Ascent Solar Technologies, Inc.
Form POS AM
October 18, 2007

As filed with the Securities and Exchange Commission on October 18, 2007

Registration No. 333-137008

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 2 TO FORM SB-2 ON

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ASCENT SOLAR TECHNOLOGIES, INC.

(Name of issuer in its charter)

Delaware	**3674**	**20-3672603**
(State or jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code No.)	(IRS Employer Identification No.)

8120 Shaffer Parkway

Littleton, Colorado 80127

(303) 285-9885

(Address and Telephone Number of Principal Executive Office and Principal Place of Business)

Matthew Foster

8120 Shaffer Parkway

Littleton, Colorado 80127

(303) 285-9885

(Name, Address and Telephone Number of Agent for Service)

Copies to:

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2300 US Bancorp Tower

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Portland, Oregon 97204

(503) 243-2300

Approximate Date of Commencement of Proposed Sale to Public:
As soon as practicable after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: o

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. o

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. o

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: o

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: o

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.

EXPLANATORY NOTE

This Post-Effective Amendment No. 2 on Form S-3 amends the Registration Statement on Form SB-2 of Ascent Solar Technologies, Inc. (the Company), declared effective by the Securities and Exchange Commission on September 20, 2006. This Post-Effective Amendment does not register any additional securities, but is being filed for the purposes of converting the registration on Form SB-2 into a registration on Form S-3. All filing fees payable in connection with the registration of the securities were previously paid in connection with the filing on Form SB-2.

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.

[Selling Securityholders Prospectus]

SUBJECT TO COMPLETION, DATED OCTOBER 18, 2007

PRELIMINARY PROSPECTUS

ASCENT SOLAR TECHNOLOGIES, INC.

654,510 Shares of Common Stock

136,354 Class B Warrants

This prospectus relates to the potential resale by certain security holders (the Selling Securityholders) of up to (a) 72,722 shares of our common stock and 136,354 Class B warrants issued to certain of our bridge investors and (b) 136,354 shares of our common stock issuable upon exercise of outstanding Class B warrants issued to certain of our bridge investors. We will not receive any proceeds from the resale of these securities by the Selling Securityholders. We are registering these securities for resale by the Selling Securityholders, but that does not necessarily mean that they will sell any of the securities.

This prospectus also relates to the potential sale by us of up to 581,788 shares of common stock to be issued upon exercise of Class B warrants that have been resold or may be resold by our bridge investors. If our bridge investors resell all of the Class B warrants issued to them, and the Class B warrants are exercised by subsequent purchasers, we will receive proceeds of up to $6,399,668 before deducting expenses estimated at $17,500.

Our common stock and Class B warrants are traded on the Nasdaq Capital Market under the symbols ASTI and ASTIZ, respectively. On October 15, 2007, the last reported sale prices of our common stock and Class B warrants on the Nasdaq Capital Market were $15.65 per share and $5.96 per warrant, respectively.

Our principal executive offices are located at 8120 Shaffer Parkway, Littleton, Colorado 80127.

These are speculative securities. Investing in these units 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 3.

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 , 2007.

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PROSPECTUS SUMMARY

This is only a summary and does not contain all the information that may be important to you. You should read the more detailed information contained in this prospectus, including the risk factors beginning on page 3. References to we, us, our, Ascent, Ascent Solar or the Company mean Ascent Solar Technologies, Inc.

Ascent Solar Technologies, Inc.

Ascent Solar is a development stage company that was formed in October 2005 to commercialize certain photovoltaic (PV) technology developed by ITN Energy Systems, Inc. (ITN) for extraterrestrial, terrestrial, and near-space applications. Ascent Solar intends to be the first company to manufacture large, roll format, PV modules in commercial quantities that use a highly efficient thin-film Copper-Indium-Gallium-diSelenide (CIGS) absorbing layer on a flexible high-temperature plastic substrate. We have produced and tested small-scale demonstration samples of our CIGS PV products at the laboratory level, but we have not yet produced any products in commercial quantities, nor have we yet received any revenues from the proposed products that we intend to commercialize as our principal business activity. We currently are establishing a 500kW/yr per shift (1.5MW) pilot-scale production line that is on schedule to begin operations in the first quarter of 2008. Successful performance of the pilot production line should prove out the manufacturing processes, products, and market acceptance to enable us to transition into large full-scale, commercial manufacturing of our CIGS PV products.

When used on space satellites and near-space aircraft, PV devices convert sunlight into the electricity needed to reliably power instruments, communications systems and the like. Currently, most PV devices used for space and near-space applications are rigid, bulky and relatively heavy, posing significant challenges to scientists and designers wishing to minimize volume and weight in order to maximize payload and reduce deployment costs. In addition to these shortcomings, PV devices traditionally used for such applications are expensive to manufacture and require the time-consuming and labor-intensive task of connecting individual solar cells together to create a complete PV module. For terrestrial applications such as residential or commercial buildings, the primary driving market factor is cost. Historically, the market has been, and continues to be, dominated by crystalline silicon technology. Emerging thin film technologies on rigid glass substrates and flexible substrates offer significant cost advantages over silicon and, as a result, these newer technologies are beginning to capture a greater share of the market. Whether thin film or silicon based, rigid photovoltaic modules are very restrictive when it comes to deployment and integration into buildings and systems.

The Ascent Solar thin film technology platform addresses many of the current silicon and thin film limitations by offering a flexible, lightweight PV product suitable for terrestrial, space and near-space applications. By employing a proprietary monolithic integration fabrication process, we intend to manufacture our PV devices on the module level, rather than the cell level, thereby avoiding the time-consuming and cost-additive cell-to-cell interconnect procedures utilized by silicon and other thin film PV device manufacturers. We believe that our choice of substrate materials and proprietary monolithic integration fabrication processes should permit us to achieve cost, volume and weight performance advantages over competitors. As a result, we believe that we will be well-positioned to capture opportunities in markets that require or desire low cost, highly efficient, lightweight and flexible PV power sources. In addition, our thin film, monolithically integrated modules will enable direct integration into building and construction materials and electronics packaging that should enable us to offer greater value and new product formats at the building integrated and electronics integrated system level.

ITN, a private company incorporated in 1994, is an incubator dedicated to the development of cutting-edge thin-film, PV, battery and fuel cell technologies. Through its work on research and development contracts for private and government entities, ITN developed proprietary processing and manufacturing know-how applicable to PV products generally, and to CIGS PV products in particular. ITN formed Ascent Solar to commercialize this investment in CIGS PV technologies. In January 2006, ITN assigned to us key CIGS PV technologies and trade secrets and granted to us an exclusive, worldwide license to use certain of ITN s proprietary process, control and design technologies in the production of CIGS PV solar modules for our target markets. Upon receipt of the necessary government approvals in January 2007, ITN subsequently assigned approximately $3.5 million in government funded research and development contracts to Ascent Solar, and the key personnel assigned to the contracts also transferred to Ascent Solar. Today, ITN still provides to us, at cost, a variety of administrative services such as facilities management, equipment maintenance, human resources, procurement, and information technology services.

Our principal business office is located at 8120 Shaffer Parkway, Littleton, Colorado, and our telephone number is (303) 285-9885. Our website address is www.ascentsolar.com. Information contained in our website or any other website does not constitute part of this prospectus.

Offering Summary

Contemporaneously with our July 2006 initial public offering, we issued common stock and Class B warrants to certain bridge investors. Each Class B warrant may be exercised for one share of common stock at $11.00 per share. The Class B warrants expire on July 10, 2011. We are registering for resale the following securities:

- 72,722 shares of common stock issued to our bridge investors.
- 136,354 Class B warrants issued to our bridge investors.
- 136,354 shares issuable upon exercise of the Class B warrants issued to our bridge investors.

We will not receive any of the proceeds from the resale of these securities. We will bear the expenses of registering these securities, which we estimate will be approximately $17,500. The Selling Securityholders will pay the cost of any brokerage commissions and discounts, and all expenses incurred by them in connection with the resale of the securities. See Plan of Distribution.

We also are registering the potential sale by us of up to 581,788 shares of common stock to be issued upon exercise of Class B warrants that have been resold or may be resold by the bridge investors. If our bridge investors resell all of the Class B warrants issued to them in July 2006, and the Class B warrants are exercised by subsequent purchasers, we will receive proceeds of up to $6,399,668 before deducting the estimated expenses referenced above of $17,500. See Plan of Distribution.

RISK FACTORS

An investment in our securities involves a high degree of risk and many uncertainties. You should carefully consider the specific factors listed below, together with the cautionary statement that follows this section and the other information included in this prospectus, before purchasing our securities. If one or more of the possibilities described as risks below 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. The following is a description of what we consider to be our key challenges and all material risks to our business and securities.

Risks Relating to Our Business

We have no history of operations and are therefore subject to various startup company risks.

We were formed in October 2005 and our business to date has consisted of initial setting up of operations to pursue our business plan. In order to pursue our plan, we will have to continue to establish internal infrastructure, hire additional personnel, adopt company plans and procedures, set up a sales organization, oversee the design and construction of our initial production line and otherwise establish the functional capabilities of an operating company. Accomplishing this task may take longer or cost more than expected, and it is likely that problems that we cannot now anticipate will require solution. We cannot assure you that we will be successful in establishing ourselves as an operating company.

We intend to address an unproven market that may not justify our commitment to it.

We intend to develop and offer flexible, lightweight, high efficiency PV products for use in terrestrial, space and near-space applications. There is no established market for our flexible thin-film CIGS technology. Our business plan assumes that such a market will develop as a result of the technological improvements that we have made and expect to continue to make. We cannot assure you that such a market will develop or, if it does develop, that it will meet our expectations.

Many of the applications for which we intend to compete will require further technological development, which we cannot guarantee.

Discussions with some potential purchasers of our PV products have been based on the assumption that we will continue to improve the cost, performance/weight and performance/volume characteristics of our planned products. While we believe that the assumptions on which these discussions have been based are reasonable, we cannot assure you that we will be able to achieve these improvements. If we are not able to achieve these improvements, the use of our PV products may be unfeasible or economically unattractive to our potential customers, in which case the sales assumptions underlying our business plan would be incorrect.

Failure of the HAA market to develop as quickly as we envision or our failure to enter that market successfully would adversely affect our projected sales, growth and revenues.

The HAA market is in its infancy, and should the market opportunity not materialize, opportunities for growth in this market may be limited. In particular, there is not yet long-term government funding for HAA projects, and to date we have not been selected to supply PV products for any HAA projects. Also, because HAA projects will be subject to the size and priorities of government budgets, the funding for HAA projects always may be at risk. If government funding or commitment to the HAA concept wanes, then demand for our products and, hence, our financial condition and business, may suffer. Furthermore, although we believe that our PV modules outperform the products of our competitors in the space and near-space markets, our products may still require improvements or modifications to meet the technical or market requirements of one or more HAA projects. There is no guarantee that such improvements or modifications can or will be made, and loss of our bids to supply PV modules to HAA contractors or projects would adversely affect our results of operation and growth.

Failure of the terrestrial market for thin-film PV products to develop as quickly as we envision or our failure to enter that market successfully would adversely affect our projected sales, growth and revenues.

We intend to sell thin-film PV modules for use in terrestrial applications, such as building integrated photovoltaic

(BIPV) and eletronics integrated photovoltaic (EIPV) products. These products comprise large-volume commodity components, such as roofing shingles, panels, membranes, batteries and hard drives. Our strategy is to partner or form strategic relationships with BIPV or EIPV suppliers to gain a foothold in these terrestrial markets. If we are unable to successfully establish working relationships with such suppliers, or if due to cost, technical or other factors, our product proves unsuitable for use in such terrestrial applications, our projected sales, growth and revenues would be adversely affected.

We have no contracts for PV products and have recorded no sales of such products; we expect that significant PV product sales will not occur for some time.

We have recorded no sales of PV products and have no contracts for such sales. Because of the nature of the projects in which such products may be used, we expect that the sales cycle will be quite long and, therefore, that it will be several months before we record significant PV product sales, although we expect to record revenue from performance of research and development contracts in the interim. As a result, we expect that it will be some time before we can determine whether our expectations relating to our products and their target markets are justified. Also, as a result, we will be required to invest substantial resources in pursuing these markets in advance of any significant revenue stream that may result from such investments. An unanticipated or longer than expected delay revenue ramp-up could put a strain on our capital resources and require us to seek additional capital. Such additional capital, if available, could substantially dilute the interest of the existing investors.

We intend to sell portions of our PV modules to contractors of government-funded projects, which will be subject to political, scheduling and funding risks.

We intend to sell our PV modules to contractors of government-funded projects such as the HAA program. We would be a subcontractor or supplier on these projects. The government agencies overseeing the projects are subject to economic and political pressures that dictate the manner in which they spend money. As a result, even if a contractor or government agency wants to purchase our PV modules, it may be unable to do so due to budgetary or political constraints. Orders may even be canceled or substantially delayed due to budgetary, political or other scheduling delays that frequently occur in connection with government-funded projects. Any such cancellations or delays would likely adversely affect our financial results.

Our reliance on government contracts to partially fund our research and development programs could impair our ability to develop and incorporate new technologies into our products and could decrease our revenue.

Government contracts may enable us to develop new technologies more rapidly than we would have been able to do otherwise. A reduction or discontinuance of these programs, or a reduction or discontinuance of our participation in these programs, might increase our expenses, which could affect our profitability and impair our ability to develop our technologies. In addition, contracts involving government agencies may be terminated or modified at the convenience of the agency. Also, we may become ineligible to participate in certain government-funded programs due to government restrictions on foreign ownership. Other risks include potential disclosure of our confidential information to third parties and the exercise of march-in rights by the government. March-in rights refer to the right of the United States government or government agency to require us to grant a license to the technology to a responsible applicant or, if we refuse, the government may grant the license itself. The government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the technology or because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations or to give the United States industry preference. Our government-sponsored research contracts are subject to audit and require that we provide regular written technical updates, as well as a final report on the results of our technical research. Because these reports are generally available to the public, third parties may obtain some aspects of our sensitive confidential information. Moreover, the failure to provide these reports or to provide inaccurate or incomplete reports may provide the government with rights to any intellectual property arising from the related research. Funding from government contracts also may limit when and how we can deploy technology developed under those contracts.

We initially will be substantially dependent on the administrative and engineering resources of our parent company ITN Energy Systems, Inc.

We will be dependent on ITN, at least initially, to provide administrative services such as facilities management,

equipment maintenance, human resources and accounting. If our relationship with ITN falters or if ITN fails to carry out its services or contracts in a satisfactory manner, our business may suffer.

Failure to build, implement or operate our production line successfully would adversely impact our business and financial condition.

We plan to produce our thin-film PV modules using a custom-built 500 kW per shift (1.5MW) annual capacity production line beginning in early 2008. This production line, which has not yet been completed, will require a substantial investment of capital. We believe that, when our PV modules are manufactured in large quantities, we will be able to demonstrate manufacturing yields, equipment capability, product performance and product quality that will enable us to produce PV modules at costs lower than those of competitors. However, the successful completion and operation of the production line will require substantial engineering resources and is subject to significant risks, including risks of cost overruns and delays or the possibility that the production line may never be completed or operational. Furthermore, we may never be able to operate our production processes in high volume, make planned process and equipment improvements, attain projected manufacturing yields or desired annual capacity, and obtain timely delivery of equipment to build the production line or hire and train the additional employees and management needed to operate the production line. Failure to meet these objectives could materially and adversely affect our business, results of operations and financial condition.

Failure to build, implement, or operate our planned 25MW production plant successfully would adversely impact our ability to sell into the terrestrial market and would affect our business and financial condition.

Our growth plan calls for scale-up of our 1.5MW production line to a 25MW production line in order to achieve the product cost and manufacturing capacities necessary to compete in the terrestrial market. We believe that, when our PV modules are manufactured in large quantities, we will be able to demonstrate manufacturing yields, equipment capability, product performance and product quality that will enable us to produce PV modules at costs lower than those of competitors. However, the successful completion and operation of the production line at the 25MW scale will require substantial engineering resources and is subject to significant risks, including risks of cost overruns and delays or the possibility that the production line may never be completed or operational. Furthermore, we may never be able to operate our production processes in high volume, make planned process and equipment improvements, attain projected manufacturing yields or desired annual capacity, and obtain timely delivery of equipment to build the production line or hire and train the additional employees and management needed to operate the production line. Failure to meet these objectives could materially and adversely affect our business, results of operations and financial condition.

Our products may not gain market acceptance, in which case we would be unable to sell our products or achieve profitability.

The development of demand for our proposed products and our ability to sell them may be adversely affected by a number of factors, many of which are beyond our control, including:

- our failure to produce PV modules that compete favorably against competing products on the basis of cost, quality, weight, efficiency and performance;

- our failure to develop or maintain successful relationships with customers, systems integrators and strategic partners; and

- the failure of our products to achieve qualification or certification by customers for use in our target market applications.

If our products fail to gain market acceptance, we would be unable to sell our products or achieve profitability.

Our future success depends on retaining our existing management 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 Matthew Foster, our President and Chief Executive Officer, Dr. Joseph Armstrong, our Chief Technology Officer, Dr. Prem Nath, our Vice President of Manufacturing, and Dr. Mohan Misra, our Chief Strategy Officer. Our future success also will depend, in part, on our ability to attract and retain highly skilled employees, including management, technical and sales personnel. The loss of services of any of our key personnel, the inability to attract, retain or assimilate key personnel in the future, or delays in

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hiring required personnel could materially harm our business and results of operations.

We may be unable to adequately protect or enforce our proprietary information, which may result in its unauthorized use or reduced sales or otherwise reduce our ability to compete.

Our business and competitive position depend upon our ability to protect our proprietary technology, including any solar power products that we develop. Despite our efforts to protect this information, unauthorized parties may attempt to obtain and use information that we regard as proprietary. Any patents issued in connection with our efforts to develop new technology for solar power products may not be broad enough to protect all of the potential uses of the technology.

In addition, when others are responsible for the control the prosecution, maintenance and enforcement of certain important intellectual property, such as technology licensed to us, the protection of the intellectual property rights may be outside of our control. If the entity that controls the intellectual property rights does not adequately protect those rights, our rights may be impaired, which may impact our ability to develop, market and commercialize our products.

Our means of protecting our proprietary rights may not be adequate, and our competitors may:

- independently develop substantially equivalent proprietary information, products and techniques;
- otherwise gain access to our proprietary information; or
- design around our patents or other intellectual property.

We have our employees, consultants and advisors execute proprietary information and invention agreements when they begin working for us. However, these agreements may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure. Failure to maintain trade secret and patent protection may adversely affect our prospects.

Successful infringement claims by third parties could result in substantial damages, lost product sales and the loss of important proprietary rights.

There has been substantial litigation regarding patent and other intellectual property in various high technology industries. In the future, we may be notified of allegations that we may be infringing on intellectual property rights possessed by others. Should litigation be brought against us, such litigation could be extremely expensive and time consuming and could materially and adversely affect our business, financial condition and results of operations, regardless of the outcome of the litigation. Such litigation could also result in loss of certain proprietary rights, significant monetary liability and barriers to product manufacturing. Any of these outcomes could materially harm our business and have a material negative impact on the value of your investment.

Risks Related to Investment in Our Securities

If we do not maintain an effective and current registration statement, you may not be able to exercise the Class B warrants.

In order for you to be able to exercise the Class B warrants, the shares of our common stock to be issued to you upon exercise of the Class B warrants must be covered by an effective and current registration statement and qualify or be exempt under the securities laws of the state or other jurisdiction in which you live. We cannot assure you that we will continue to maintain a current registration statement relating to the shares of our common stock underlying the Class B warrants, nor can we assure you that an exemption from state registration or qualification will be available throughout their term. This may temporarily or permanently prevent you from exercising the Class B warrants, or may have an adverse effect on demand for the Class B warrants and the prices that can be obtained from reselling them.

While the Class B warrants are outstanding, it may be more difficult to raise additional equity capital.

During the term that the Class B warrants are outstanding, the holders of those warrants are given the opportunity to profit from a rise in the market price of our common stock. The Class B warrants are not redeemable by us. We may find it more difficult to raise additional equity capital while these warrants are outstanding. At any time during which these warrants are likely to be exercised, we may be able to obtain additional equity capital on more favorable terms from other sources.

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Future sales or the potential for future sales of our securities may cause the trading price of our common stock and Class B warrants to decline and could impair our ability to raise capital through subsequent equity offerings.

Sales of a substantial number of shares of our common stock or other securities in the public markets, or the perception that 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 substantial number of our outstanding shares of common stock are subject to lock-up agreements. As these shares are released from the lock-up agreements, the sale of such shares could cause the market price of our common stock to decline. Furthermore, a large number of our outstanding shares are not registered under the Securities Act of 1933, as amended (the Securities Act). If and when these shares are registered and become eligible for sale on the public markets, the market price of our common stock could decline.

As a public company we are subject to complex legal and accounting requirements that will require us to incur substantial expense and will expose us to risk of non-compliance.

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. Our relative inexperience with these requirements may increase the cost of compliance and may also increase the risk that we will fail to comply. 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 that we will be able to comply with all of these requirements or that the cost of such compliance will not prove to be a substantial competitive disadvantage vis-à-vis our privately held and larger public competitors.

FORWARD-LOOKING STATEMENTS

Some of the statements made in this prospectus discuss future events and developments, including our future business strategy and our ability to generate revenue, income and cash flow. In some cases, you can identify forward-looking statements by words or phrases such as may, should, expects, plans, anticipates, believes, estimates, predicts, potential, continue, our future success depends, seek to continue, or t words or phrases, or comparable words or phrases. These statements are only predictions that are based, in part, on assumptions involving judgments about future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond our control. Actual events or results may differ materially. In evaluating these statements, you should specifically consider various facts, including the risks outlined in the Risk Factors section. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. We do not undertake to update any of the forward-looking statements after the date of this prospectus to conform these statements to actual results.

USE OF PROCEEDS

We will not receive any proceeds upon the sale of any of the securities registered on behalf of the Selling Securityholders for resale.

If our bridge investors resell all of the Class B warrants issued to them in July 2006, and the Class B warrants are exercised by subsequent purchasers, we will receive proceeds of up to $6,399,668 before deducting expenses estimated at $17,500. We will retain discretion over the use of the net proceeds we may receive from the warrant exercises, but we currently intend to use such proceeds, if any, for working capital purposes, financing of capital expenditures, research and development, general and administrative expenses, manufacturing expenses and sales and marketing.

SELLING SECURITYHOLDERS

The following tables set forth certain information, based on information obtained from the Selling Securityholders, with respect to the beneficial ownership of our securities by each Selling Securityholder before this offering, and as adjusted to reflect the sale of all the securities offered by the Selling Securityholders. Assuming all securities offered by the Selling Securityholders are sold and no additional securities are purchased by the Selling Securityholders, they will own no securities in the Company.

Common Stock

Selling Securityholder (1)	Number of Shares of Common Stock Owned Before the Offering (2)	Number of Shares to be Offered (2)	Number of Shares of Common Stock Owned After the Offering
Donald J. Helfgott	9,090	9,090	0
Parisa Roshanzamir & Shawn Zahed (JTWROS)	9,090	9,090	0
Harold R. & Linda L. Clayton (JTWROS)	18,180	18,180	0
Saybrook L.P. (6)	36,362	36,362	0

Class B Warrants

Selling Securityholder (1)	Number of Class B Warrants Owned Before the Offering (3)	Number of Class B Warrants to be Offered (3)	Number of Class B Warrants Owned After the Offering
Donald J. Helfgott	18,180	18,180	0
Parisa Roshanzamir & Shawn Zahed (JTWROS)	18,180	18,180	0
Morton Topfer	18,180	18,180	0
Glenbrook Capital L.P. (5)	27,272	27,272	0
Harold R. & Linda L. Clayton (JTWROS)	18,180	18,180	0
Saybrook L.P. (6)	36,362	36,362	0

Common Stock Underlying Class B Warrants

Selling Securityholder (1)	Shares of Common Stock Underlying Warrants Owned Before the Offering (4)	Shares of Common Stock Underlying Warrants to be Offered (4)	Shares of Common Stock Underlying Warrants Owned After the Offering
Donald J. Helfgott	18,180	18,180	0
Parisa Roshanzamir & Shawn Zahed (JTWROS)	18,180	18,180	0
Morton Topfer	18,180	18,180	0
Glenbrook Capital L.P. (5)	27,272	27,272	0
Harold R. & Linda L. Clayton (JTWROS)	18,180	18,180	0
Saybrook L.P. (6)	36,362	36,362	0

(1) Unless otherwise indicated, the address of the Selling Securityholder is c/o Paulson Investment Company, 811 SW Naito Parkway, Suite 200, Portland, OR 97204.
(2) Represents shares issued to the Selling Securityholder in July 2006.
(3) Represents Class B warrants issued to the Selling Securityholder in July 2006.
(4) Represents shares issuable upon exercise of the Class B warrants.
(5) Glenbrook Capital, L.P. has the power to dispose of and the power to vote the securities beneficially owned by it, which power is exercised by general partner Glenbrook Capital Management, a Nevada corporation, whose president is Robert Lishman. Mr. Lishman disclaims beneficial ownership of these securities.
(6) Saybrook, L.P. has the power to dispose of and the power to vote the securities beneficially owned by it, which power is exercised by general partner M. Albin Jubitz, Jr.

Unless otherwise noted, we believe that all persons named in the table have sole voting and investment power with respect to all shares of common stock and warrants beneficially owned by them. None of the Selling Securityholders has been a director, officer or employee or has had any other material relationship with us in the past three years.

PLAN OF DISTRIBUTION

Each Selling Securityholder and its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of its shares of common stock or warrants on a stock exchange, market or trading facility on which those securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Securityholder may use any one or more of the following methods when selling shares and warrants:

- 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 or warrants 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;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker dealers may agree with the Selling Securityholders to sell a specified number of such shares or warrants at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Securityholders may also sell shares under Rule 144 under the Securities Act, rather than under this prospectus.

The Selling Securityholders may also engage in short sales against the box, puts and calls and other transactions in our securities or derivatives of our securities and may sell or deliver securities in connection with these trades.

Broker dealers engaged by the Selling Securityholders may arrange for other broker dealers to participate in sales. Broker dealers may receive commissions or discounts from the Selling Securityholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. It is not expected that these commissions and discounts will exceed what is customary in the types of transactions involved. Any profits on the resale of shares or warrants by a broker dealer acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, attributable to the sale of shares or warrants will be borne by a selling stockholder. The Selling Securityholders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares or warrants if liabilities are imposed on that person under the Securities Act.

The Selling Securityholders may from time to time pledge or grant a security interest in some or all of the shares or warrants 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 or warrants from time to time under this prospectus after we have filed an amendment to this prospectus, amending the list of Selling Securityholders to include the pledgee, transferee or other successors in interest. The Selling Securityholders also may transfer the shares or warrants in other circumstances, in which case the transferees, pledgees, donees or other successors in interest will be the selling beneficial owners for purposes of this prospectus and may sell the shares or warrants from time to time under this prospectus, amending the list of Selling Securityholders to include the pledgee, donee, transferee or other successors in interest.

The Selling Securityholders and any broker dealers or agents that are involved in selling the shares or warrants may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker dealers or agents and any profit on the resale of the shares or warrants purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

We are required, or have elected, to pay all fees and expenses incident to the registration of the shares and warrants being registered herein. We are not required to pay commissions and other selling expenses. We have agreed to indemnify the Selling Securityholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act arising out of or based upon any untrue or alleged untrue statement of a material fact contained in the registration statement, any prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or based upon any omission or alleged omission of a material fact necessary to make the statements therein not misleading.

The anti-manipulation rules of Regulation M under the Securities Exchange Act of 1934 may apply to sales of common stock and activities of the Selling Securityholders.

With regard to the up to 581,788 shares of common stock that may be issued upon exercise of Class B warrants, such shares would be offered solely by us, and no underwriters are participating in such offering.

DESCRIPTION OF SECURITIES

Our authorized capital stock consists of 75,000,000 shares of common stock, $0.0001 par value, and 25,000,000 shares of preferred stock, $0.0001 par value. As of September 30, 2007, we had 11,160,401 shares of common stock and no shares of preferred stock outstanding. As of September 30, 2007, we had no Class A warrants and 8,680,228 Class B warrants outstanding, excluding the restricted Class B warrants held by Norsk Hydro Produksjon AS as described below. Assuming that all of the shares appearing on the cover of this prospectus are issued, we will have 11,814,911 shares of common stock outstanding.

The following is a summary of the rights of certain of our securities. For more detailed information relating to our capital stock, please see our certificate of incorporation and bylaws, both as amended (our Certificate of Incorporation and Bylaws, respectively).

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 of Directors (the 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.

Holders of our common stock have no 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. At present we have no plans to issue any shares of preferred stock or to adopt any new series, preferences or other classification of preferred 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. Our Board presently does not intend to seek stockholder approval prior to the issuance of currently authorized stock, unless otherwise required by law or applicable stock exchange rules.

Class A Warrants

General. Each Class A warrant entitles the holder to purchase one share of common stock at an exercise price of $6.60 per share. This exercise price will be adjusted if specific events, summarized below, occur. A holder of warrants will not be deemed a holder of the underlying stock for any purpose until the warrant is exercised. If at their expiration date the Class A warrants are not currently exercisable, the expiration date will be extended for 30 days following notice to the holders of the warrants that the warrants are again exercisable. If we cannot honor the exercise of Class A warrants and the securities underlying the warrants are listed on a securities exchange or if there are three independent market makers for the underlying securities, we may, but are not required to, settle the warrants for a price equal to the difference between the

closing price of the underlying securities and the exercise price of the warrants. Because we are not required to settle the warrants by payment of cash, and because there is a possibility that warrant holders will not be able to exercise the warrants when they are in-the-money or otherwise, there is a risk that the warrants will never be settled in shares or payment of cash. This may have an adverse effect on the demand for the warrants and the prices that can be obtained from reselling them.

Redemption. We have the right to redeem the Class A warrants at a price of $0.25 per warrant, after providing 30 days prior written notice to the Class A warrantholders. In May 2007, we called our outstanding Class A public warrants for redemption, and all such Class A public warrants that remained unexercised as of June 25, 2007, the announced redemption date, are now expired. Consequently, as of September 30, 2007, there were no Class A warrants outstanding. Holders of representative s warrants are entitled to receive Class A warrants upon exercise of the representative s warrants, but those warrants will not be freely tradeable and will be immediately subject to a call for redemption at $0.25 per warrant. The holders will then have to decide whether to exercise their Class A warrants or hold them for redemption.

Class B Warrants

General. The Class B warrants may be exercised until the expiration date, which is July 10, 2011. Each Class B warrant entitles the holder to purchase one share of common stock at an exercise price of $11.00 per share. This exercise price will be adjusted if specific events, summarized below, occur. A holder of warrants will not be deemed a holder of the underlying stock for any purpose until the warrant is exercised. If, at their expiration date, the Class B warrants are not currently exercisable, the expiration date will be extended for 30 days following notice to the holders of the warrants that the warrants are again exercisable. If we cannot honor the exercise of Class B warrants and the securities underlying the warrants are listed on a securities exchange or if there are three independent market makers for the underlying securities, we may, but are not required to, settle the warrants for a price equal to the difference between the closing price of the underlying securities and the exercise price of the warrants. Because we are not required to settle the warrants by payment of cash, and because there is a possibility that warrant holders will not be able to exercise the warrants when they are in-the-money or otherwise, there is a risk that the warrants will never be settled in shares or payment of cash. This may have an adverse effect on the demand for the warrants and the prices that can be obtained from reselling them.

No Redemption. The Class B warrants are non-redeemable.

Provisions Applicable to the Class A and Class B Warrants

Exercise. The holders of the warrants may exercise them only if an appropriate registration statement is then in effect. Fractional shares of common stock will not be issued upon exercise of the warrants.

Adjustments in Certain Events. The warrants provide for adjustment of the number of shares for which each warrant is exercisable if certain events occur. If we distribute to our stockholders additional shares of common stock through a dividend or distribution, or if we effect a stock split of our common stock, the total number of shares of common stock purchasable on exercise of a warrant will be adjusted so that the holder of a warrant thereafter exercised will be entitled to receive the number of shares of common stock the holder would have owned or received after such event if the warrant holder had exercised the warrant before the event causing the adjustment and held the securities received on such exercise through the record date for the event. The aggregate exercise price of the warrant will remain the same in that circumstance, but the effective purchase price per share of common stock purchasable upon exercise of the warrant will be proportionately reduced because a greater number of common stock shares will then be purchasable upon exercise of the adjusted warrant. We will make equivalent changes in the warrants if we effect a reverse stock split.

In the event of a capital reorganization or reclassification of our common stock, the warrants will be adjusted so that thereafter each warrant holder will be entitled to receive upon exercise the same number and kind of securities that such holder would have received if the warrant had been exercised before the capital reorganization or reclassification of our common stock and the securities received on such exercise had been held through the record date of the recapitalization.

If we merge or consolidate with another corporation, or if we sell our assets as an entirety or substantially as an entirety to another corporation, we will make provisions so that warrant holders will be entitled to receive upon exercise of a warrant the kind and number of securities, cash or other property that would have been received as a result of the transaction by a person who was our stockholder immediately before the transaction and who owned the same number of shares of common stock for which the warrant was exercisable immediately before the transaction. No adjustment to the warrants will

be made, however, if a merger or consolidation does not result in any reclassification or change in our outstanding common stock.

2005 Stock Option Plan

Our 2005 Stock Option Plan, as amended (the Option Plan), currently authorizes the grant of up to 1,000,000 shares of common stock (subject to 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 of the Company, options to purchase more than 100,000 shares. As of September 30, 2007, there were outstanding and unexercised options to purchase 666,087 shares under our Option Plan.

Norsk Hydro Options

In March 2007, we sold 1,600,000 shares of restricted common stock to Norsk Hydro Produksjon AS, a Norwegian company and subsidiary of Norsk Hydro ASA (Norsk Hydro), in a private placement pursuant to Rule 506 of Regulation D. We also granted two options to Norsk Hydro:

- An option (the Initial Warrants Option) to purchase restricted Class A warrants (or if the Class A warrants are redeemed, common stock) and restricted Class B warrants that are otherwise identical to the Class A warrants formerly traded, and Class B warrants currently traded, on Nasdaq under the symbols ASTIW and ASTIZ, respectively. Norsk Hydro exercised this option in August 2007 to purchase 934,462 additional shares of common stock and 1,965,690 Class B warrants.

- An option (the Tranche 2 Option) to purchase additional shares of restricted common stock, Class A warrants (or if the Class A warrants are redeemed, common stock) and Class B warrants that would result in Norsk Hydro owning up to 35.0% of the issued and outstanding common stock, Class A warrants and Class B warrants. This option may be exercised beginning December 13, 2007. The Tranche 2 Option expires on June 15, 2009. This option has not yet been exercised. Upon exercise of the Tranche 2 Option, the purchase price of each security obtained will be equal to the average of the closing bids of security in the five consecutive trading days ending on and including the trading day that is one day prior to the date of exercise, as reported by Nasdaq.

Representative s Warrants

In connection with our initial public offering, we issued to the representative of the underwriters warrants to purchase 300,000 units. The representative s warrants are exercisable for units (each unit consisting of one share of common stocks, one Class A warrant and two Class B warrants) until July 10, 2011. Representative s warrants to purchase 66,875 units have been exercised as of September 30, 2007, as have the 66,875 underlying Class A warrants. To the extent that holders of representative s warrants are entitled to receive Class A warrants upon exercise of the representative s warrants, those warrants will be immediately subject to a call for redemption at $0.25 per warrant. The holders will then have to decide whether to exercise their Class A warrants or hold them for redemption. We have agreed to keep a registration statement covering the issuance and resale of the securities underlying the representative s warrants effective until July 10, 2011. If we cannot honor the exercise of representative s warrants and the securities underlying the warrants are listed on a securities exchange or if there are three independent market makers for the underlying securities, we may, but are not required to, settle the representative s warrants for a price equal to the difference between the closing price of the underlying securities and the exercise price of the warrants. Because we are not required to settle the representative s warrants by payment of cash, it is possible that the representative s warrants will never be settled in shares or payment of cash.

Authorized but Unissued Shares

The authorized but unissued shares of common and preferred stock are available for future issuance without stockholder approval, unless otherwise required by law or applicable stock exchange rules. These additional 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.

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; provided, however, that if less than the entire Board is to be removed, no one director may be removed if the vote cast against his removal would be sufficient to elect him if then cumulatively voted at an election of the entire 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 stockholder 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 of Directors 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 will be 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:

- Prior to the date of the transaction, 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, 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.

EXPERTS

The financial statements included in our annual report on Form 10-KSB for the year ended December 31, 2006 and incorporated into this prospectus by reference 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 given upon the authority of them as experts in auditing and accounting.

LEGAL MATTERS

The validity of the securities offered hereby will be passed on by Holland & Knight LLP, Portland, Oregon.

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 the Company previously has filed with the SEC. This means the Company can disclose important information to you by referring you to other documents that it has filed with the SEC. The information that is incorporated by reference is considered part of this prospectus, and information that the Company files later will automatically update and may supersede this information. For further information about the Company 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-KSB filed on March 30, 2007, which contains audited financial statements for the fiscal year ended December 31, 2006;

- Our quarterly report on Form 10-QSB filed on May 1, 2007, for the quarter ended March 31, 2007;

- Our quarterly report on Form 10-QSB filed on July 31, 2007, for the quarter ended June 30, 2007;

- Our current reports on Forms 8-K filed on January 18, 2007, January 31, 2007, February 22, 2007, March 13 2007, April 18, 2007, April 27, 2007, May 24, 2007, June 18, 2007, June 21, 2007, June 25, 2007, June 29, 2007, August 10, 2007, August 16, 2007, October 1, 2007 and October 12, 2007.

- All other reports filed by us pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (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 the Company 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 number: Ascent Solar Technologies, Inc., Attention: Corporate Secretary, 8120 Shaffer Parkway, Littleton, Colorado 80127, telephone (303) 285-9885. 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 of 1933, as amended. This prospectus does not contain all the information set forth in the registration statement because certain

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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 informational 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, 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 us or our shareholders 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.
- 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 shareholders 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 of 1933 may be permitted for directors, officers or persons controlling the Company pursuant to applicable state law, the Company has been informed that, in the opinion of the Commission, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated expenses in connection with the issuance and distribution of the securities being registered, all of which are being borne by the Company.

Legal fees and expense	$12,500
Accounting fees and expenses	$2,500
Other	$2,500
Total	$17,500

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 service as a director or officer of the corporation, or his 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 him (Expenses), and judgments, fines and amounts paid in settlement that are actually and reasonably incurred by him, in connection with the defense or settlement of such action, provided that he acted in good faith and in a manner he 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 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 he acted in good faith and in a manner he 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.

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 of 1933 may be permitted to directors, officers and controlling persons of Registrant pursuant to the above, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable.

Item 16. Exhibits.

Exhibit No.	Description
3.1	Registrant s Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
3.2	Registrant s Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
3.3	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed April 17, 2007)
4.1	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
4.2	Form of Class A Warrant (incorporated by reference to Exhibit 4.2 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No.333-131216), as amended)
4.3	Form of Class B Warrant (incorporated by reference to Exhibit 4.3 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
4.4	Warrant Agreement Between the Registrant and Computershare Trust Company, Inc. (incorporated by reference to Exhibit 4.5 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
4.5	Amendment No. 1 to Warrant Agreement Between the Registrant and Computershare Trust Company, Inc.*
4.6	Form of Representative s Purchase Warrant (incorporated by reference to Exhibit 4.6 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No 333-131216), as amended)
4.7	Bridge Unit Purchase and Investor Subscription Agreement with forms of promissory note and bridge right (incorporated by reference to Exhibit 10.12 of our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
4.8	Amendment No. 1 to Bridge Unit Purchase and Investor Subscription Agreement (incorporated by reference to Exhibit 10.13 of our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
4.9	Amendment to Annex B to Bridge Unit Purchase and Investor Subscription Agreement (incorporated by reference to Exhibit 10.13A of our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
5.1	Opinion of Holland & Knight LLP*
23.1	Consent of Hein & Associates LLP
23.2	Consent of Holland & Knight LLP (included in Exhibit 5.1)*
24.1	Power of Attorney*

* Previously filed.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) to file, during any period in which offers or sales of the registered securities 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;

(ii) to reflect in the prospectus any facts or events which, individually or together, 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 SEC pursuant to Rule 424(b) (§ 230.424(b) if, in the aggregate, the changes in volume and price represent no more than a 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 additional or changed material information on the plan of distribution.

Provided, however, that,

Paragraphs (1)(i), (1)(ii) and (1)(iii) of this undertaking do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) that, for determining liability under the Securities Act, each such post-effective amendment shall be treated as a new registration statement of the securities offered, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) For determining liability of the undersigned small business issuer under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned small business issuer undertakes that in a primary offering of securities of the undersigned small business issuer pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned small business issuer will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned small business issuer relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned small business issuer or used or referred to by the undersigned small business issuer;

(iii) The portion of any other free writing prospectus relating to the offering con–taining material information about the undersigned small business issuer or its securities provided by or on behalf of the undersigned small business issuer; and

(iv) Any other communication that is an offer in the offering made by the undersigned small business issuer to the purchaser.

(5) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) If the registrant is relying on Rule 430B:

(a) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(b) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. 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 effective date, 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 effective date; or

(ii) 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) If the registrant requests acceleration of the effective date of the registration statement under Rule 461, then in the event that a claim for indemnification against such liabilities (other than the payment by the small business issuer of expenses incurred or paid by a director, officer or controlling person of the small business issuer 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 and will be governed by the final adjudication of such issue.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described under Item 15 above, or otherwise, the registrant 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. 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 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, 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 amendment to be signed on its behalf by the undersigned, thereunto duly authorized, in Littleton, Colorado on October 18, 2007.

Ascent Solar Technologies, Inc.

By: /s/ Matthew Foster
Matthew Foster, President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned directors and officers of Ascent Solar Technologies, Inc., do hereby constitute and appoint Matthew Foster and Janet Casteel or either 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, this amendment to the registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	**Title**	**Date**
/s/ Matthew Foster Matthew Foster	President and Chief Executive Officer (Principal Executive Officer)	October 18, 2007
/s/ Janet Casteel Janet Casteel	Chief Accounting Officer and Treasurer (Principal Accounting and Financial Officer)	October 18, 2007
* Mohan S. Misra	Chairman of the Board	October 18, 2007
/s/ Stanley Gallery Stanley Gallery	Director	October 18, 2007
/s/ Einar Glomnes Einar Glomnes	Director	October 18, 2007
/s/ Amit Kumar Amit Kumar	Director	October 18, 2007
/s/ Joel S. Porter Joel S. Porter	Director	October 18, 2007
/s/ T.W. Fraser Russell T.W. Fraser Russell	Director	October 18, 2007

/s/ Richard Swanson Richard Swanson	Director	October 18, 2007

* By: /s/ Matthew Foster
Matthew Foster
Attorney-in-fact

EXHIBIT INDEX

Exhibit No.	**Description**
3.1	Registrant s Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
3.2	Registrant s Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
3.3	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed April 17, 2007)
4.1	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
4.2	Form of Class A Warrant (incorporated by reference to Exhibit 4.2 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No.333-131216), as amended)
4.3	Form of Class B Warrant (incorporated by reference to Exhibit 4.3 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
4.4	Warrant Agreement Between the Registrant and Computershare Trust Company, Inc. (incorporated by reference to Exhibit 4.5 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No. 333-131216), as amended)
4.5	Amendment No. 1 to Warrant Agreement Between the Registrant and Computershare Trust Company, Inc.*
4.6	Form of Representative s Purchase Warrant (incorporated by reference to Exhibit 4.6 to our Registration Statement on Form SB-2 filed July 10, 2006 (Reg. No 333-131216), as amended)
4.7	Bridge Unit Purchase and Investor Subscription Agreement with forms of promissory note and bridge right (incorporated by reference to Exhibit 10.12 of our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
4.8	Amendment No. 1 to Bridge Unit Purchase and Investor Subscription Agreement (incorporated by reference to Exhibit 10.13 of our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
4.9	Amendment to Annex B to Bridge Unit Purchase and Investor Subscription Agreement (incorporated by reference to Exhibit 10.13A of our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
5.1	Opinion of Holland & Knight LLP*
23.1	Consent of Hein & Associates LLP
23.2	Consent of Holland & Knight LLP (included in Exhibit 5.1)*
24.1	Power of Attorney*

* Previously filed.