Ascent Solar Technologies, Inc.
Form S-3
December 05, 2014
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As filed with the Securities and Exchange Commission on December 5, 2014
Registration No. 333-

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

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ASCENT SOLAR TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

Delaware	20-3672603
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

12300 North Grant Street
Thornton, Colorado 80241
(720) 872-5000
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

William M. Gregorak
Ascent Solar Technologies, Inc.
12300 North Grant Street
Thornton, Colorado 80241
(720) 872-5000
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
James Carroll
Faegre Baker Daniels LLP
1470 Walnut Street, Suite 300
Boulder, Colorado 80302
(303) 447-7700

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective as determined by market conditions and other factors.
If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: ¨

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

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If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ¨

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company x

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value $0.0001	4,000,000 shares (3)	$1.50	$6,000,000	$698

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, this registration statement also covers such additional shares as may hereafter be offered or issued to prevent dilution resulting from stock splits, stock dividends, recapitalizations or certain other capital adjustments.

(2) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, using the average of the high and low prices as reported on the NASDAQ Capital Market on December 4, 2014, which was $1.50 per share.

(3) Represents a portion of the shares issuable upon conversion of senior secured convertible notes, including in connection with payment of principal and interest under such notes.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. These securities may not be sold until the related registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 5, 2014

PROSPECTUS

ASCENT SOLAR TECHNOLOGIES, INC.

4,000,000 shares of common stock

The selling stockholder named in this prospectus is offering to sell up to 4,000,000 shares of common stock of Ascent Solar Technologies, Inc. We will not receive any proceeds from the resale of shares of our common stock by the selling stockholder.

This prospectus includes 4,000,000 shares of common stock issuable upon the conversion of our Senior Secured Convertible Notes due 2018 (the “Notes”).

Our common stock is traded on the NASDAQ Capital Market under the symbol “ASTI.” On December 4, 2014, the last reported sale price of our common stock on the NASDAQ Capital Market was $1.50 per share.

Our principal executive offices are located at 12300 North Grant Street, Thornton, Colorado 80241.

These are speculative securities. Investing in these securities involves significant risks. You should purchase these securities only if you can afford a complete loss of your investment. See “Risk Factors” beginning on page 6.

The selling stockholder is offering these shares of common stock. The selling stockholder may sell all or a portion of these shares from time to time in market transactions through any market on which our common stock is then traded, in negotiated transactions or otherwise, and at prices and on terms that will be determined by the then prevailing market price or at negotiated prices directly or through a broker or brokers, who may act as agent or as principal or by a combination of such methods of sale. The selling stockholder will receive all proceeds from the sale of the common stock. For additional information on the methods of sale, you should refer to the section entitled “Plan of Distribution.”

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is [ ], 2014

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ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should not assume that the information appearing in this prospectus, any prospectus supplement or any document incorporated by reference is accurate as of any date other than its date, regardless of the time of delivery of the prospectus or prospectus supplement or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since those dates.

PROSPECTUS SUMMARY

This summary highlights information contained in this prospectus. While we believe that this summary highlights some of the most important information about Ascent Solar Technologies, Inc. and this offering, you should read this entire prospectus and the documents incorporated by reference carefully, including "Risk Factors," before deciding to invest in our securities. In this prospectus, references to "we," "us," "our," "Ascent," "Ascent Solar" or the "Company" mean Ascent Solar Technologies, Inc.

Overview

We are a development stage company formed in October 2005 to commercialize flexible photovoltaic ("PV") modules using proprietary technology. Our technology was initially developed at ITN Energy Systems, Inc. ("ITN") beginning in 1994 and subsequently assigned and licensed to us. Our proprietary manufacturing process deposits multiple layers of materials, including a thin film of highly efficient copper-indium-gallium-diselenide ("CIGS") semiconductor material, on a flexible, lightweight, high tech plastic substrate using a roll-to-roll manufacturing process and then laser patterns the layers to create interconnected PV cells, or PV modules, in a process known as monolithic integration.

We believe that our technology and manufacturing process, which results in a lighter, flexible module package, provides us with unique market opportunities relative to both the crystalline silicon ("c-Si") based PV manufacturers that currently lead the PV market, as well as other thin film PV manufacturers that use substrate materials such as glass, stainless steel or other metals that can be heavier and more rigid than plastics.

We believe that the use of CIGS on a flexible, durable, lightweight, high tech plastic substrate will allow for unique and seamless integration of our PV modules into a variety of electronic products, building materials, defense, transportation and space applications, as well as other products and applications that may emerge.

Recent Strategic Developments

Introduction of EnerPlex™ Consumer Products

In February 2012, we began to reposition our business model with an immediate focus on developing downstream consumer products. In June 2012, we launched our EnerPlex™ line of consumer products, and introduced our first product, the Surfr™, under the EnerPlex brand. The Surfr™ is a battery and solar case for the Apple® iPhone® 4/4S smart phone, featuring our ultra-light CIGS thin film technology integrated directly into the case.

The case incorporates our ultra-light and thin PV module into a sleek, protective iPhone® 4/4S case, along with a thin, life extending, battery. The charger adds minimal weight and size to an iPhone® smartphone, yet provides supplemental charging when needed. In August of 2012, we announced the launch of the second version of the Surfr™ for the Samsung® Galaxy S® III, which provides 85% additional battery life.

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In December 2012, we launched the EnerPlex Kickr™ and EnerPlex Jumpr™ product series. The Kickr IV is an extremely portable, compact and durable solar charging device, approximately seven inches by seven inches when folded, and weighs less than half a pound. The Kickr IV provides 6.5 watts of regulated power that can help charge phones, digital cameras, and other small USB enabled devices. The Kickr IV is ideal for outdoor activities such as camping, hiking and mountain climbing as well as daily city use. To complement the Kickr IV, we also released the Jumpr series of portable power banks in December of 2012. The Jumpr series provides a compact power storage solution for those who need to take the power of the sun with them while on the go.

During 2013, our EnerPlex brand rapidly expanded with the addition of two new product series as well as over fifteen new products. In the beginning of 2013, we introduced further additions to the Jumpr line of portable power banks; releasing the Jumpr Mini and Jumpr Stack in August and the Jumpr Max in September. The latest additions to the Kickr line of portable solar chargers, the Kickr I and Kickr II, were introduced in August 2013. Furthermore, in October 2013, we released our first series of solar integrated backpacks, the Packr, for consumer use. The Packr is a fashion forward and functional pack perfect for charging mobile electronic devices while on the go. Also in October 2013, we introduced the Surfr battery and solar case for the Samsung Galaxy S® 4, and in December 2013, we introduced the Surfr battery and solar case for Apple's iPhone® 5. In addition, we added an assortment of useful accessories to our product lines, all of which can be integrated into the EnerPlex ecosystem of products; such as the LED wand which can be easily plugged into a Jumpr power bank to provide hours of light, or the Travel Adaptor, which enables consumers to charge up their Jumpr power banks from a traditional outlet anywhere in the world. During 2014, we introduced the Jumpr Slate 10K and 5K, which are thin lithium polymer portable power banks.

We continue to aggressively pursue new distribution channels for the EnerPlex brand. These activities have led to placement in a variety of high-traffic ecommerce venues such as www.walmart.com, www.brookstone.com, www.newegg.com as well as many others including our own e-commerce platform at www.goenerplex.com. The April 2013 placement of EnerPlex products at Fry's Electronics, a US West Coast consumer electronics retailer, represented our first domestic retail presence. EnerPlex products are carried in all of Fry's 35 stores across 9 states. Each store is provided with EnerPlex branded merchandising assets to highlight the uniqueness of our product lines. In addition, we currently have a total of 11 automated retail stores (kiosks) in operation. We believe this multi-faceted strategy will give the EnerPlex™ brand the broadest exposure for the amount of investment and make our products immediately available to large numbers of consumers.

We continue to design and manufacture PV integrated consumer electronics as well as portable power applications for commercial and military users. Due to the high durability of our products due to the monolithic integration employed by our technology, the capability to customize modules into different form factors and the industry leading light weight and flexibility provided by our modules, we believe that the potential applications for our products are numerous.

Suqian Joint Venture

On July 2, 2013, we entered into a framework agreement for the establishment of a joint venture (the "Joint Venture") with the Government of the Municipal City of Suqian in Jiangsu Province, China ("Suqian"). On December 28, 2013 we signed the definitive agreement with Suqian which further specified the terms and time frame of the Joint Venture.

Under this definitive agreement, Suqian will provide cash of approximately $32.5 million, as well as the five year rent-free use of approximately 331,000 square feet of factory and office space in the Suqian Economic and Industrial Development Science Park. The Joint Venture will build a 100MW factory over six years to manufacture our proprietary thin-film CIGS photovoltaic modules on flexible polyimide in addition to related consumer products.

We shall purchase the factory within the first 5 years at the initial construction cost, and shall also purchase Suqian's ownership interest in the Joint Venture within 5 years at 1.5 times of Suqian's cash investment.

In the initial phase of the project, we and Suqian will form the Joint Venture in which Suqian will inject approximately $4.8 million in cash and have majority interest of 75%. We shall contribute approximately $1.6

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million in cash and hold a minority interest of 25%. Subsequently, Suqian will further contribute the balance of the committed $32.5 million while we will contribute our proprietary technology and intellectual property, as well as certain equipment from our Colorado facility, thereby increasing our shareholdings progressively up to 80% ownership.

Under the definitive agreement, Suqian will also provide a package of additional incentives including:

- A 5-year corporate tax holiday and a further 50% tax rebate over the following 5 years,
- Full rebate of value-added tax for the first 2 years and 50% rebate for the subsequent 3 years, and
- Free accommodations for up to 3 years for key scientists, engineers and management personnel of the Joint Venture.

As phase two of this program is implemented, we will have the option to purchase approximately 215,000 square feet of land zoned for commercial usage at a favorable price at 10% above the government's prevailing cost.
The implementation of the definitive agreement with Suqian, including the formation of the Joint Venture, will be subject to a number of contractual conditions and governmental approvals. Such conditions and approvals must be obtained in the future in order for the Suqian factory to be built and become operational.

On September 17, 2014, we were granted the Certificate of Approval for Establishment with Foreign Investment in the People's Republic of China, and on September 24, 2014, we were officially granted the business license to operate the Joint Venture. These documents were the main gating factors for starting the operations of the Joint Venture. Several activities, including the cash injection by Suqian into the Joint Venture and the transfer of equipment by us, will begin during the fourth quarter of 2014. We expect that certain parts of the Joint Venture's factory will be in operation by the end of the first quarter of 2015.

Need for Additional Capital
Since inception, we have incurred significant losses. We expect to continue to incur net losses in the near term. For the nine month period ended September 30, 2014, our cash used in operations was $20.7 million. For the year ended December 31, 2013, our cash used in operations was $20.3 million. At September 30, 2014, we had cash and equivalents of $1.0 million. At December 31, 2013, we had cash and equivalents of approximately $3.3 million.

We do not expect that sales revenue and cash flows will be sufficient to support operations and cash requirements until we have fully implemented our new consumer products strategy. Additional projected product revenues are not anticipated to result in a positive cash flow position for the year 2015 overall. We continue to accelerate sales and marketing efforts related to our consumer products strategy through increased hiring and expansion of our sales channel. In November 2014, we completed a financing that will provide the Company gross proceeds of $35 million in increments throughout 2015 and the early part of 2016. The Company may need to raise additional capital in order to continue our current level of operations throughout 2016. There is no assurance that we would be able to raise such capital on acceptable terms or at all. If our revenues do not increase rapidly, and/or additional financing is not obtained, we will be required to significantly curtail operations to reduce costs and/or sell assets. Such actions would likely have an adverse impact on our future operations.

Going Concern Qualification
On March 28, 2014, we filed our Annual Report on Form 10-K with the Securities and Exchange Commission (the "SEC"), which Annual Report included our audited financial statements for the year ended December 31, 2013. The report of our independent registered public accounting firm on such financial statements contained an explanatory paragraph expressing substantial doubt regarding our ability to continue as a going concern.

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The full text of the report of our independent registered public accounting firm is contained in our Annual Report on Form 10-K for the year ended December 31, 2013, which is incorporated by reference into this prospectus.

Corporate Information

We are incorporated under the laws of Delaware. Our principal business office is located at 12300 North Grant Street, Thornton, Colorado 80241, and our telephone number is (720) 872-5000. Our website address is www.ascentsolar.com. Information contained on our website or any other website does not constitute part of this prospectus.

THE OFFERING

On November 14, 2014, we entered into a Securities Purchase Agreement (the "Securities Purchase Agreement") with Hudson Bay Master Fund Ltd (the "Selling Stockholder"). Pursuant to the terms of the Securities Purchase Agreement, we sold to the Selling Stockholder (i) 3,000 shares of Series D Convertible Preferred Stock (the "Series D Preferred Stock"), at a price of $1,000 per share of Series D Preferred Stock, (ii) $32,000,000 original principal amount of Notes and (iii) warrants (the "Warrants") to purchase up to 7,777,778 shares of our common stock. The sale of the Series D Preferred Stock, the Notes and the Warrants to the Selling Stockholder closed on November 19, 2014 (the "Closing Date").

In connection with the Securities Purchase Agreement, we entered into a Registration Rights Agreement (the "Registration Rights Agreement") with the Selling Stockholder, pursuant to which we agreed to register a minimum of 4,000,000 shares of common stock issuable upon conversion of the Notes, including shares of common stock that may be issuable as payments of principal and interest on the Notes. We also agreed, under certain circumstances, to register in one or more additional registration statements up to 200% of the sum of (i) the maximum number of shares of common stock issuable pursuant to the Notes and (ii) the maximum number of shares of common stock issuable upon exercise of the Warrants.

This prospectus includes 4,000,000 shares of common stock issuable upon conversion of the Notes.

Common stock outstanding prior to the offering	16,246,360*
Common stock offered by the Selling Stockholder	4,000,000**
Common stock to be outstanding after the offering	20,246,360**
Use of proceeds	We will not receive any proceeds from the sale of the securities hereunder. See "Use of Proceeds" for a complete description.

* As of November 17, 2014.

** Assumes the issuance of 4,000,000 shares of common stock upon conversion of a portion of the Notes.

FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into it contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements as statements containing the words "believe," "expect," "may," "will," "could," "would," "anticipa "intend," "estimate," "project," "plan," "continue," "assume" or other similar expressions, although not all forward-looking statements contain these identifying words. All statements contained in this

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prospectus regarding our plans, objectives, goals, strategies, future events, future net sales or performance, capital expenditures, projected financial position, potential future revenues, projected costs, financing needs, plans or intentions relating to acquisitions, plans for the commercialization of our products, business trends and results that might be obtained by pursuing management's current plans and objectives are forward-looking statements. Forward-looking statements include, but are not necessarily limited to, those relating to:

- Our limited operating history and lack of profitability;
- Our ability to successfully design, manufacture and sell our EnerPlex™ line of consumer products;
- Our ability to develop demand for, and sales of, our products;
- Our ability to attract and retain qualified personnel to implement our business plan and corporate growth strategies;
- Our ability to develop sales, marketing and distribution capabilities;
- Our ability to achieve profitability through our strategic alliance with TFG Radiant Investment Group Ltd. (“TFG Radiant”) in designing, manufacturing and selling products;
- Our ability to successfully develop and maintain strategic relationships with key partners, including original equipment manufacturers (“OEMs”), system integrators, distributors, retailers and e-commerce companies, who deal directly with end users in our target markets;
- The accuracy of our estimates and projections;
- Our ability to secure additional financing to fund our short-term and long-term financial needs;
- Our ability to maintain the listing of our common stock on the NASDAQ Capital Market;
- The commencement, or outcome, of legal proceedings against us, or by us, including ongoing ligation proceedings;
- Changes in our business plan or corporate strategies;
- The extent to which we are able to manage the growth of our operations effectively, both domestically and abroad, whether directly owned or indirectly through licenses;
- The supply, availability and price of equipment, components and raw materials, including the elements needed to produce our photovoltaic modules;
- Our ability to expand and protect the intellectual property portfolio that relates to our consumer electronics, photovoltaic modules and processes;
- General economic and business conditions, and in particular, conditions specific to consumer electronics and the solar power industry; and
- Other risks and uncertainties discussed in greater detail in the section captioned “Risk Factors.”

You should not place undue reliance on our forward-looking statements because the matters they describe are subject to known and unknown risks, uncertainties and other unpredictable factors, many of which are beyond our control. Our forward-looking statements are based on the information currently available to us and speak only as of the date on the cover of this prospectus. New risks and uncertainties arise from time to time, and it is impossible for us to predict these matters or how they may affect us. Over time, our actual results, performance or achievements

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will likely differ from the anticipated results, performance or achievements that are expressed or implied by our forward-looking statements, and such differences might be significant and materially adverse to our investors. We have no duty to, and do not intend to, update or revise the forward-looking statements in this prospectus after the date of this prospectus except to the extent required by the federal securities laws. You should consider all risks and uncertainties disclosed in our filings with the SEC described in the sections of this prospectus entitled “Information Incorporated by Reference” and “Where You Can Find More Information,” all of which are accessible on the SEC's website at www.sec.gov.

RISK FACTORS

An investment in our securities involves a high degree of risk and many uncertainties discussed in the section entitled “Risk Factors” in our annual report on Form 10-K for the year ended December 31, 2013, which is incorporated by reference into this prospectus. You should carefully consider the risk factors before purchasing our securities. If one or more of the possibilities described as risks actually occurs, our operating results and financial condition would likely suffer and the trading price of our securities could fall, causing you to lose some or all of your investment in the securities we are offering.

Risks Relating to Our Business

We have a limited history of operations, have not generated significant revenue from operations and have had limited production of our products.

We have a limited operating history and have generated limited revenue from operations. Currently we are producing consumer oriented products in quantities necessary to meet current demand. Under our current business plan, we expect losses to continue until annual revenues and gross margins reach a high enough level to cover operating expenses. We plan to continue manufacturing at our current facilities and to expand our production capacity as part of our Joint Venture with Suqian. We are utilizing contract manufacturers in Asia for components and for final assembly of finished goods. Our ability to achieve our business, commercialization and expansion objectives will depend on a number of factors, including whether:

- we can generate customer acceptance of and demand for our products;
- we successfully ramp up commercial production on the equipment installed;
- our products are successfully and timely certified for use in our target markets;
- we successfully operate production tools to achieve the efficiencies, throughput and yield necessary to reach our cost targets;
- the products we design are saleable at a price sufficient to generate profits;
- our strategic alliance with TFG Radiant results in the design, manufacture and sale of sufficient products to achieve profitability;
- our ability to complete the formation of our Joint Venture with Suqian and subsequent installation of manufacturing equipment and ramp to production;
- we raise sufficient capital to enable us to reach a level of sales sufficient to achieve profitability on terms favorable to us;
- we are able to design, manufacture, market, distribute and sell our newly introduced line of consumer oriented products;

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- we effectively manage the planned ramp up of our operations;
- we successfully develop and maintain strategic relationships with key partners, including OEMs, system integrators and distributors, retailers and e-commerce companies, who deal directly with end users in our target markets;
- our ability to maintain the listing of our common stock on the NASDAQ Capital Market;
- our ability to achieve projected operational performance and cost metrics;
- our ability to enter into commercially viable licensing, joint venture, or other commercial arrangements; and
- the availability of raw materials.

Each of these factors is critical to our success, and accomplishing each of these tasks may take longer or cost more than expected, or may never be accomplished. It also is likely that problems we cannot now anticipate will arise. If we cannot overcome these problems, our business, results of operations and financial condition could be materially and adversely affected.

We have to date incurred net losses and may be unable to generate sufficient sales in the future to become profitable.

We incurred a net loss applicable to common stockholders of $36.1 million for the year ended December 31, 2013 and $39.5 million for the nine months ended September 30, 2014. We reported an accumulated deficit of $287.4 million as of September 30, 2014. We expect to incur net losses in the near term. Our ability to achieve profitability depends on a number of factors, including market acceptance of our consumer oriented products at competitive prices. If we are unable to raise additional capital and generate sufficient revenue to achieve profitability and positive cash flows, we may be unable to satisfy our commitments and may have to discontinue operations.

Our EnerPlex line of consumer oriented products exposes us to many new risks and uncertainties.

Following the appointment of our new President and CEO in February 2012, we repositioned our business model with an immediate focus into developing downstream consumer products. In 2012 we launched our EnerPlex brand line of consumer products, and introduced the first product under the EnerPlex brand with a solar assisted mobile phone charger incorporating our CIGS PV thin film technology. This new line of consumer oriented products exposes us to many risks and uncertainties that are new to our business.

We have limited experience in the design, manufacture, marketing, distribution and sale of consumer oriented products. Our ability to be successful with our line of consumer oriented products will depend on a number of factors, including whether:

- we can achieve and maintain customer acceptance of our new consumer oriented products;
- we can rapidly develop and successfully introduce large numbers of new consumer oriented products in response to changing consumer preferences, the introduction of new consumer electronics products (such as new mobile phone models) that our EnerPlex™ products are designed to extend their battery life, and the introduction of new products by competing manufacturers;
- we can maintain an adequate level of product quality over multiple consumer oriented products which must be designed, manufactured and introduced rapidly to keep pace with changing consumer preferences and competitive factors;
- we can successfully manage our third party contract manufacturers located outside the U.S. on whom we are heavily dependent for the production of our consumer oriented products;

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- we can successfully distribute our consumer oriented products through distributors, wholesalers, internet retailers and traditional retailers (many of whom distribute products from competing manufacturers) on whom we are heavily dependent; and
- we can successfully manage the substantial inventory and other asset risks associated with the manufacture and sale of consumer electronic products, given the rapid and unpredictable pace of product obsolescence in such consumer markets.

Our business is based on a new technology, and if our PV modules or processes fail to achieve the performance and cost metrics that we expect, then we may be unable to develop demand for our PV modules and generate sufficient revenue to support our operations.

Our CIGS on flexible plastic substrate technology is a relatively new technology. Our business plan and strategies assume that we will be able to achieve certain milestones and metrics in terms of throughput, uniformity of cell efficiencies, yield, encapsulation, packaging, cost and other production parameters. We cannot assure you that our technology will prove to be commercially viable in accordance with our plan and strategies. Further, we or our strategic partners and licensees may experience operational problems with such technology after its commercial introduction that could delay or defeat the ability of such technology to generate revenue or operating profits. If we are unable to achieve our targets on time and within our planned budget, then we may not be able to develop adequate demand for our PV modules, and our business, results of operations and financial condition could be materially and adversely affected.

Our failure to further refine our technology and develop and introduce improved PV products could render our PV modules uncompetitive or obsolete and reduce our net sales and market share.

Our success requires us to invest significant financial resources in research and development to keep pace with technological advances in the solar energy industry. However, research and development activities are inherently uncertain, and we could encounter practical difficulties in commercializing our research results. Our expenditures on research and development may not be sufficient to produce the desired technological advances, or they may not produce corresponding benefits. Our PV modules may be rendered obsolete by the technological advances of our competitors, which could harm our results of operations and adversely impact our net sales and market share.

Failure to expand our manufacturing capability successfully at our facilities, through our strategic alliances, or our Joint Venture with Suqian, would adversely impact our ability to sell our products into our target markets and would materially and adversely affect our business, results of operations and financial condition.

Our growth plan calls for production and operation at our facility, our Joint Venture with Suqian and at contract manufacturers in Asia. Successful operations will require substantial engineering and manufacturing resources and are subject to significant risks, including risks of cost overruns, delays and other risks, such as geopolitical unrest that may cause us not be able to successfully operate in other countries. Furthermore, we may never be able to operate our production processes in high volume or at the volumes projected, make planned process and equipment improvements, attain projected manufacturing yields or desired annual capacity, obtain timely delivery of components, or hire and train the additional employees and management needed to scale our operations. Failure to meet these objectives on time and within our planned budget could materially and adversely affect our business, results of operations and financial condition.

We may be unable to manage the expansion of our operations and strategic alliances effectively.

We will need to significantly expand our operations and form beneficial strategic alliances in order to reduce manufacturing costs through economies of scale and partnerships, secure contracts of commercially material amounts with reputable customers and capture a meaningful share of our target markets. To manage the expansion of our operations and alliances, we will be required to improve our operational and financial systems, oversight, procedures and controls and expand, train and manage our growing employee base. Our management team will also be required to maintain and cultivate our relationships with partners, customers, suppliers and other third parties and

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attract new partners, customers and suppliers. In addition, our current and planned operations, personnel, facility size and configuration, systems and internal procedures and controls, even when augmented through strategic alliances, might be inadequate or insufficient to support our future growth. If we cannot manage our growth effectively, we may be unable to take advantage of market opportunities, execute our business strategies or respond to competitive pressures, resulting in a material and adverse effect to our business, results of operations and financial condition.

We depend on a limited number of third party suppliers for key raw materials, and their failure to perform could cause manufacturing delays and impair our ability to deliver PV modules to customers in the required quality and quantity and at a price that is profitable to us.

Our failure to obtain raw materials and components that meet our quality, quantity and cost requirements in a timely manner could interrupt or impair our ability to manufacture our products or increase our manufacturing cost. Most of our key raw materials are either sole sourced or sourced by a limited number of third party suppliers. As a result, the failure of any of our suppliers to perform could disrupt our supply chain and impair our operations. Many of our suppliers are small companies that may be unable to supply our increasing demand for raw materials as we implement our planned expansion. We may be unable to identify new suppliers in a timely manner or on commercially reasonable terms. Raw materials from new suppliers may also be less suited for our technology and yield PV modules with lower conversion efficiencies, higher failure rates and higher rates of degradation than PV modules manufactured with the raw materials from our current suppliers.

Our continuing operations may require additional capital which we may not be able to obtain on favorable terms, if at all or without dilution to our stockholders.

Since inception, we have incurred significant losses. We expect to continue to incur net losses in the near term. For the year ended December 31, 2013, our cash used in operations was $20.3 million. At December 31, 2013, we had cash and cash equivalents of approximately $3.3 million. For the nine months ended September 30, 2014, our cash used in operations was $20.7 million. At September 30, 2014, we had cash and equivalents of $1.0 million.

Although we have commenced production at our manufacturing facility, we do not expect that sales revenue and cash flows will be sufficient to support operations and cash requirements until we have fully implemented our new consumer products strategy. Additional projected product revenues are not anticipated to result in a positive cash flow position for the year 2015 overall. As a result of our issuance of the Notes, Warrants and shares of Series D Preferred Stock, we believe that we will have sufficient capital to continue our current level of operations through the end of 2015. The Company may need to raise additional capital in order to continue our current level of operations throughout 2016.

To the extent that we may need to raise additional capital in the future, there is no assurance that we will be able to raise additional capital on acceptable terms or at all. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our existing stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we raise additional funds through debt financing, which may involve restrictive covenants, our ability to operate our business may be restricted. If adequate funds are not available or are not available on acceptable terms, if and when needed, our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our products, expand capacity or otherwise respond to competitive pressures could be significantly limited, and our business, results of operations and financial condition could be materially and adversely affected.

In addition, the terms of a loan we obtained from the Colorado Housing and Finance Authority (“CHFA”) in connection with our purchase and improvement of our Thornton, Colorado facility contain covenants that limit our ability, without the consent of CHFA, to create or incur additional indebtedness (other than obligations created or incurred in the ordinary course of business such as working capital financing); merge or consolidate with any other entity; or make loans or advances to our officers, shareholders, directors or employees. The presence of these covenants gives CHFA the ability to bar us from engaging in certain transactions in the future that we may determine are necessary or advisable to meet our business objectives, including debt offerings and acquisitions of or by other

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companies. If CHFA were to withhold its written consent under these or other circumstances, we could be forced to prepay such loans at a premium, which could adversely affect our business, results of operations and financial condition.

Our products may never gain sufficient market acceptance, in which case we would be unable to sell our products or achieve profitability.

Demand for our products may never develop sufficiently, and our products may never gain market acceptance, if we fail to produce products that compare favorably against competing products on the basis of cost, quality, weight, efficiency and performance. Demand for our products also will depend on our ability to develop and maintain successful relationships with key partners, including distributors, retailers, OEMs, system integrators and value added resellers. If our products fail to gain market acceptance as quickly as we envision or at all, our business, results of operations and financial condition could be materially and adversely affected.

We are targeting emerging markets for a significant portion of our planned product sales. These markets are new and may not develop as rapidly as we expect, or may not develop at all.

Our target markets include consumer electronics, portable power, defense, transportation, space and near space, and building applied photovoltaic ("BAPV") and building integrated photovoltaic ("BIPV") markets. Although certain areas of these markets have started to develop, some of them are in their infancy. We believe these markets have significant long term potential; however, some or all of these markets may not develop and emerge as we expect. If the markets do develop as expected, there may be other products that could provide a superior product or a comparable product at lower prices than our products. If these markets do not develop as we expect, or if competitors are better able to capitalize on these markets our revenues and product margins may be negatively affected.

Failure to consummate strategic relationships with key partners in our various target market segments, such as consumer electronics, defense and portable power, transportation, space and near space, and the respective implementations of the right strategic partnerships to enter these various specified markets, could adversely affect our projected sales, growth and revenues.

We intend to sell thin-film PV modules for use in consumer electronics, portable power systems, defense and portable power systems, transportation, space and near space solar panel applications. Our marketing and distribution strategy is to form strategic relationships with distributors, retailers and value added resellers as well as direct to consumer kiosks and e-commerce to provide a foothold in these target markets. If we are unable to successfully establish working relationships with such market participants or if, due to cost, technical or other factors, our products prove unsuitable for use in such applications; our projected revenues and operating results could be adversely affected.

If sufficient demand for our products does not develop or takes longer to develop than we anticipate, we may be unable to grow our business, generate sufficient revenue to attain profitability or continue operations.

The solar energy industry is at a relatively early stage of development, and the extent to which PV modules, including our own, will be widely adopted is uncertain. While pure PV solutions is not our short term primary market, if PV technology proves unsuitable for widespread adoption or if demand for PV modules fails to develop sufficiently, long term we may be unable to grow our business, generate sufficient sales to attain profitability or continue operations. Many factors, of which several are outside of our control, may affect the viability of widespread adoption of PV technology and demand for PV modules.

We face intense competition from other manufacturers of thin-film PV modules and other companies in the solar energy industry.

The solar energy and renewable energy industries are both highly competitive and continually evolving as participants strive to distinguish themselves within their markets and compete with the larger electric power

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industry. We believe our main sources of competition are other thin film PV manufacturers and companies developing other solar solutions, such as solar thermal and concentrated PV technologies.

Many of our existing and potential competitors have substantially greater financial, technical, manufacturing and other resources than we do. A competitor's greater size provides them with a competitive advantage because they often can realize economies of scale and purchase certain raw materials at lower prices. Many of our competitors also have greater brand name recognition, established distribution networks and large customer bases. In addition, many of our competitors have well-established relationships with our current and potential partners and distributors and have extensive knowledge of our target markets. As a result of their greater size, these competitors may be able to devote more resources to the research, development, promotion and sale of their products or respond more quickly to evolving industry standards and changes in market conditions than we can. Our failure to adapt to changing market conditions and to compete successfully with existing or future competitors could materially and adversely affect our business, results of operations and financial condition.

Problems with product quality or performance may cause us to incur warranty expenses, damage our market reputation and prevent us from maintaining or increasing our market share.

If our products fail to perform as expected while under warranty, or if we are unable to support the warranties, sales of our products may be adversely affected or our costs may increase, and our business, results of operations and financial condition could be materially and adversely affected.

We may also be subject to warranty or product liability claims against us that are not covered by insurance or are in excess of our available insurance limits. 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. The possibility of future product failures could cause us to incur substantial expenses to repair or replace defective products. Furthermore, widespread product failures may damage our market reputation and reduce our market share causing sales to decline.

The interests of our largest stockholder, TFG Radiant, may conflict with our interests or your interests now or in the future.

As of November 17, 2014, TFG Radiant owned approximately 24% of our common stock. As a result of its large holding of our shares, TFG Radiant may have the ability to prevent any transaction that requires the approval of stockholders regardless of whether other stockholders believe any such transaction is in their own best interests, with the exception of certain agreements TFG Radiant has made pursuant to the Amended and Restated Stockholders Agreement between us and TFG Radiant. TFG Radiant also has certain registration rights that could impact shareholders. Additionally, TFG Radiant currently holds two seats on our Board of Directors, which affords TFG Radiant greater control and influence over matters affecting our business.

On February 1, 2012, Mr. Victor Lee was appointed by our Board as our President and Chief Executive Officer. Mr. Lee is the managing director of Tertius Financial Group Pte Ltd, the joint venture partner with Radiant Group in TFG Radiant.

TFG Radiant may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. TFG Radiant also may pursue opportunities (including by acquisition) that may be adverse to, or be in direct or indirect competition with us. Additionally, our potential customers may be competitors of TFG Radiant and our interests in selling to those customers could be divergent from TFG Radiant's competitive interests. So long as TFG Radiant continues to own a significant amount of the outstanding shares of our common stock and Mr. Lee is President and Chief Executive Officer, TFG Radiant may be able to strongly influence or effectively control our decisions.

Currency translation risk may negatively affect our net sales, cost of equipment, cost of sales, gross margin or profitability and could result in exchange losses.

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Although our reporting currency is the U.S. dollar, we may conduct business and incur costs in the local currencies of other countries in which we operate, make sales or buy equipment or materials. As a result, we are subject to currency translation risk. Our future contracts and obligations may be exposed to fluctuations in currency exchange rates, and, as a result, our capital expenditures or other costs may exceed what we have budgeted. Further, changes in exchange rates between foreign currencies and the U.S. dollar could affect our net sales and cost of sales and could result in exchange losses. We cannot accurately predict future exchange rates or the overall impact of future exchange rate fluctuations on our business, results of operations and financial condition.

A significant increase in the price of our raw materials could lead to higher overall costs of production, which would negatively affect our planned product margins, or make our products uncompetitive in the PV market.

Our raw materials include high temperature plastics and various metals. Significant increases in the costs of these raw materials may impact our ability to compete in our target markets at a price sufficient to produce a profit.

Our intellectual property rights or our means of enforcing those rights may be inadequate to protect our business, which may result in the unauthorized use of our products or reduced sales or otherwise reduce our ability to compete.

Our business and competitive position depends upon our ability to protect our intellectual property rights and proprietary technology, including any PV modules that we develop. We attempt to protect our intellectual property rights, primarily in the United States, through a combination of patent, trade secret and other intellectual property laws, as well as licensing agreements and third party nondisclosure and assignment agreements. Because of the differences in foreign patent and other laws concerning intellectual property rights, our intellectual property rights may not receive the same degree of protection in foreign countries as they would in the United States. Our failure to obtain or maintain adequate protection of our intellectual property rights, for any reason, could have a materially adverse effect on our business, results of operations and financial condition. Further, any patents issued in connection with our efforts to develop new technology for PV modules may not be broad enough to protect all of the potential uses of our technology.

We also rely on unpatented proprietary technology. It is possible others will independently develop the same or similar technology or otherwise obtain access to our unpatented technology. To protect our trade secrets and other proprietary information, we require our employees, consultants and advisors to execute proprietary information and invention assignment agreements when they begin working for us. We cannot assure these agreements will provide meaningful protection of our trade secrets, unauthorized use, misappropriation or disclosure of trade secrets, know how or other proprietary information. Despite our efforts to protect this information, unauthorized parties may attempt to obtain and use information that we regard as proprietary. If we are unable to maintain the proprietary nature of our technologies, we could be materially adversely affected.

In addition, when others control the prosecution, maintenance and enforcement of certain important intellectual property, such as technology licensed to us, the protection and enforcement of the intellectual property rights may be outside of our control. If the entity that controls intellectual property rights that are licensed to us does not adequately protect those rights, our rights may be impaired, which may impact our ability to develop, market and commercialize our products. Further, if we breach the terms of any license agreement pursuant to which a third party licenses us intellectual property rights, our rights under that license may be affected and we may not be able to continue to use the licensed intellectual property rights, which could adversely affect our ability to develop, market and commercialize our products.

If third parties claim we are infringing or misappropriating their intellectual property rights, we could be prohibited from selling our PV products, be required to obtain licenses from third parties or be forced to develop non-infringing alternatives, and we could be subject to substantial monetary damages and injunctive relief.

The PV industry is characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. We are aware of numerous issued patents and pending patent applications owned

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by third parties that may relate to current and future generations of solar energy. The owners of these patents may assert the manufacture, use or sale of any of our products infringes one or more claims of their patents. Moreover, because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued patents that materially and adversely affect our business. Third parties could also assert claims against us that we have infringed or misappropriated their intellectual property rights. Whether or not such claims are valid, we cannot be certain we have not infringed the intellectual property rights of such third parties. Any infringement or misappropriation claim could result in significant costs or substantial damages to our business or an inability to manufacture, market or sell any of our PV modules found to infringe or misappropriate. Even if we were to prevail in any such action, the litigation could result in substantial cost and diversion of resources that could materially and adversely affect our business. The large number of patents, the rapid rate of new patent issuances, the complexities of the technology involved and uncertainty of litigation increase the risk of business assets and management's attention being diverted to patent litigation. Even if obtaining a license were feasible, it could be costly and time consuming. We might be forced to obtain additional licenses from our existing licensors in the event the scope of the intellectual property we have licensed is too narrow to cover our activities, or in the event the licensor did not have sufficient rights to grant us the license(s) purported granted. Also, some of our licenses may restrict or limit our ability to grant sub-licenses and/or assign rights under the licenses to third parties, which may limit our ability to pursue business opportunities.

Our future success depends on retaining our Chief Executive Officer and existing management team and hiring and assimilating new key employees and our inability to attract or retain key personnel would materially harm our business and results of operations.

Our success depends on the continuing efforts and abilities of our executive officers, including Mr. Victor Lee, our President and Chief Executive Officer, our other executive officers, and key technical personnel. Our future success also will depend on our ability to attract and retain highly skilled employees, including management, technical and sales personnel. The loss of any of our key personnel, the inability to attract, retain or assimilate key personnel in the future, or delays in hiring required personnel could materially harm our business, results of operations and financial condition.

Our PV modules contain limited amounts of cadmium sulfide, and claims of human exposure or future regulations could have a material adverse effect on our business, results of operations and financial condition.

Our PV modules contain limited amounts of cadmium sulfide, which is regulated as a hazardous material due to the adverse health effects that may arise from human exposure, and is banned in certain countries. We cannot assure you human or environmental exposure to cadmium sulfide used in our PV modules will not occur. Any such exposure could result in third party claims against us, damage to our reputation and heightened regulatory scrutiny of our PV modules. Future regulation relating to the use of cadmium in various products could force us to seek regulatory exemptions or impact the manufacture and sale of our PV modules and could require us to incur unforeseen environmental related costs. The occurrence of future events such as these could limit our ability to sell and distribute our PV modules, and could have a material adverse effect on our business, results of operations and financial condition.

Environmental obligations and liabilities could have a substantial negative impact on our financial condition, cash flows and profitability.

We are subject to a variety of federal, state, local and foreign laws and regulations relating to the protection of the environment, including those governing the use, handling, generation, processing, storage, transportation and disposal of, or human exposure to, hazardous and toxic materials (such as the cadmium used in our products), the discharge of pollutants into the air and water, and occupational health and safety. We are also subject to environmental laws which allow regulatory authorities to compel, or seek reimbursement for, cleanup of environmental contamination at sites now or formerly owned or operated by us and at facilities where our waste is or has been disposed. We may incur significant costs and capital expenditures in complying with these laws and regulations. In addition, violations of, or liabilities under, environmental laws or permits may result in restrictions being imposed on our operating activities or in our being subjected to substantial fines, penalties, criminal

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proceedings, third party property damage or personal injury claims, cleanup costs or other costs. Also, future developments such as more aggressive enforcement policies, the implementation of new, more stringent laws and regulations, or the discovery of presently unknown environmental conditions or noncompliance may require expenditures that could have a material adverse effect on our business, results of operations and financial condition. Further, greenhouse gas emissions have increasingly become the subject of international, national, state and local attention. Although future regulations could potentially lead to an increased use of alternative energy, there can be no guarantee that such future regulations will encourage solar technology. Given our limited history of operations, it is difficult to predict future environmental expenses.

We currently anticipate having substantial international operations that will subject us to a number of risks, including potential unfavorable political, regulatory, labor and tax conditions in foreign countries.

We expect to expand our operations abroad in the future and, as a result, we may be subject to the legal, political, social and regulatory requirements and economic conditions of foreign jurisdictions. Risks inherent to international operations, include, but are not limited to, the following:

- difficulty in procuring supplies and supply contracts abroad;
- difficulty in enforcing agreements in foreign legal systems;
- foreign countries imposing additional withholding taxes or otherwise taxing our foreign income, imposing tariffs or adopting other restrictions on foreign trade and investment, including currency exchange controls;
- inability to obtain, maintain or enforce intellectual property rights;
- risk of nationalization;
- changes in general economic and political conditions in the countries in which we may operate, including changes in the government incentives we might rely on;
- unexpected adverse changes in foreign laws or regulatory requirements, including those with respect to environmental protection, export duties and quotas;
- difficulty with staffing and managing widespread operations;
- 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
- difficulty of, and costs relating to, compliance with the different commercial and legal requirements of the international markets in which we plan to offer and sell our PV products.

Our business in foreign markets will require us to respond to rapid changes in market conditions in these countries. Our overall success as an international business depends, in part, on our ability to succeed in differing legal, regulatory, economic, social and political conditions. If we are not able to develop and implement policies and strategies that are effective in each location where we will do business, then our business, results of operations and financial condition could be materially and adversely affected.

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

The market for electricity generation products is heavily influenced by foreign, U.S., state and local government regulations and policies concerning the electric utility industry, as well as policies promulgated by electric utilities. These regulations and policies often relate to electricity pricing and technical interconnection of customer owned

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electricity generation. In the United States and in a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. These regulations and policies could deter end user purchases of PV products and investment in the research and development of PV technology. For example, without a mandated regulatory exception for PV systems, utility customers are often charged interconnection or standby fees for putting distributed power generation on the electric utility grid. These fees could increase the cost to our end users of using PV systems and make them less desirable, thereby harming our business, prospects, results of operations and financial condition. In addition, electricity generated by PV systems mostly competes with expensive peak hour electricity, rather than the less expensive average price of electricity. Modifications to the peak hour pricing policies of utilities, such as to a flat rate, would require PV systems to achieve lower prices in order to compete with the price of electricity from other sources.

We anticipate that our PV modules and their use in installations will be subject to oversight and regulation in accordance with national and local ordinances relating to building codes, safety, environmental protection, utility interconnection and metering and related matters. It is difficult to track the requirements of individual states and design equipment to comply with the varying standards. Any new government regulations or utility policies pertaining to PV modules may result in significant additional expenses to us, our business partners and their customers and, as a result, could cause a significant reduction in demand for our PV modules.

Risks Relating to our Private Placement of Notes and Warrants

We could be required to make substantial cash payments upon an event of default or change of control under the Notes described below.

The Notes provide for events of default including, among others, payment defaults, cross defaults, material breaches of any representations or warranties, breaches of covenants that are not cured within the applicable time period, failure to perform certain required activities in a timely manner, failure to comply with the requirements under the Registration Rights Agreement described below, suspension from trading or failure of our common stock to be listed on an eligible market for certain periods and certain bankruptcy-type events involving us or a subsidiary.

Upon an event of default, a holder of the Notes may require us to redeem all or any portion of the Notes (including all accrued and unpaid interest and all interest that would have accrued), in cash, at a price equal to the greater of: (i) up to 125% of the amount being redeemed, depending on the nature of the default, and (ii) the product of (A) the conversion rate in effect at such time multiplied by (B) the product of (1) up to 125%, depending on the nature of the default, multiplied by (2) the highest closing sale price of the common stock on any trading day during the period beginning on the date immediately before the event of default and ending on the date of redemption.

In addition, under the terms of the Notes, in the event of transactions involving a change of control, the holder of a Note will have the right to require us to redeem all or any portion of the Note it holds in cash, at a price with a redemption premium of 125% calculated by the formula specified in the Notes.

If either an event of default or change of control occurs, our available cash could be seriously depleted and our ability to fund operations could be materially harmed.

The Notes contain various covenants and restrictions which may limit our ability to operate our business and raise capital.

The Notes impose certain restrictive covenants on us which may impede our ability to operate our business or raise further funds in the capital markets. For example, so long as the Notes are outstanding, we cannot, and cannot permit any of our subsidiaries to:

- incur, guarantee, assume or suffer to exist any indebtedness (other than permitted indebtedness under the Notes);
- declare or pay cash dividends;

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- redeem or repurchase equity interests;
- permit liens on our properties or assets (other than permitted liens under the Notes); and
- repay certain indebtedness in cash if an event of default has occurred.

A breach of any of these covenants could result in a default under the Notes. If there is an event of default, a holder of the Notes may require us to redeem all or any portion of the Notes (including all accrued and unpaid interest and all interest that would have accrued through the maturity date) in cash, which could have a material adverse effect on our financial condition and cash flow.

Our stockholders may experience significant dilution as a result of shares of our common stock issued pursuant to the Notes and Warrants.

As of November 17, 2014, we had approximately 54.5 million shares of our common stock reserved or designated for future issuance pursuant to the Notes and the Warrants. Under the Notes and Warrants, we are required to have reserved or have designated for future issuance at least 200% of the maximum potential number of shares of common stock necessary to effect the conversion of the Notes and the exercise of the Warrants, subject to potential future anti-dilution adjustments. Although we have the option to settle the interest and principal payments on the Notes in cash and certain conversion and exercise restrictions are placed upon the holders of the Notes and Warrants, the issuance of material amounts of common stock by us would cause our existing stockholders to experience significant dilution in their investment in our Company. In addition, our existing stockholders could experience significant dilution in their investment in our Company as a result of the issuance of shares related to our outstanding Series A and Series D preferred stock, as described further below in these risk factors. Also, if we obtain additional financing involving the issuance of equity securities or securities convertible into equity securities, our existing stockholders' investment would be further diluted. Such dilution could cause the market price of our common stock to decline, which could impair our ability to raise additional financing.

Substantial leverage and debt service obligations may adversely affect our cash flows.

In connection with the sale of the Notes to the Selling Stockholder identified herein, we incurred indebtedness in the aggregate principal amount of $32 million. The degree to which we are leveraged could, among other things:

- require us to dedicate a substantial portion of our future cash flows from operations and other capital resources to debt service;
- make it difficult for us to obtain necessary financing in the future for working capital, acquisitions or other purposes on favorable terms, if at all;
- make it more difficult for us to be acquired;
- make us more vulnerable to industry downturns and competitive pressures; and
- limit our flexibility in planning for, or reacting to, changes in our business.

Our ability to meet our debt service obligations (including interest or amortization payments on the Notes) will depend upon our future performance, which will be subject to financial, business and other factors affecting our operations, many of which are beyond our control. We currently intend to make interest and amortization payments on the Notes through the issuance of shares of our common stock, which requires us to be in compliance with certain equity conditions (including trading volume and stock price conditions), unless these conditions are waived by the holder. Such payments in shares will be limited to the extent that such payments would cause the holder to beneficially own in excess of 4.99% of the outstanding shares of our common stock at the time of such payment. If we are not permitted to deliver shares of common stock to repay the Notes due to a failure to satisfy any of the these conditions or the limitations on payment in our shares, we will be required to make such payments in cash which

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could adversely affect our ability to fund operations due to the diversion of necessary cash flow to fund operations to utilization for Note payments.

Sales of a significant number of shares of our common stock in the public markets or significant short sales of our stock, or the perception that such sales could occur, could depress the market price of our common stock and impair our ability to raise capital.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public markets, including any shares issued upon conversion of the Notes, in payment of principal of and interest on the Notes, or upon exercise of the Warrants, could depress the market price of our common stock. If there are significant short sales of our stock, the price decline that could result from this activity may cause the share price to decline more so, which, in turn, may cause long holders of the stock to sell their shares, thereby contributing to sales of stock in the market. Such sales also may impair our ability to raise capital through the sale of additional equity securities in the future at a time and price that our management deems acceptable, if at all. In addition, a large number of our outstanding shares are not registered under the Securities Act. If and when these shares are registered or become eligible for sale to the public market, the market price of our common stock could also decline.

We may not be able to maintain effectiveness of the registration statement of which this prospectus forms a part, which could impact the liquidity of our common stock.

Under the terms of the Registration Rights Agreement, we are obligated to include shares of common stock issued or issuable upon conversion of the Notes, including in connection with principal payments, or as payment of interest under the Notes, and upon the exercise of the Warrants, in an effective registration statement. The registration statement of which this prospectus forms a part is intended to satisfy part of these obligations. We intend to use our reasonable best efforts to maintain the registration statement to be effective, but may not be able to do so. We cannot assure you that no stop order will be issued, or if such a stop order is issued, we will be able to amend the registration statement to defeat the stop order. If the registration statement is not effective, investors' ability to sell the shares of common stock underlying the Notes and Warrants may be limited, which would have a material adverse effect on the liquidity of our common stock.

The accounting treatment for our Notes and Warrants is complex and subject to judgments concerning the valuation of the Warrants and the embedded derivative rights within the Notes. Fluctuations in the valuation of the Warrants or these rights could cause us to take charges to our earnings and make our financial results unpredictable.

Our Notes issued on November 19, 2014 may contain embedded derivative rights in accordance with accounting principles generally accepted in the United States, or GAAP. These derivative rights, or similar rights in convertible securities we may issue in the future, and the Warrants need to be, or may need to be, separately valued as of the end of each accounting period in accordance with GAAP. Changes in the valuations of the Warrants or these rights, the valuation methodology or the assumptions on which the valuations are based could cause us to take charges to our earnings, which would adversely impact our results of operations. Moreover, the methodologies, assumptions and related interpretations of accounting or regulatory authorities associated with embedded derivatives are complex and in some cases uncertain, which could cause our accounting for derivatives, and as a result, our financial results, to fluctuate. There is a risk that questions could arise from investors or regulatory authorities concerning the appropriate accounting treatment of these instruments, which could cause volatility in our financials until the embedded derivative rights expire, which in turn could adversely impact our results of operations, our reputation and our public stock price.

The gross amount of funds realized from the issuance of the Notes, Warrants and Series D Preferred Stock may be affected by the requirement that a portion of the purchase price be maintained in restricted control accounts, as well as the limitation on the percentage of beneficial ownership by the holders.

Approximately $30.5 million of the purchase price of the Notes, Warrants and Series D Preferred Stock was placed into restricted control accounts. Approximately $2.5 million thereof will be released to us after (i) the

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registration statement of which this prospectus forms a part becomes effective and (ii) the issuance of all shares of common stock related to the Financing have been approved by our stockholders in accordance with applicable NASDAQ listing rules. An additional $6 million from the control accounts shall be released to us 75 days thereafter. Thereafter, additional funds from the control accounts shall be released to us (i) in connection with certain conversions of the Notes and redemptions of the Series D Preferred Stock, and (ii) up to $6 million in any 90 day period, provided that we meet certain equity conditions.

In addition, under the terms of the Securities Purchase Agreement, the number of shares a holder, together with its affiliates, is able to beneficially own at any given time is limited to 4.99% of our total common stock then outstanding. If a holder's beneficial ownership reaches the limit that it has elected, such holder will not be able to convert any remaining portion of its Note or Series D Preferred Stock or exercise its Warrant until such time that it sells enough shares to reduce its ownership percentage.

These restrictions could limit the amount of proceeds we expect to realize from the issuance of the Notes, Warrants and Series D Preferred Stock. If we realize less than the full purchase price of the Notes, it may have a material adverse effect on our financial position, cash flows and our ability to continue operating as a going concern.

Risks Relating to our Securities and an Investment in our Common Stock

As a public company we are subject to complex legal and accounting requirements that require us to incur substantial expenses, and our financial controls and procedures may not be sufficient to ensure timely and reliable reporting of financial information, which, as a public company, could materially harm our stock price and listing on the NASDAQ Capital Market.

As a public company, we are subject to numerous legal and accounting requirements that do not apply to private companies. The cost of compliance with many of these requirements is substantial, not only in absolute terms but, more importantly, in relation to the overall scope of the operations of a small company. Failure to comply with these requirements can have numerous adverse consequences including, but not limited to, our inability to file required periodic reports on a timely basis, loss of market confidence, delisting of our securities and/or governmental or private actions against us. We cannot assure you we will be able to comply with all of these requirements or the cost of such compliance will not prove to be a substantial competitive disadvantage vis-à-vis our privately held and larger public competitors.

The Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley") requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of Sarbanes-Oxley. Our compliance with Section 404 of Sarbanes-Oxley will require we incur substantial accounting expense and expend significant management efforts. The effectiveness of our controls and procedures may, in the future, be limited by a variety of factors, including:

- faulty human judgment and simple errors, omissions or mistakes;
- fraudulent action of an individual or collusion of two or more people;
- inappropriate management override of procedures; and
- the possibility that any enhancements to controls and procedures may still not be adequate to assure timely and accurate financial information.

If we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm, identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, we may be subject to NASDAQ delisting, investigations by the SEC and civil or criminal sanctions.

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Our ability to successfully implement our business plan and comply with Section 404 requires us to be able to prepare timely and accurate financial statements. We expect we will need to continue to improve existing, and implement new operational, financial and accounting systems, procedures and controls to manage our business effectively.

Any delay in the implementation of, or disruption in the transition to, new or enhanced systems, procedures or controls may cause our operations to suffer, and we may be unable to conclude that our internal control over financial reporting is effective as required under Section 404 of Sarbanes-Oxley. If we are unable to complete the required Section 404 assessment as to the adequacy of our internal control over financial reporting, if we fail to maintain or implement adequate controls, our ability to obtain additional financing could be impaired. In addition, investors could lose confidence in the reliability of our internal control over financial reporting and in the accuracy of our periodic reports filed under the Exchange Act. A lack of investor confidence in the reliability and accuracy of our public reporting could cause our stock price to decline.

The price of our common stock may continue to be volatile.

Our common stock is currently traded on the NASDAQ Capital Market. The trading price of our common stock from time to time has fluctuated widely and may be subject to similar volatility in the future. For example, during the 2014 calendar year, the closing price of our common stock traded (as adjusted to reflect a 1-for-10 reverse stock split of our common stock that occurred on August 26, 2014 (the "Reverse Stock Split")) as low as $1.46 and as high as $7.50. The trading price of our common stock in the future may be affected by a number of factors, including events described in these "Risk Factors." In recent years, broad stock market indices, in general, and smaller capitalization and PV companies, in particular, have experienced substantial price fluctuations. In a volatile market, we may experience wide fluctuations in the market price of our common stock. These fluctuations may have a negative effect on the market price of our common stock regardless of our operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted. A securities class action suit against us could result in substantial costs, potential liabilities and the diversion of management's attention and resources, and could have a material adverse effect on our financial condition.

Future sales, or the potential for future sales, of our securities may cause the trading price of our common stock to decline and could impair our ability to raise capital.

Sales of a substantial number of shares of our common stock or other securities in the public markets, or the perception these sales may occur, could cause the market price of our common stock or other securities to decline and could materially impair our ability to raise capital through the sale of additional securities. A large number of our outstanding shares are not registered under the Securities Act. If and when these shares are registered or become eligible for sale to the public market, the market price of our common stock could decline.

If you purchase the securities, you may experience dilution if we issue additional equity securities in future fundraising transactions.

If we issue additional common stock, or securities convertible into or exchangeable or exercisable for common stock, our stockholders, including investors who purchase shares in this offering, will experience dilution, and any such issuances may result in downward pressure on the price of our common stock.

Current stockholders will be diluted by the issuance of shares related to our Series A preferred stock, Series D preferred stock and our Notes, including shares that would be issued if we elect to pay redemption amounts, interest and dividends in the form of common stock.

The conversion of our Series A preferred stock, Series D preferred stock and the Notes would result in the future issuance of significant additional shares of common stock by the Company. In addition, an indeterminate number of additional common shares may be issued in the event the Company elects to pay dividends and interest due on the Series A preferred stock, Series D preferred stock and the Notes in the form of shares rather than cash. To the extent

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we issue common stock in payment of the amounts due in connection with our Series A preferred stock, Series D preferred stock and the Notes in the form of our common stock, rather than cash, such issuances will dilute the ownership interests of existing stockholders.

As of November 17, 2014, 212,390 shares of Series A preferred stock remained outstanding. If all remaining shares of Series A preferred stock were immediately converted as of the date of this prospectus, we estimate that we would issue 212,390 common shares upon conversion and 558,921 additional common shares for make-whole amounts paid in common shares in lieu of cash.

As of November 17, 2014, 3,000 shares of Series D preferred stock remained outstanding. If all remaining shares of Series D preferred stock were immediately converted as of the date of this prospectus, we estimate that we would issue 2,096,133 common shares upon conversion. If all of the $32,000,000 of our Notes were immediately converted as of the date of this prospectus, we estimate that we would issue 22,707,071 common shares upon conversion. If we elect to make the required installment payments on the Notes and Series D Preferred Stock in the form of shares rather than cash (as we intend to do), the number of shares that we would issue in respect of the Series D Preferred Stock and the Notes may exceed the amounts referred to above.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our Amended and Restated Certificate of Incorporation and Second Amended and Restated Bylaws, each as amended, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us, or for a change in the composition of our Board or management to occur, even if doing so would benefit our stockholders. These provisions include:

- authorizing the issuance of “blank check” preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- dividing our Board into three classes;
- limiting the removal of directors by the stockholders; and
- limiting the ability of stockholders to call a special meeting of stockholders.

In addition, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with an interested stockholder for a period of three years following the date on which the stockholder became an interested stockholder, unless such transactions are approved by our Board. This provision could have the effect of delaying or preventing a change of control, whether or not it is desired by, or beneficial to, our stockholders.

TFG Radiant, our largest stockholder, is exempt from the general prohibitions of Section 203 because the transaction by which it became an interested stockholder was approved by our Board. Because TFG Radiant has two representatives on our Board, it is less likely that a third party could become an interested stockholder without the consent of TFG Radiant.

USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by the Selling Stockholder. We will not receive any of the proceeds resulting from the sale of common stock by the Selling Stockholder.

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SALE OF NOTES, WARRANTS AND SERIES D PREFERRED STOCK

On November 14, 2014, we entered into the Securities Purchase Agreement with the Selling Stockholder. Pursuant to the terms of the Securities Purchase Agreement, we sold to the Selling Stockholder (i) 3,000 shares of Series D Preferred Stock, at a price of $1,000 per share of Series D Preferred Stock, (ii) $32,000,000 original principal amount of Notes and (iii) Warrants to purchase up to 7,777,778 shares of our common stock. The sale of the Series D Preferred Stock, the Notes and the Warrants to the Selling Stockholder (the "Financing") closed on November 19, 2014. Although we received gross proceeds of approximately $35 million on the Closing Date, $30.5 million of gross proceeds from the Financing is held in our bank account with Zions First National Bank and is subject to restrictions on release. We will be able to freely access $2.5 million of these restricted proceeds after (i) the registration statement of which this prospectus forms a part becomes effective and (ii) the issuance of all shares of Common Stock related to the Financing have been approved by the Company's stockholders in accordance with applicable NASDAQ listing rules. We will be able to access the remaining $28 million of restricted proceeds in increments upon their release in accordance with the terms of the Series D Preferred Stock and the Notes throughout 2015 and the early part of 2016. The economic terms of the Series D Preferred Stock and the Notes are substantially similar, except that the Series D Preferred Stock is unsecured and ranks junior to the Notes and other existing and future indebtedness of the Company. The Series D Preferred Stock was offered and sold pursuant to a prospectus supplement filed with the SEC in connection with our shelf registration statement on Form S-3 (File No. 333-199214), which became effective on October 16, 2014. We offered and sold the Notes and Warrants in a private placement in reliance upon exemptions from the registration requirements under Section 4(a)(2) under the Securities Act and Rule 506 of Regulation D promulgated thereunder.

In connection with the Financing, we are paying WestPark Capital, Inc., the placement agent (the "Placement Agent"), an aggregate cash fee equal to $1,575,000, paid ratably over time as the gross proceeds of the Financing become unrestricted and available to us, as well as reimbursement of certain expenses. In addition, we will issue 50,000 shares of common stock to the Placement Agent.

The Securities Purchase Agreement provides that, subject to certain exceptions, we will not issue any securities from the Closing Date until the date immediately following the 90th trading day of the earlier of (A) the date that the registration statement of which this prospectus forms a part becomes effective or (B) the date that the common stock underlying the Notes and Warrants are eligible for resale under Rule 144. Under the Securities Purchase Agreement, we will not enter into any new variable rate securities transactions so long as any Series D Preferred Stock or Notes remain outstanding. For so long as any Notes remain outstanding, the Selling Stockholder has the right to participate in the purchase of 50% of the securities offered by us in any future financing transactions.

In connection with the Securities Purchase Agreement, TFG Radiant, our largest stockholder, entered into a Voting Agreement with us. Pursuant to the Voting Agreement, TFG Radiant has agreed to vote all of the shares of our common stock that it owns in favor of the common stock issuances related to the Series D Preferred Stock, the Notes and the Warrants and certain other stockholder proposals. We intend to seek stockholder approval for these matters at a special stockholders meeting to be held in December 2014.

Description of the Notes

Ranking

The Notes are senior secured indebtedness of the Company that rank senior to our outstanding and future indebtedness, except for certain existing permitted indebtedness of the Company. The Notes are secured by a first priority perfected security interest in all of our and our subsidiaries' current and future assets (including a pledge of

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the stock of our subsidiaries), other than those assets which already secure our existing permitted indebtedness. So long as any Notes remain outstanding, neither we nor our subsidiaries will incur any new indebtedness, except for permitted indebtedness under the Notes, or create any new encumbrances on our or our subsidiaries' assets, except for permitted liens under the Notes. Under certain circumstances, our subsidiaries will be required to guarantee our obligations under the Notes.

Maturity Date

Unless earlier converted or redeemed, the Notes will mature on May 19, 2018 (the "Maturity Date"), subject to the right of the Selling Stockholder to extend the date under certain circumstances.

Interest

The Notes bear interest at a rate of 7% per annum, subject to increase to 15% per annum upon the occurrence and continuance of an event of default (as described below). Interest on the Notes is payable monthly in shares of common stock or cash, at our option. Interest on the Notes is computed on the basis of a 360-day year and twelve 30-day months and is payable in arrears monthly and is compounded monthly.

Conversion

All amounts due under the Notes are convertible at any time, in whole or in part, at the option of the holders into shares of common stock at a fixed conversion price, which is subject to adjustment for stock splits, stock dividends, combinations or similar events. The Notes are convertible into shares of common stock at the initial price of $2.25 per share (the "Conversion Price"). If and whenever on or after the Closing Date, we issue or sell any shares of common stock for a consideration per share (the "New Issuance Price") less than a price equal to the Conversion Price in effect immediately prior to such issuance or sale (a "Dilutive Issuance"), then, immediately after such Dilutive Issuance, the Conversion Price then in effect shall be reduced to an amount equal to the New Issuance Price.

In addition, a holder of the Notes has the option to convert a portion of the Notes into shares of common stock at an "Alternate Conversion Price" equal to the lowest of (i) the Conversion Price then in effect and (ii) 85% of the quotient of (A) the sum of the volume-weighted average price of the common stock for each of the three lowest trading days during the ten consecutive trading day period ending and including the trading day immediately prior to the date of the applicable conversion date, divided by three. Except to the extent an event of default has occurred and is continuing, the amount of Notes and Series D Preferred Stock that can be converted using the Alternate Conversion Price is limited to $28 million.

Voting Rights

The Notes do not have any voting rights.

Payment of Principal and Interest

We have agreed to make amortization payments with respect to the principal amount of the Notes in shares of our common stock, subject to the satisfaction of certain equity conditions, or at our option, in cash or a combination of shares of common stock and cash, in equal installments payable once every month. The first installment will be due on January 2, 2015. On each of the installment dates, our scheduled amortization payment will be an amount equal to approximately $854,000. Amortization payments shall first be applied to the redemption of shares of Series D Preferred Stock until all shares of the Series D Preferred Stock have been redeemed. Thereafter, amortization payments shall be applied to pay principal and interest on the Notes.

For amortization payments paid in shares of common stock, the number of shares of common stock that shall be issued as an installment conversion amount shall be determined based on an installment conversion price (the "Installment Conversion Price") of the lowest of (i) the Conversion Price then in effect and (ii) 85% of the quotient

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of (A) the sum of the volume-weighted average price of the common stock for each of the five lowest trading days during the 20 consecutive trading day period ending and including the trading day immediately prior to the applicable installment date, divided by five.

Any holder of Notes may elect to defer the payment of the installment amount due on any installment dates, in whole or in part, to another installment date, in which case the amount deferred will become part of such subsequent installment date and will continue to accrue interest.

During an installment period, any holder of Notes may elect to accelerate the amortization of the Notes at the Installment Conversion Price of the current installment date if, in the aggregate, all such accelerations in such period do not exceed five times the installment amount. Such accelerated amounts shall be payable in our common stock.

Optional Redemption by the Company

We may redeem all, but not less than all, of the Notes at any time after 30 calendar days after the earlier of (A) the date that the registration statement of which this prospectus forms a part becomes effective or (B) the date that the shares of common stock underlying the Notes and Warrants are eligible for resale under Rule 144, subject to the satisfaction of certain equity conditions set forth in the Notes. In the case of an optional redemption of Notes by us, the Notes shall be redeemed in cash at a price with a redemption premium of 120% calculated by the formula specified in the Notes. We are required to provide holders of the Notes with at least 90 trading days prior notice of our election to redeem the Notes.

Events of Default

The Notes contain standard and customary events of default including but not limited to: (i) failure to make payments when due under the Notes and the Series D Preferred Stock; (ii) bankruptcy or insolvency of the Company; and (iii) certain failures to comply with the requirements under the Registration Rights Agreement as described below.

If there is an event of default, a holder of the Notes may require us to redeem all or any portion of the Notes (including all accrued and unpaid interest and all interest that would have accrued through the Maturity Date), in cash, at a price equal to the greater of: (i) up to 125% of the amount being redeemed, depending on the nature of the default, and (ii) the product of (A) the conversion rate in effect at such time multiplied by (B) the product of (1) up to 125%, depending on the nature of the default, multiplied by (2) the highest closing sale price of the common stock on any trading day during the period beginning on the date immediately before the event of default and ending on the date of redemption.

If there is an event of default, a holder of the Notes may convert all or any portion of the Notes into shares of common stock. In such event, the conversion price would be the lowest of (i) the Conversion Price then in effect and (ii) 85% of the quotient of (A) the sum of the volume-weighted average price of the common stock for each of the three lowest trading days during the ten consecutive trading day period ending and including the trading day immediately prior to the date of the applicable conversion date, divided by three.

Change of Control

The Notes prohibit us from entering into transactions involving a change of control, unless the successor entity is a publicly traded corporation that assumes all of our obligations under the Notes and the Series D Preferred Stock in a written agreement approved by holders of the Notes.

In the event of transactions involving a change of control, the holder of Notes will have the right to require the Company to redeem all or any portion of the Note it holds in cash, at a price with a redemption premium of 125% calculated by the formula specified in the Notes.

19.99% Cap

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We are prohibited from issuing shares of common stock pursuant to the Notes, the Series D Preferred Stock and the Warrants in excess of 19.99% of the issued and outstanding shares of common stock immediately prior to the transaction unless stockholder approval of such issuance of securities is obtained as required by applicable NASDAQ rules. We intend to seek stockholder approval of such share issuances in excess of such 19.99% limit at a special stockholders meeting to be held on December 22, 2014.

Limitations on Conversion and Issuance

The Notes may not be converted and shares of common stock may not be issued under the Notes, the Warrants and the Series D Preferred Stock if, after giving effect to the conversion or issuance, the holder together with its affiliates would beneficially own in excess of 4.99% of the outstanding shares of common stock. At each holder's option, the cap may be raised or lowered to any other percentage not in excess of 9.99%, except that any increase will only be effective upon 61-days' prior notice to us.

Dividend and Distribution Participation Rights

The holders of the Notes are entitled to receive any dividends paid or distributions made to the holders of Common Stock on an "as if converted to Common Stock" basis.

Control Accounts

Although we received gross proceeds of approximately $35 million on the Closing Date, $30.5 million of gross proceeds from the Financing is held in our bank account with Zions First National Bank that is subject to restrictions on release. We will be able to freely access $2.5 million of these restricted proceeds after (i) the registration statement of which this prospectus forms a part becomes effective and (ii) the issuance of all shares of Common Stock related to the Financing have been approved by the Company's stockholders in accordance with applicable NASDAQ listing rules. We will be able to access the remaining $28 million of restricted proceeds in increments upon their release in accordance with the terms of the Series D Preferred Stock and the Notes throughout 2015 and the early part of 2016.

Description of the Series D Preferred Stock

For a description of the Series D Preferred Stock, please see "Series D Preferred Stock" under the section entitled "Description of Capital Stock" below.

Description of the Warrants

The Warrants entitle the holders of the Warrants to purchase, in the aggregate, up to 7,777,778 shares of our common stock. The Warrants will be exercisable on May 19, 2015 and for five years thereafter.

The Warrants will be exercisable at an initial exercise price equal to $2.25 per share. The exercise price of the Warrants is subject to adjustment for stock splits, stock dividends, combinations or similar events. In addition, the exercise price is also subject to a "full ratchet" anti-dilution adjustment, subject to customary exceptions, in the event that we issue securities at a price lower than the then applicable exercise price. The Warrants may be exercised for cash or (under certain circumstances) on a cashless basis.

19.99% Cap

We are prohibited from issuing shares of our common stock pursuant to the Notes, the Series D Preferred Stock and the Warrants in excess of 19.99% of the issued and outstanding shares of common stock immediately prior to the transaction unless stockholder approval of such issuance of securities is obtained as required by applicable NASDAQ rules. We intend to seek stockholder approval of such share issuances in excess of such 19.99% limit at a special stockholders meeting to be held in December 2014.

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Limitations on Exercise

The Warrants may not be exercised if, after giving effect to the exercise, the holder of the Warrants together with its affiliates would beneficially own in excess of 4.99%, at the election of the holder as of the Closing Date, of the outstanding shares of our common stock. At a holder's option, the cap applicable to the exercise of the Warrants may be raised or lowered to any other percentage not in excess of 9.99%, except that any increase will only be effective upon 61-days' prior notice to us.

Change of Control

The Warrants prohibit us from entering into transactions involving a change of control, unless the successor entity is a publicly traded corporation that assumes all of our obligations under the Warrants in a written agreement approved by holders of the Warrants.

Upon the occurrence of a change of control, a holder of a Warrant will have the right to require us to repurchase the holder's Warrant for a purchase price in cash equal to the Black Scholes value, as calculated under the Warrants, of the then unexercised portion of the Warrant.

Events of Default

Upon the occurrence of an event of default (as defined in the Notes), a holder of a Warrant will have the right to require us to repurchase the holder's Warrant for a purchase price in cash equal to the Black Scholes value, as calculated under the Warrants, of the then unexercised portion of the Warrant.

Registration Rights Agreement

In connection with the Securities Purchase Agreement, we entered into the Registration Rights Agreement, pursuant to which we agreed (i) to register at least 4,000,000 shares issuable in connection with the Notes in an initial registration statement filed with the SEC and (ii) under certain circumstances to register in an additional registration statement 200% of the sum of (A) the maximum number of shares of common stock issuable pursuant to the Notes and (B) the maximum number of shares of common stock issuable upon exercise of the Warrants. Pursuant to the Registration Rights Agreement, we are required to file the initial registration statement no later than 30 days after the Closing Date and to have such registration statement declared effective within 90 days after the Closing Date. If we are unable to meet our obligations under the Registration Rights Agreement, we may be required to pay certain cash damages to holders of the Notes and Warrants.

SELLING STOCKHOLDER

The shares of common stock being offered by the Selling Stockholder are those issuable to the Selling Stockholder upon conversion of the Notes. For additional information regarding the issuance of the Notes, Warrants and Series D Preferred Stock, see "Sale of Notes, Warrants and Series D Preferred Stock" above. We are registering the shares of common stock in order to permit the Selling Stockholder to offer the shares for resale from time to time. Except for the ownership of the Notes, Warrants and Series D Preferred Stock issued pursuant to the Securities Purchase Agreement, the Selling Stockholder has not had any material relationship with us within the past three years.

The table below lists the Selling Stockholder and other information regarding the beneficial ownership (as determined under Section 13(d) of the Exchange Act and the rules and regulations thereunder) of the shares of common stock held by the Selling Stockholder. The second column lists the number of shares of common stock beneficially owned by the Selling Stockholder, based on its respective ownership of shares of common stock, Notes, Warrants, and Series D Preferred Stock as of November 17, 2014, assuming conversion of the Notes and Series D Preferred Stock and exercise of the Warrants held by the Selling Stockholder on that date but taking account of any limitations on conversion and exercise set forth therein.

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The third column lists the shares of common stock being offered by this prospectus by the Selling Stockholder and does not take into account any limitations on (i) conversion of the Notes and Series D Preferred Stock set forth therein or (ii) exercise of the Warrants set forth therein.

In accordance with the terms of the Registration Rights Agreement with the Selling Stockholder, this prospectus covers the resale of 4,000,000 shares of common stock that may be issuable upon conversion of the Notes. This prospectus is only offering a portion of the shares of common stock that may actually be issued in connection with the Notes. The fourth column assumes the sale of all of the shares offered by the Selling Stockholder pursuant to this prospectus.

Under the terms of the Notes, Warrants and Series D Preferred Stock, the Selling Stockholder may not convert the Notes or Series D Preferred Stock or exercise the Warrants to the extent (but only to the extent) such Selling Stockholder or any of its affiliates would beneficially own a number of shares of our common stock which would exceed 4.99% of our outstanding shares. The number of shares in the second column reflects these limitations. The Selling Stockholder may sell all, some or none of its shares in this offering. See “Plan of Distribution.”

Name and Address of Selling Stockholder	Number of Shares of Common Stock Beneficially Owned Prior to the Offering	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Number of Shares of Common Stock Owned after the Offering	Percentage of Shares of Common Stock Owned after the Offering	
Hudson Bay Master Fund Ltd (1)	853,280	4,000,000	853,280	4.99	%

(1) The address of the Selling Stockholder is c/o Hudson Bay Capital Management LP, 777 Third Avenue, 30th Floor, New York, NY 10017. Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay Master Fund Ltd. and Sander Gerber disclaims beneficial ownership over these securities. The securities held by the Selling Stockholder contain conversion and issuance limitations providing that the Selling Stockholder may not be issued shares of common stock (whether by means of conversion of the Notes or Series D Preferred Stock, exercise of the Warrants or otherwise) if, after giving effect to such issuance, the Selling Stockholder would beneficially own in excess of 4.99% of our outstanding shares of common stock. Accordingly, the number of shares of common stock set forth in the table above as being offered by the Selling Stockholder may exceed the number of shares of common stock that the Selling Stockholder could own beneficially (after giving effect to the conversion and issuance limitations) at any given time through ownership of the Notes, Series D Preferred Stock and the Warrants.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 150,000,000 shares of common stock, $0.0001 par value, and 25,000,000 shares of preferred stock, $0.0001 par value. As of November 17, 2014, 750,000 shares have been designated as Series A Preferred Stock, 2,000 shares have been designated as Series B-1 Preferred Stock, 1,000 shares have been designated as Series B-2 Preferred Stock, 1,000 shares have been designated as Series C Preferred Stock and 3,000 shares have been designated as Series D Preferred Stock. As of November 17, 2014, we had 16,246,360 shares of common stock (as adjusted to reflect the Reverse Stock Split), 212,390 shares of Series A Preferred Stock, 3,000 shares of Series D Preferred Stock, and no shares of Series B-1, Series B-2 or Series C Preferred Stock outstanding.

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The following is a summary of the rights of our common stock, preferred stock (including our Series A Preferred Stock and Series D Preferred Stock) and certain outstanding rights to obtain our common stock. It does not purport to be complete. For more detailed information about the terms of our capital stock, please see our Amended and Restated Certificate of Incorporation, as amended (our "Certificate of Incorporation"), including the certificates of designation for each of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock, and our Second Amended and Restated Bylaws, as amended (our "Bylaws").

Common Stock

Holders of our common stock are entitled to one vote for each share on all matters submitted to a stockholder vote and may not cumulate their votes. Holders of common stock are entitled to share in all dividends that our Board, in its discretion, declares from legally available funds. In the event of our liquidation, dissolution or winding up, each outstanding share entitles its holder to participate pro rata in all assets that remain after payment of liabilities and after providing for each class of stock, if any, having preference over the common stock.

Except for TFG Radiant, which holds pre-emptive rights with respect to certain equity issuances by us (on terms no less favorable than any such issuance) in order to maintain their percentage ownership in our common stock, no other holders of our common stock have any conversion, preemptive or other subscription rights, and there are no redemption provisions applicable to our common stock. The rights of the holders of common stock are subject to any rights that may be fixed for holders of preferred stock.

Preferred Stock

Our Board is authorized by our Certificate of Incorporation to establish classes or series of preferred stock and fix the designation, powers, preferences and rights of the shares of each such class or series and the qualifications, limitations or restrictions thereof without any further vote or action by our stockholders. Any shares of preferred stock so issued could have priority over our common stock with respect to dividend or liquidation rights. Any future issuance of preferred stock may have the effect of delaying, deferring or preventing a change in our control without further action by our stockholders and may adversely affect the voting and other rights of the holders of our common stock.

The issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could be used to discourage an unsolicited acquisition proposal. For instance, the issuance of a series of preferred stock might impede a business combination by including class voting rights that would enable a holder to block such a transaction. In addition, under certain circumstances, the issuance of preferred stock could adversely affect the voting power of holders of our common stock. Although our Board is required to make any determination to issue preferred stock based on its judgment as to the best interests of our stockholders, our Board could act in a manner that would discourage an acquisition attempt or other transaction that some, or a majority, of our stockholders might believe to be in their best interests or in which such stockholders might receive a premium for their stock over the then market price of such stock.

Series A Preferred Stock

On June 17, 2013, we entered into a Securities Purchase Agreement (the "Seow Purchase Agreement") with Seng Wei Seow ("Seow"), pursuant to which Seow agreed to purchase from us, and we agreed to sell to Seow (subject to the terms and conditions set forth therein), an aggregate of $6,000,000 of Series A Preferred Stock at a price of $8.00 per share of Series A Preferred Stock and warrants to purchase up to 262,500 shares of our common stock (as adjusted to reflect the Reverse Stock Split).

In connection with the Seow Purchase Agreement, we designated 750,000 shares of Series A Preferred Stock. The Series A Preferred Stock ranks senior to our common stock with respect to dividend rights, pari passu with respect to rights upon liquidation to our common stock, and junior to all existing and future indebtedness. Except as otherwise required by law (or with respect to approval of certain actions), the Series A Preferred Stock have no voting rights.

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Holders of Series A Preferred Stock are entitled to cumulative dividends at a rate of 8.0% per annum (subject to adjustment in certain circumstances) when and if declared by the Board. We are obligated to pay certain make-whole amounts to the holders of Series A Preferred Stock, if the stock is redeemed or converted (as described below) prior to the fourth anniversary of its issuance date, in lieu of dividends that the stockholders would have otherwise received. The dividends and make-whole amounts (if any) may be paid in cash or in the form of common stock at the discretion of the Board.

We have the right to redeem all or a portion of the Series A Preferred Stock at any time at a redemption price of $8.00 per share, plus any accrued and unpaid dividends and plus the make-whole amount (if any).

The Series A Preferred Stock may be converted into shares of our common stock at any time at the option of the holder. In the event of a conversion by the holder, the price per share is equal to (a) Original Issue Price (as defined in the certificate of designation for the Series A Preferred Stock) multiplied by (b) the number of shares of Series A Preferred Stock shares being converted, divided by (c) the conversion price of $8.00 (as adjusted to reflect the Reverse Stock Split).

A conversion by us may be effected if certain Equity Conditions (as defined in the certificate of designation for the Series A Preferred Stock) are met and in the event that the closing price of our common stock exceeds 200% of the conversion price for any 20 consecutive trading days. In the event of a Company conversion, we shall issue the number of shares of common stock equal to (a) the Original Issue Price multiplied by (b) the number of shares of Series A Preferred Stock being converted, divided by (c) the conversion price of $8.00 (as adjusted to reflect the Reverse Stock Split).

Unless we have received the approval of the holders of a majority of the Series A Preferred Stock then outstanding, we shall not (i) alter or change adversely the powers, preferences or rights given to the Series A Preferred Stock or alter or amend the certificate of designation for the Series A Preferred Stock, (ii) authorize or create any class of stock ranking as to distribution of dividends senior to the Series A Preferred Stock, (iii) amend our Certificate of Incorporation or other charter documents in breach of any of the provisions in the certificate of designation for the Series A Preferred Stock, (iv) increase the authorized number of shares of Series A Preferred Stock, or (v) enter into any agreement with respect to the foregoing.

Upon any liquidation, dissolution or winding up of the Company, after payment or provision for payment of our debts and other liabilities, the holders of Series A Preferred Stock shall be entitled to receive, pari passu with any distribution to the holders of common stock of the Company, an amount equal to $8.00 per share of Series A Preferred Stock plus any accrued and unpaid dividends.

In January 2014, our stockholders approved all issuances of shares of common stock in connection with the securities issued pursuant to the Seow Purchase Agreement pursuant to NASDAQ Listing Rule 5635(d).

Series D Preferred Stock

Rank

The Series D Preferred Stock, with respect to dividend rights and rights upon our liquidation, dissolution or winding up, ranks: (a) senior with respect to all shares of our capital stock, except for our Series A preferred stock and (b) on a parity with respect to our Series A preferred stock.

Dividends

Holders of the Series D Preferred Stock will be entitled to dividends in the amount of 7% per annum, subject to an increase to 15% per annum upon the occurrence and continuance of certain triggering events. Dividends are payable monthly in shares of common stock or cash, at our option. Dividends are computed on the basis of a 360-day year and twelve 30-day months and are payable in arrears monthly and are compounded monthly.

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Conversion

The Series D Preferred Stock is convertible into common stock at the Conversion Price, subject to certain adjustments. The Series D Preferred Shares may be converted into shares of common stock at any time at the option of the holder. The Series D Preferred Shares may also be converted into shares of common stock at our option if the closing price of our common stock exceeds the Conversion Price by 200% for fifteen consecutive trading days.

In addition, a holder of the Series D Preferred Stock has the option to convert a portion of the Series D Preferred Stock into shares of common stock at an "Alternate Conversion Price" equal to the lowest of (i) the Conversion Price then in effect and (ii) 85% of the quotient of (A) the sum of the volume-weighted average price of the common stock for each of the three lowest trading days during the ten consecutive trading day period ending and including the trading day immediately prior to the date of the applicable conversion date, divided by three. Except to the extent an event of default has occurred and is continuing, the amount of Notes and Series D Preferred Stock that can be converted using the Alternate Conversion Price is limited to $28 million.

If and whenever on or after the Closing Date, we issue or sell any shares of common stock at a New Issuance Price that is less than a price equal to the Conversion Price in effect immediately prior to such issuance or sale, then, immediately after such Dilutive Issuance, the Conversion Price then in effect shall be reduced to an amount equal to the New Issuance Price.

Optional Redemption by the Company

We may redeem all, but not less than all, of the Series D Preferred Stock outstanding at any time after 30 calendar days after the earlier of (A) the date that the registration statement of which this prospectus forms a part becomes effective or (B) the date that the common stock underlying the Notes and Warrants are eligible for resale under Rule 144, provided that we meet certain equity conditions. In the case of an optional redemption of Series D Preferred Stock by us, the Series D Preferred Stock shall be redeemed in cash at a price with a redemption premium of 120% calculated by the formula specified in the certificate of designations of the Series D Preferred Stock. We are required to provide holders of the Series D Preferred Stock with at least 90 trading days prior notice of our election to redeem the Series D Preferred Stock.

Triggering Events

The certificate of designations of the Series D Preferred Stock provides that "Triggering Events" include, but are not limited to: (i) the Series D Preferred Stock, or shares of our common stock issuable upon conversion of the Series D Preferred Stock, not being freely tradable without restriction, (ii) our suspension from trading our common stock on the NASDAQ Capital Market or other applicable stock exchange; (iii) our failure to make dividend payments when due; (iv) bankruptcy or insolvency of the Company; (v) our breach of the Securities Purchase Agreement, Notes, Warrants or certificate of designations of the Series D Preferred Stock under certain circumstances, and (vi) any default under the Notes.

If a triggering event occurs, we may be required to redeem all or any number of the shares of Series D Preferred Stock in cash at a price with a redemption premium of 125% calculated by the formula specified in the certificate of designations of the Series D Preferred Stock.

If a triggering event occurs, a holder of the Series D Preferred Stock may convert all or any portion of the Series D Preferred Stock into shares of common stock at the Alternate Conversion Price.

Change of Control

The certificate of designations of the Series D Preferred Stock prohibits us from entering into transactions involving a change of control, unless the successor entity is a publicly traded corporation that assumes all of our obligations under the certificate of designations of the Series D Preferred Stock in a written agreement approved by holders of the Series D Preferred Stock.

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In the event of transactions involving a change of control, a holder of Series D Preferred Stock will have the right to require us to redeem all or any number of the shares of Series D Preferred Stock it holds in cash at a price with a redemption premium of 125% calculated by the formula specified in the certificate of designations of the Series D Preferred Stock.

Liquidation Value

Upon our liquidation, dissolution or winding up, holders of Series D Preferred Stock will be entitled to be paid out of our assets, before any amount shall be paid to the holders of any other shares of our capital stock (except for the Series A Preferred Stock), an amount per shares of Series D Preferred Stock equal to the sum of (i) the Black Scholes value with respect to the outstanding portion of all Warrants held by the holder and (ii) the greater of (A) 125% of the conversion amount thereof and (B) the amount per share such holder would receive if such holder converted such Series D Preferred Stock into common stock immediately prior to the date of payment.

Voting Rights

Except as otherwise required by law (or with respect to approval of certain actions), the Series D Preferred Stock will not have voting rights.

Limitations on Beneficial Ownership

Series D Preferred Stock may not be converted, and shares of our common stock may not be issued in connection therewith, if, after giving effect to the conversion or issuance, the holder together with its affiliates would beneficially own in excess of 4.99% of the outstanding shares of our common stock. At each holder's option, the cap may be raised or lowered to any other percentage not in excess of 9.99%, except that any increase will only be effective upon 61-days' prior notice to us.

Authorized but Unissued Shares

The authorized but unissued shares of common stock are available for future issuance without stockholder approval, unless otherwise required by law or applicable stock exchange rules. Additional authorized but unissued shares may be used for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares could hinder or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Warrants under the Seow Purchase Agreement

Under the Seow Purchase Agreement, we agreed to sell warrants (the "Seow Warrants") to purchase up to 262,500 shares of our common stock at an exercise price of $9.00 per share of common stock (as adjusted to reflect the Reverse Stock Split). The Seow Warrants have a three year term until June 2016.

2005 Stock Option Plan

At a special meeting of our stockholders held on October 22, 2014, the stockholders approved an amendment and restatement of our 2005 Stock Option Plan, as amended (the "Option Plan"). The Option Plan currently authorizes the grant of up to 3,400,000 shares of common stock (as adjusted to reflect the Reverse Stock Split and subject to further adjustment for stock splits and similar capital changes) in connection with incentive stock option grants and non-qualified stock option grants. Employees and, in the case of nonqualified stock options, directors, consultants or other service providers are eligible to receive grants under our plans. According to the terms of the Option Plan, no employee may be granted, in any fiscal year, options to purchase more than 500,000 shares. As of November 17, 2014, there were 192,610 options vested or expected to vest in the future under our Option Plan. As of November 17, 2014, 3,082,442 shares remained available for future grant under our Option Plan.

2008 Restricted Stock Plan

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At a special meeting of the Company's stockholders held on October 22, 2014, the stockholders approved an amendment and restatement of our 2008 Restricted Stock Plan, as amended (the "Stock Plan"). The Stock Plan currently authorizes the grant of up to 1,500,000 shares of restricted common stock and restricted stock units (as adjusted to reflect the Reverse Stock Split and subject to further adjustment for stock splits and similar capital changes) to employees, directors, consultants or other service providers. According to the terms of the Stock Plan, no individual may be granted, in any fiscal year, more than 200,000 shares. Vesting of shares of restricted stock granted under the Stock Plan may occur over a specified period of time or based upon performance metrics announced at the time of grant. As of November 17, 2014, 59,571 restricted stock units were expected to vest in the future under the Stock Plan. As of November 17, 2014, 1,261,063 shares remained available for future grant under the Stock Plan.

Registration Rights

Pursuant to a stockholders agreement between us and TFG Radiant, TFG Radiant holds certain registration rights related to its shares. We granted Seow certain registration rights in connection with the execution of the Seow Purchase Agreement. We granted Ironridge certain registration rights in connection with the execution of the Ironridge Purchase Agreement, which rights have been satisfied. On November 14, 2014, we granted the Selling Stockholder certain registration rights in connection with the execution of the Securities Purchase Agreement and the issuance of the Notes and Warrants.

Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Certificate of Incorporation and Bylaws

Our Certificate of Incorporation and Bylaws contain a number of provisions that could make our acquisition by means of a tender or exchange offer, a proxy contest or otherwise more difficult. These provisions are summarized below.

Removal of Directors. Our Bylaws provide that our directors may only be removed by the affirmative vote of the shares entitled to vote at an election of directors, or for cause by a majority of the Board. Although our Bylaws do not give the Board the power to approve or disapprove stockholder nominations for the election of directors or of any other business stockholders desire to conduct at an annual or any other meeting, the Bylaws may have the effect of precluding a nomination for the election of directors or precluding the conduct of business at a particular annual meeting if the proper procedures are not followed, or discouraging or deterring a third party from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control, even if the conduct of that solicitation or attempt might be beneficial to our stockholders.

Staggered Board. Staggered terms tend to protect against sudden changes in management and may have the effect of delaying, deferring or preventing a change in our control without further action by our stockholders. Our Board is divided into three classes, with one class of directors elected at each year's annual stockholders meeting.

Special Meetings. Our Bylaws provide that special meetings of stockholders can be called by the President, at the request of a majority of the Board or at the written request of holders of at least 50% of the shares outstanding and entitled to vote.

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for our Board to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our Company.

Delaware Anti-Takeover Statute. We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging under certain circumstances in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

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- Prior to the date of the transaction that resulted in the stockholder becoming an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder.
- Upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer.
- On or subsequent to the date of the transaction that resulted in the stockholder becoming an interested stockholder, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting securities. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our Board does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

The provisions of Delaware law, our Certificate of Incorporation and our Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Listing

Our common stock is listed on the NASDAQ Capital Market under the trading symbol “ASTI.”

Transfer Agent and Registrar

The transfer agent and registrar of our common stock is Computershare Investor Services.

PLAN OF DISTRIBUTION

We are registering shares of common stock issuable upon conversion of the Notes to permit the resale of these shares of common stock by the holders of the Notes from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the Selling Stockholder of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The Selling Stockholder may sell all or a portion of its shares of common stock offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the Selling Stockholder will be responsible for underwriting discounts or commissions or agent’s commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

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- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the registration statement, of which this prospectus forms a part, is declared effective by the SEC;
- broker-dealers may agree with a selling security holder to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Stockholder may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the Selling Stockholder may transfer the shares of common stock by other means not described in this prospectus. If the Selling Stockholder effects such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the Selling Stockholder or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the Selling Stockholder may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The Selling Stockholder may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The Selling Stockholder may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The Selling Stockholder may pledge or grant a security interest in some or all of the Notes, Warrants or shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The Selling Stockholder also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

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To the extent required by the Securities Act and the rules and regulations thereunder, the Selling Stockholder and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the Selling Stockholder and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that the Selling Stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The Selling Stockholder and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the Selling Stockholder and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the Registration Rights Agreement, estimated to be $45,000 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or "blue sky" laws; provided, however, the Selling Stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the Selling Stockholder against liabilities, including some liabilities under the Securities Act in accordance with the Registration Rights Agreements or the Selling Stockholder will be entitled to contribution. We may be indemnified by the Selling Stockholder against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the Selling Stockholder specifically for use in this prospectus, in accordance with the related Registration Rights Agreement or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

EXPERTS

The financial statements in our Annual Report on Form 10-K for the year ended December 31, 2013 have been audited by Hein & Associates LLP, an independent registered public accounting firm, to the extent and for the periods set forth in their report, and are incorporated in this prospectus by reference in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

LEGAL MATTERS

The validity of the securities offered hereby will be passed on by Faegre Baker Daniels LLP, Boulder, Colorado.

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INFORMATION INCORPORATED BY REFERENCE

This prospectus is part of a registration statement on Form S-3. The SEC allows this filing to "incorporate by reference" information that we previously have filed with the SEC. This means we can disclose important information to you by referring you to other documents that we have filed with the SEC. The information that is incorporated by reference is considered part of this prospectus, and information that we file later will automatically update and may supersede this information. For further information about us and the securities being offered, you should refer to the registration statement and the following documents that are incorporated by reference:

- Our annual report on Form 10-K filed on March 28, 2014, which contains audited financial statements for the fiscal year ended December 31, 2013;
- Our definitive proxy statements on Schedule 14A filed on April 25, 2014, September 26, 2014 and December 1, 2014;
- Our quarterly reports on Form 10-Q filed on May 7, 2014, August 13, 2014 and November 12, 2014;
- Our current reports on Form 8-K filed on January 2, 2014, January 24, 2014, February 11, 2014, March 21, 2014, March 27, 2014, April 2, 2014, April 9, 2014, April 22, 2014, May 29, 2014, July 21, 2014, July 31, 2014, September 2, 2014, September 4, 2014, September 16, 2014, October 28, 2014 and November 17, 2014;
- All other reports filed by us pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the annual report referred to above; and
- The description of our common stock contained in Forms 8-A filed on June 19, 2006 and August 8, 2006 and any amendments or reports filed for the purpose of updating such description.

All documents filed by us subsequent to those listed above with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, prior to the termination of the offering, shall be deemed to be incorporated by reference into this prospectus and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of all documents that are incorporated by reference in this prospectus by writing or telephoning us at the following address and telephone number: Ascent Solar Technologies, Inc., Attention: Corporate Secretary, 12300 North Grant Street, Thornton, Colorado 80241, telephone (720) 872-5000. We will provide copies of all documents requested (not including exhibits to those documents, unless the exhibits are specifically incorporated by reference into those documents or this prospectus) without charge.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 filed with the SEC under the Securities Act. This prospectus does not contain all the information set forth in the registration statement because certain information has been incorporated into the registration statement by reference in accordance with the rules and regulations of the SEC. Please review the documents incorporated by reference for a more complete description of the matters to which such documents relate.

We are subject to the information reporting requirements of the Exchange Act. In accordance with the Exchange Act, we file reports, proxy statements, and other information with the SEC. You can inspect and copy these reports, proxy statements, and other information at the Public Reference Room of the SEC, 100 F Street, N.E., Washington,

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D.C. 20549, at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference rooms. Our SEC filings are also available on the SEC's web site. The address of this site is http://www.sec.gov.

INDEMNIFICATION

Our Certificate of Incorporation contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for the following:

- Any breach of their duty of loyalty to our Company or our stockholders;
- Acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- Unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; and
- Any transaction from which the director derived an improper personal benefit.

Our Bylaws provide that we are required to indemnify our directors and officers and may indemnify our employees and other agents to the fullest extent permitted by Delaware law. Our Bylaws also provide that we shall advance expenses incurred by a director or officer before the final disposition of any action or proceeding upon receipt of an undertaking from or on behalf of that director or officer to repay the advance if it is ultimately determined that he or she is not entitled to be indemnified. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by the Board. These agreements provide for indemnification for related expenses including attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our Certificate of Incorporation and Bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees regarding which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION OF SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

DEALER PROSPECTUS DELIVERY OBLIGATION

Until the date that is 90 days from the date of this prospectus, all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to

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the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

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PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.
The estimated expenses of the offering, all of which are to be borne by the Company, are as follows:

SEC Registration Fee	$ 698
Printing and Engraving *	5,000
Accounting Fees and Expenses *	15,000
Legal Fees and Expenses *	15,000
Transfer Agent Fees *	5,000
Miscellaneous *	4,302
Total*	$ 45,000

* Estimated

Item 15. Indemnification of Directors and Officers.
Under Delaware law, a corporation may indemnify any person who was or is a party or is threatened to be made a party to an action (other than an action by or in the right of the corporation) by reason of his or her service as a director or officer of the corporation, or his or her service, at the corporation's request, as a director, officer, employee or agent of another corporation or other enterprise, against expenses (including attorneys' fees) that are actually and reasonably incurred by such person (“Expenses”), and judgments, fines and amounts paid in settlement that are actually and reasonably incurred by such person, in connection with the defense or settlement of such action, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was unlawful. Although Delaware law permits a corporation to indemnify any person referred to above against Expenses in connection with the defense or settlement of an action by or in the right of the corporation, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, if such person has been judged liable to the corporation, indemnification is only permitted to the extent that the Court of Chancery (or the court in which the action was brought) determines that, despite the adjudication of liability, such person is entitled to indemnity for such Expenses as the court deems proper. The General Corporation Law of the State of Delaware also provides for mandatory indemnification of any director, officer, employee or agent against Expenses to the extent such person has been successful in any proceeding covered by the statute. In addition, the General Corporation Law of the State of Delaware provides the general authorization of advancement of a director's or officer's litigation expenses in lieu of requiring the authorization of such advancement by the board of directors in specific cases, and that indemnification and advancement of expenses provided by the statute shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement or otherwise.
The Bylaws of the Company provide for the broad indemnification by the directors and officers of the Company and for advancement of litigation expenses to the fullest extent permitted by current Delaware law. The Company also has entered into indemnification contracts with its directors and officers.

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The Company maintains a policy of directors and officers liability insurance which reimburses the Company for expenses which it may incur in connection with the foregoing indemnity provisions and which may provide direct indemnification to directors and officers where the Company is unable to do so.
Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the above, the Company has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable

Item 16. Exhibits.

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216))
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2011)
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed February 11, 2014)
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed September 2, 2014)
3.5	Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K dated October 28, 2014)
3.6	Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to our Current Report on Form 8-K filed on February 17, 2009)
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4.2	Certificate of Designations of Series A Preferred Stock (incorporated by reference to Exhibit 4.2 to our Registration Statement on Form S-3 filed July 1, 2013 (Reg. No. 333-189739))
4.3	Form of Warrant (incorporated by reference to Exhibit 4.3 to our Registration Statement on Form S-3 filed July 1, 2013 (Reg. No. 333-189739, as amended))

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4.4	Certificate of Designations of Series B-1 and B-2 Preferred Stock (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed October 30, 2013)
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23.1	Consent of Hein & Associates LLP*
23.2	Consent of Faegre Baker Daniels LLP (included in Exhibit 5.1)*
24.1	Power of Attorney (included on the signature pages hereof)*

* Filed herewith.

Item 17. Undertakings.

1. The undersigned registrant hereby undertakes to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

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(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the registration statement is on Form S-3 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

2. The undersigned registrant hereby undertakes that, for the purpose of determining any liability under the Securities Act of 1933, as amended, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. The undersigned registrant hereby undertakes to remove from registration by means of a post-effective amendment any of the securities being registered that remain unsold at the termination of the offering.

4. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

5. The undersigned registrant hereby undertakes that, for the purposes of determining liability to any purchaser:

If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

6. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons of the undersigned registrant according the foregoing provisions, or otherwise, the undersigned registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, as amended, and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Thornton, State of Colorado on December 5, 2014.

Ascent Solar Technologies, Inc.

By: /s/ Victor Lee
Lee Kong Hian (aka Victor Lee)
President and Chief Executive Officer

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POWER OF ATTORNEY

We, the undersigned directors and officers of Ascent Solar Technologies, Inc., do hereby constitute and appoint Victor Lee and William M. Gregorak or any of them, our true and lawful attorneys and agents, to do any and all acts and things in our name and behalf in our capacities as directors and officers and to execute any and all instruments for us and in our names in the capacities indicated below, which said attorneys and agents, or either of them, may deem necessary or advisable to enable said corporation to comply with the Securities Act of 1933, as amended, and any rules, regulations, and requirements of the Securities and Exchange Commission, in connection with this registration statement, including specifically, but without limitation, power and authority to sign for us or any of us in our names and in the capacities indicated below, any and all amendments (including post-effective amendments) to this registration statement, or any related registration statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended; and we do hereby ratify and confirm all that the said attorneys and agents, or either of them, shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Victor Lee Lee Kong Hian (aka Victor Lee)	President and Chief Executive Officer and Director (Principal Executive Officer)	December 5, 2014
/s/ William M Gregorak William M. Gregorak	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	December 5, 2014
/s/ Amit Kumar Amit Kumar, Ph.D.	Chairman of the Board of Directors	December 5, 2014
/s/ Kim J. Huntley Kim J. Huntley	Director	December 5, 2014
G. Thomas Marsh	Director	
Xu Biao (aka Winston Xu)	Director	

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EXHIBIT INDEX

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