets, refinancing, or restructuring effort. See also under this section, "Risks Related to Our Operations—We may in the future be required to consolidate the assets, liabilities, and financial results of certain of our existing or future joint ventures, which could have an adverse impact on our financial position, gross margin and operating results", "Risks Related to Our Sales Channels—Changes in international trade policies, tariffs, or trade disputes could significantly and adversely affect our business, revenues, margins, results of operations, and cash flows," and "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 1. Organization and Summary of Significant Accounting Policies—Liquidity."

Although we are currently in compliance with the covenants contained in our debt agreements, we cannot assure you that we will be able to remain in compliance with such covenants in the future. We may not be able to cure future violations or obtain waivers from our creditors in order to avoid a default. An event of default under any of our debt agreements could have a material adverse effect on our liquidity, financial condition, and results of operations.

Our current tax holidays in the Philippines and Malaysia will expire within the next several years, and other related international tax developments could adversely affect our results.

We benefit from income tax holiday incentives in the Philippines in accordance with our subsidiary’s registration with the Philippine Economic Zone Authority (“PEZA”), which provide that we pay no income tax in the Philippines for those operations subject to the ruling (through July 2019). Tax savings associated with the Philippines tax holidays were approximately $3.4 million, $5.6 million, and $10.0 million in fiscal 2018, 2017, and 2016, respectively, which provided a diluted net income (loss) per share benefit of $0.02, $0.04, and $0.07 in fiscal 2018, 2017, and 2016, respectively.

Our income tax holidays were granted as manufacturing lines were placed in service. We plan to apply for extensions and renewals upon expiration; however, while we expect all approvals to be granted, we can offer no assurance that

they will be. We believe that if our Philippine tax holidays are not extended or renewed, (a) gross income attributable to activities covered by our PEZA registrations will be taxed at a 5% preferential rate, and (b) our Philippine net income attributable to all other activities will be taxed at the statutory Philippine corporate income tax rate, currently 30%. An increase in our tax liability could materially and adversely affect our business, financial condition and results of operations.

We continued to qualify for the auxiliary company status in Switzerland where we sell our solar power products. The auxiliary company status entitles us to a tax rate of 11.5% in Switzerland, reduced from approximately 24.2%. Tax savings associated with this ruling were approximately $1.8 million, $2.4 million, and $1.9 million in fiscal 2018, 2017, and 2016,

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respectively, which provided a diluted net income (loss) per share benefit of $0.01, $0.02, and $0.01 in fiscal 2018, 2017, and 2016, respectively.

We also benefit from a tax holiday granted by the Malaysian government, subject to certain hiring, capital spending, and manufacturing requirements. We have successfully negotiated with the Malaysian government to modify the requirements of the tax holiday; we are currently in compliance with the modified requirements of the tax holiday. We received approval from the Malaysian government of the extension of our tax holiday for a second five-year term (through June 30, 2021). Tax savings associated with the Malaysia tax holiday were approximately $7.6 million, $6.8 million, and $2.0 million in fiscal 2018, 2017, and 2016 respectively, which provided a diluted net income (loss) per share benefit of $0.05, $0.05, and $0.01 in fiscal 2018, 2017, and 2016 respectively. Although we were granted the extension, should we fail to meet certain requirements in the future and are unable to renegotiate the tax ruling further, we could be retroactively and prospectively subject to statutory tax rates and repayment of certain incentives which could negatively impact our business.

More generally, with the finalization of specific actions contained within the Organization for Economic Development and Cooperation's ("OECD") Base Erosion and Profit Shifting ("BEPS") study ("Actions"), many OECD countries have acknowledged their intent to implement the Actions and update their local tax regulations. Among the considerations required by the Actions is the need for appropriate local business operational substance to justify any locally granted tax incentives, such as those described above, and that the incentives are not determined to constitute "state aid" which would invalidate the incentive. If we fail to maintain sufficient operational substance or if the countries determine the incentive regimes do not conform with the BEPS regulations being considered for implementation, adverse material economic impacts may result.

A change in our effective tax rate could have a significant adverse impact on our business, and an adverse outcome resulting from examination of our income or other tax returns could adversely affect our results.

A number of factors may adversely affect our future effective tax rates, such as the jurisdictions in which our profits are determined to be earned and taxed; changes in the valuation of our deferred tax assets and liabilities; adjustments to estimated taxes upon finalization of various tax returns; adjustments to our interpretation of transfer pricing standards; changes in available tax credits, grants and other incentives; changes in stock-based compensation expense; the availability of loss or credit carryforwards to offset taxable income; changes in tax laws or the interpretation of such tax laws (for example U.S. and international tax reform); changes in U.S. generally accepted accounting principles (U.S. GAAP); expiration or the inability to renew tax rulings or tax holiday incentives. A change in our effective tax rate due to any of these factors may adversely affect our future results from operations.

On December 22, 2017, the U.S. enacted significant changes to U.S. tax law following the passage and signing of H.R.1, "An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018" (previously known as "The Tax Cuts and Jobs Act" and, as enacted, the "Tax Act"). The Tax Act reduced the U.S. federal corporate tax rate from 35% to 21%, required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and created new taxes on certain foreign sourced earnings. The U.S. Department of Treasury has broad authority to issue regulations and interpretive guidance that may significantly impact how we will apply the law and impact our results of operations in the period issued. The Tax Act required complex computations not previously provided in U.S. tax law. As such, the application of accounting guidance for such items was previously uncertain. As of December 30, 2018, we have completed our "Tax Act" analysis and it did not have any impact to our expectations of actual cash payments for income tax in the foreseeable future.

Changes made to the Code by the Tax Act — in particular, the reduction of the U.S. federal corporate tax rate from 35% to 21% — could affect the cost of capital provided by third-party investors for our projects. In particular, the reduction of the U.S. federal corporate tax rate from 35% to 21% decreases the value of depreciation to potential tax equity investors who may, as a result, require higher cash flow from solar project customers, and investors in SunPower solar energy projects may pay less for the project, in each case to compensate for the lower tax benefit value.

Significant judgment is required to determine the recognition and measurement attributes prescribed in the accounting guidance for uncertainty in income taxes. The accounting guidance for uncertainty in income taxes applies to all income tax positions, including the potential recovery of previously paid taxes, which if settled unfavorably could adversely affect our provision for income taxes. In addition, we are subject to examination of our income tax returns by various tax authorities. We regularly assess the likelihood of adverse outcomes resulting from any examination to determine the adequacy of our provision for income taxes. An adverse determination of an examination could have an adverse effect on our operating results and financial condition. See also “Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 14. Income Taxes.”

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Additionally, longstanding international tax norms that determine each country's jurisdiction to tax cross-border international trade are evolving (for example, those relating to the Actions currently being undertaken by the OECD and similar actions by the G8 and G20) and U.S. tax reform may lead to further changes in (or departure from) these norms. As these and other tax laws and related regulations change, our financial results could be materially impacted. Given the unpredictability of these possible changes and their potential interdependency, it is very difficult to assess whether the overall effect of such potential tax changes would be cumulatively positive or negative for our earnings and cash flow, but such changes could adversely impact our financial results.

Our credit agreements contain covenant restrictions that may limit our ability to operate our business.

We may be unable to respond to changes in business and economic conditions, engage in transactions that might otherwise be beneficial to us, or obtain additional financing, because our debt agreements, our Affiliation Agreement with Total, foreign exchange hedging agreements and equity derivative agreements contain, and any of our other future similar agreements may contain, covenant restrictions that limit our ability to, among other things:

- incur additional debt, assume obligations in connection with letters of credit, or issue guarantees;
- create liens;
- make certain investments or acquisitions;
- enter into transactions with our affiliates;
- sell certain assets;
- redeem capital stock or make other restricted payments;
- declare or pay dividends or make other distributions to stockholders; and
- merge or consolidate with any person.

Our ability to comply with these covenants is dependent on our future performance, which will be subject to many factors, some of which are beyond our control, including prevailing economic conditions. In addition, our failure to comply with these covenants could result in a default under our other debt instruments, which could permit the holders to accelerate such debt. If any of our debt is accelerated, we may not have sufficient funds available to repay such debt, which could materially and negatively affect our financial condition and results of operations.

Risks Related to Our Supply Chain

Our long-term, firm commitment supply agreements could result in excess or insufficient inventory, place us at a competitive disadvantage on pricing, or lead to disputes, each of which could impair our ability to meet our cost reduction roadmap, and in some circumstances may force us to take a significant accounting charge.

If our supply agreements provide insufficient inventory to meet customer demand, or if our suppliers are unable or unwilling to provide us with the contracted quantities, we may be forced to purchase additional supply at market prices, which could be greater than expected and could materially and adversely affect our results of operations. Due to the industry-wide shortage of polysilicon experienced before 2011, we purchased polysilicon that we resold to third-party ingot and wafer manufacturers who deliver wafers to us that we then use in the manufacturing of our solar cells. Without sufficient polysilicon, some of those ingot and wafer manufacturers would not have been able to produce the wafers on which we rely. We have historically entered into multiple long-term fixed supply agreements for periods of up to 10 years to match our estimated customer demand forecasts and growth strategy for the next several years. The long-term nature of these agreements, which often provide for fixed or inflation-adjusted pricing, may prevent us from benefiting from decreasing polysilicon costs, has, and may continue to, cause us to pay more at unfavorable payment terms than the current market prices and payment terms available to our competitors, and has in the past, and could again in the future, cause us to record an impairment. In the event that we have inventory in excess of short-term requirements of polysilicon, in order to reduce inventory or improve working capital, we may, and sometimes do, elect to sell such inventory in the marketplace at prices below our purchase price, thereby incurring a loss.

Additionally, because certain of these agreements are “take or pay,” if certain of our agreements for polysilicon from these suppliers were to decrease in the future, we could be required to purchase polysilicon that we do not need, resulting in either storage costs or payment for polysilicon we nevertheless choose not to accept from such suppliers. Additionally, existing arrangements from prior years have resulted in above current market pricing for purchasing polysilicon, resulting in inventory losses we have realized. Further, we face significant, specific counterparty risk under long-term supply agreements when

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dealing with suppliers without a long, stable production and financial history. In the event any such supplier experiences financial difficulties or goes into bankruptcy, it could be difficult or impossible, or may require substantial time and expense, for us to recover any or all of our prepayments. Any of the foregoing could materially harm our financial condition and results of operations.

We will continue to be dependent on a limited number of third-party suppliers for certain raw materials and components for our products, which could prevent us from delivering our products to our customers within required timeframes and could in turn result in sales and installation delays, cancellations, penalty payments, and loss of market share.

We rely on a limited number of third-party suppliers for certain raw materials and components for our solar cells, panels and power systems, such as polysilicon, inverters and module material. If we fail to maintain our relationships with our suppliers or to build relationships with new suppliers, or if suppliers are unable to meet demand through industry consolidation, we may be unable to manufacture our products or our products may be available only at a higher cost or after a long delay.

To the extent the processes that our suppliers use to manufacture components are proprietary, we may be unable to obtain comparable components from alternative suppliers. In addition, the financial markets could limit our suppliers' ability to raise capital if required to expand their production or satisfy their operating capital requirements. As a result, they could be unable to supply necessary raw materials, inventory and capital equipment which we would require to support our planned sales operations to us, which would in turn negatively impact our sales volume, profitability, and cash flows. The failure of a supplier to supply raw materials or components in a timely manner, or to supply raw materials or components that meet our quality, quantity and cost requirements, could impair our ability to manufacture our products or could increase our cost of production. If we cannot obtain substitute materials or components on a timely basis or on acceptable terms, we could be prevented from delivering our products to our customers within required timeframes.

Any such delays could result in sales and installation delays, cancellations, penalty payments or loss of revenue and market share, any of which could have a material adverse effect on our business, results of operations, and financial condition.

We utilize construction loans, term loans, sale-leaseback, preferred equity, and other financing structures to fund acquisition, development, construction, and expansion of photovoltaic power plant projects in the future, and such funds may or may not continue to be available as required to further our plans. Furthermore, such project financing increases our consolidated debt and may be structurally senior to other debt such as our Credit Agricole revolving credit facility and outstanding convertible debentures.

Certain of our subsidiaries and other affiliates are separate and distinct legal entities and, except in limited circumstances, have no obligation to pay any amounts due with respect to our indebtedness or indebtedness of other subsidiaries or affiliates, and do not guarantee the payment of interest on or principal of such indebtedness. Such subsidiaries may borrow funds to finance particular projects. In the event of a default under a project financing which we do not cure, the lenders or lessors generally have rights to the power plant project and related assets. In the event of foreclosure after a default, we may not be able to retain any interest in the power plant project or other collateral supporting such financing. In addition, any such default or foreclosure may trigger cross default provisions in our other financing agreements, including our corporate debt obligations, which could materially and adversely affect our results of operations. In the event of our bankruptcy, liquidation or reorganization (or the bankruptcy, liquidation or reorganization of a subsidiary or affiliate), such subsidiaries' or other affiliates' creditors, including trade creditors and holders of debt issued by such subsidiaries or affiliates, will generally be entitled to payment of their claims from the assets of those subsidiaries or affiliates before any assets are made available for distribution to us or the holders of our indebtedness. As a result, holders of our corporate indebtedness will be effectively subordinated to all present and future debts and other liabilities (including trade payables) of certain of our subsidiaries. As of December 30, 2018, our subsidiaries had $6.5 million in subsidiary project financing, which is effectively senior to our corporate debt,

such as our Credit Agricole revolving credit facility, our 4.00% debentures due 2023 and our 0.875% debentures due 2021.

Risks Related to Our Operations

We have significant international activities and customers, and plan to continue these efforts, which subject us to additional business risks, including logistical complexity and political instability.

A substantial portion of our sales are made to customers outside of the United States, and a substantial portion of our supply agreements are with supply and equipment vendors located outside of the United States. We have solar cell and module production lines located at our manufacturing facilities in the Philippines, Mexico, France, and Malaysia.

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Risks we face in conducting business internationally include:

- multiple, conflicting and changing laws and regulations, export and import restrictions, employment laws, environmental protection, regulatory requirements, international trade agreements, and other government approvals, permits and licenses;
- difficulties and costs in staffing and managing foreign operations as well as cultural differences;
- potentially adverse tax consequences associated with current, future or deemed permanent establishment of operations in multiple countries;
- relatively uncertain legal systems, including potentially limited protection for intellectual property rights, and laws, changes in the governmental incentives we rely on, regulations and policies which impose additional restrictions on the ability of foreign companies to conduct business in certain countries or otherwise place them at a competitive disadvantage in relation to domestic companies;
- one-time transition tax by the U.S. on earnings of certain foreign subsidiaries that were previously tax deferred;
- inadequate local infrastructure and developing telecommunications infrastructures;
- financial risks, such as longer sales and payment cycles and greater difficulty collecting accounts receivable;
- currency fluctuations, government-fixed foreign exchange rates, the effects of currency hedging activity, and the potential inability to hedge currency fluctuations;
- political and economic instability, including wars, acts of terrorism, political unrest, boycotts, curtailments of trade and other business restrictions;
- trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make us less competitive in some countries; and
- liabilities associated with compliance with laws (for example, the Foreign Corrupt Practices Act in the U.S. and similar laws outside of the U.S.).

We have a complex organizational structure involving many entities globally. This increases the potential impact of adverse changes in laws, rules and regulations affecting the free flow of goods and personnel, and therefore heightens some of the risks noted above. Further, this structure requires us to effectively manage our international inventory and warehouses. If we fail to do so, our shipping movements may not map with product demand and flow. Unsettled intercompany balances between entities could result, if changes in law, regulations or related interpretations occur, in adverse tax or other consequences affecting our capital structure, intercompany interest rates and legal structure. If we are unable to successfully manage any such risks, any one or more could materially and negatively affect our business, financial condition and results of operations.

If we experience interruptions in the operation of our solar cell production lines, our revenue and results of operations may be materially and adversely affected.

If our solar cell or module production lines suffer problems that cause downtime, we might be unable to meet our production targets, which would adversely affect our business. Our manufacturing activities require significant

management attention, a significant capital investment and substantial engineering expenditures.

The success of our manufacturing operations is subject to significant risks including:

- cost overruns, delays, supply shortages, equipment problems and other operating difficulties;
- custom-built equipment may take longer or cost more to engineer than planned and may never operate as designed;
- incorporating first-time equipment designs and technology improvements, which we expect to lower unit capital and operating costs, but which may not be successful;

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- our ability to obtain or maintain third-party financing to fund capital requirements;
- difficulties in maintaining or improving our historical yields and manufacturing efficiencies;
- difficulties in protecting our intellectual property and obtaining rights to intellectual property developed by our manufacturing partners;
- difficulties in hiring and retaining key technical, management, and other personnel;
- potential inability to obtain, or obtain in a timely manner, financing, or approvals from governmental authorities for operations; and
- tariffs imposed on imported solar cells and modules which may cause market volatility, price fluctuations, supply shortages, and project delays.

Any of these or similar difficulties may unexpectedly delay or increase costs of our supply of solar cells.

If we do not achieve satisfactory yields or quality in manufacturing our solar products, our sales could decrease and our relationships with our customers and our reputation may be harmed.

The manufacture of solar cells is a highly complex process. Minor deviations in the manufacturing process can cause substantial decreases in yield and in some cases, cause production to be suspended or yield no output. We have from time to time experienced lower than anticipated manufacturing yields. As we expand our manufacturing capacity and qualify additional suppliers, we may initially experience lower yields. If we do not achieve planned yields, our product costs could increase, and product availability would decrease resulting in lower revenues than expected. In addition, in the process of transforming polysilicon into ingots, a significant portion of the polysilicon is removed in the process. In circumstances where we provide the polysilicon, if our suppliers do not have very strong controls in place to ensure maximum recovery and utilization, our economic yield can be less than anticipated, which would increase the cost of raw materials to us.

Additionally, products as complex as ours may contain undetected errors or defects, especially when first introduced. For example, our solar cells or solar panels may contain defects that are not detected until after they are shipped or are installed because we cannot test for all possible scenarios. These defects could cause us to incur significant warranty, non-warranty, and re-engineering costs, divert the attention of our engineering personnel from product development efforts, and significantly affect our customer relations and business reputation. If we deliver solar products with errors or defects, including cells or panels of third-party manufacturers, or if there is a perception that such solar products contain errors or defects, our credibility and the market acceptance and sales of our products could be harmed. In addition, some of our arrangements with customers include termination or put rights for non-performance. In certain limited cases, we could incur liquidated damages or even be required to buy back a customer's system at fair value on specified future dates if certain minimum performance thresholds are not met.

A change in our 1603 U.S. Treasury Department Cash Grant proceeds or solar investment tax credits could adversely affect our business, revenues, margins, results of operations and cash flows.

We have incorporated into our financial planning and agreements with our customers certain assumptions regarding the future level of U.S. tax incentives, including the ITC, which is administered by the U.S. Treasury Department ("U.S. Treasury"). The ITC allows qualified applicants to claim an amount equal to 30% of the eligible cost basis for qualifying solar energy property. The U.S. Treasury also made payments under the Cash Grant program in lieu of the ITC for projects which commenced construction prior to December 31, 2011 and completed construction by December 31, 2016. We hold projects and have sold projects to certain customers based on certain underlying

assumptions regarding the ITC and Cash Grant, including for our California Valley Solar Ranch and Solar Star projects. We have also accounted for certain projects and programs in our business using the same assumptions. Owners of our qualifying projects and our residential lease program have applied or will apply for the ITC, and have applied for the Cash Grant. We have structured the tax incentive applications, both in timing and amount, to be in accordance with the guidance provided by the U.S. Treasury and U.S. Internal Revenue Service ("IRS"). Any changes to the U.S. Treasury or IRS guidance which we relied upon in structuring our projects, failure to comply with the requirements, including the safe harbor protocols, lower levels of incentives granted, or changes in assumptions including the estimated residual values and the estimated fair market value of financed and installed systems for the purposes of Cash Grant and ITC applications, could

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materially and adversely affect our business and results of operations. While all grants related to our projects have been fully paid by the U.S. Treasury, if the IRS or U.S. Treasury disagrees, as a result of any future review or audit, with the fair market value of, or other assumptions concerning, our solar projects or systems that we have constructed or that we construct in the future, including the systems for which tax incentives have already been paid, it could have a material adverse effect on our business and financial condition. We also have obligations to indemnify certain of our customers for the loss of tax incentives to such customers. We may have to recognize impairments or lower margins than initially anticipated for certain of our projects or our residential lease program. Additionally, if the amount or timing of the Cash Grant or ITC payments received varies from what we have projected, our revenues, margins and cash flows could be adversely affected and we may have to recognize losses, which would have a material adverse effect on our business, results of operations and financial condition.

There are continuing developments in the interpretation and application of how companies should calculate their eligibility and level of Cash Grant and ITC incentives. There have been recent cases in the U.S. district courts that challenge the criteria for a true lease, which could impact whether the structure of our residential lease program qualifies under the Cash Grant and ITC. Additionally, the Office of the Inspector General of the U.S. Treasury has issued subpoenas to a number of significant participants in the rooftop solar energy installation industry. The Inspector General is working with the Civil Division of the U.S. Department of Justice to investigate the administration and implementation of the Cash Grant program, including potential misrepresentations concerning the fair market value of certain solar power systems submitted for Cash Grant. While we have not received a subpoena, we could be asked to participate in the information gathering process. The results of the current investigation could affect the underlying assumption used by the solar industry, including us, in our Cash Grant and ITC applications, which could reduce eligibility and level of incentives and could adversely affect our results of operations and cash flows. If the IRS redetermines the amount of the cash grant awards, investors may be required to make corresponding adjustments to their taxable income or other changes. Such adjustments may provide us with an indication of IRS practice regarding the valuation of residential leased solar assets, and we would consider such adjustments in our accounting for our indemnification obligations to investors who receive cash grants and investment tax credits.

We obtain certain of our capital equipment used in our manufacturing process from sole suppliers and if this equipment is damaged or otherwise unavailable, our ability to deliver products on time will suffer, which in turn could result in order cancellations and loss of revenue.

Some of the capital equipment used in the manufacture of our solar power products has been developed and made specifically for us, is not readily available from multiple vendors and would be difficult to repair or replace