Ascent Solar Technologies, Inc.
Form 10-K
March 12, 2009

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ý **ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2008

or

o **TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Transition Period from to
Commission File No. 001-32919

Ascent Solar Technologies, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-3672603**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
8120 Shaffer Parkway Littleton, CO	**80127**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number including area code: **303-285-9885**

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

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.0001 par value per share Class B Warrants	The NASDAQ Stock Market LLC

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

None

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

Indicate by check mark whether the issuer is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes o No ý

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

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

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

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

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

As of June 30, 2008, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates was $106,737,107, based upon the last reported sale price of the registrant's common stock on that date as reported by NASDAQ.

As of February 2, 2009, there were 20,951,382 shares of our common stock issued and outstanding.

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ASCENT SOLAR TECHNOLOGIES, INC.
Form 10-K Annual Report
for the Fiscal Year ended December 31, 2008

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes "forward-looking statements" that involve risks and uncertainties. Forward-looking statements include statements concerning our plans, objectives, goals, strategies, future events, future net sales or performance, capital expenditures, financing needs, plans or intentions relating to acquisitions, business trends and other information that is not historical information and, in particular, appear under headings including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business." When used in this Annual Report, the words "estimates," "expects," "anticipates," "projects," "plans," "intends," "believes," "forecasts," "foresees," "likely," "may," "should," "goal," "target" and variations of such words or similar expressions are intended to identify forward-looking statements. All forward-looking statements are based upon information available to us on the date of this Annual Report.

These forward-looking statements are subject to risks, uncertainties and other factors, many of which are outside of our control, that could cause actual results to differ materially from the results discussed in the forward-looking statements, including, among other things, the matters discussed in this Annual Report in the sections captioned "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Factors you should consider that could cause these differences are:

Our limited operating history and lack of profitability;

Our ability to secure equity or debt or other financing necessary to fund our operations and the acquisition of additional operating capacity;

Our ability to meet the cost and performance metrics that we have forecasted;

Our ability to develop demand for, and sales of, our photovoltaic modules and establish strategic relationships with key partners, including original equipment manufacturers, system integrators and distributors;

Our ability to obtain necessary or desired certifications for our photovoltaic modules;

Whether we receive timely delivery of production tools from our equipment suppliers;

Our ability to design, purchase, install, qualify and operate production tools pursuant to our business plan and within budgeted amounts;

The extent to which we are able to reduce the per watt manufacturing costs of our photovoltaic modules, and the extent to which our competitors are able to do the same with their photovoltaic modules;

Global demand for electricity and the market for renewable energy, including solar energy;

The cost-effectiveness of photovoltaic-generated energy relative not only to that generated from conventional sources such as fossil fuels, but also to that generated from other renewable sources which include wind, biomass, geothermal and tidal power;

The availability of, or changes to, government policies, subsidies and incentives that affect the use or cost of renewable energy;

The emergence of disruptive or competing technologies in the energy industry;

Our competitive position and that of our photovoltaic modules relative to others in the photovoltaic and thin-film markets;

The extent to which our interests align with or deviate from that of Norsk Hydro Produksjon AS, our largest stockholder, and its affiliates;

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Foreign currency exchange fluctuations, political instability in certain foreign markets or the general state of geopolitical affairs;

The supply and price of equipment, components and raw materials;

The status of our relationship with ITN Energy Systems, Inc.;

Our ability to attract and retain key executives and employees;

Our continued investment in research and development, and our ability to remain competitive through development of new technologies;

The extent to which we are able to manage the expansion of our operations effectively, both domestically and abroad;

Commencement of legal proceedings against us or by us, including proceedings relating to environmental matters or intellectual property rights;

Our ability to expand and protect the intellectual property portfolio that relates to our photovoltaic modules and processes;

The extent to which we qualify to perform research and development under the federal government's Small Business Innovation Research program; and

General economic and business conditions.

There may be other factors that could cause our actual results to differ materially from the results referred to in the forward-looking statements. We undertake no obligation to publicly update or revise forward-looking statements to reflect subsequent events or circumstances after the date made or to reflect the occurrence of unanticipated events, except as required by law.

References to "we," "us," "our," "Ascent," "Ascent Solar" or the "Company" in this Annual Report mean Ascent Solar Technologies, Inc.

PART I

Item 1. Business

Business Overview

We are a development stage company formed in October 2005 to commercialize flexible photovoltaic (PV) modules using proprietary technology. Our technology was initially developed at ITN Energy Systems, Inc. (ITN) by our founder and core scientific team beginning in 1994 and subsequently assigned and licensed to us. Our proprietary manufacturing process deposits multiple layers of materials, including a thin film of highly efficient copper-indium-gallium-diselenide (CIGS) semiconductor material, on a flexible, lightweight, plastic substrate and then laser patterns the layers to create interconnected PV cells, or PV modules, in a process known as monolithic integration. We believe that our technology and manufacturing process provides us with significant advantages over both the crystalline silicon (c-Si) based PV manufacturers that currently dominate the PV market, as well as other thin-film PV manufacturers that use rigid and/or heavier substrate materials such as glass, stainless steel or other metals.

Our thin-film PV modules require less than 1% of the semiconductor material to achieve the same power output as a c-Si-based PV device, thus we do not face the supply constraints and raw material costs that may affect silicon-based PV manufacturers. Also, relative to our thin-film competitors, our use of CIGS on a flexible, durable, lightweight, high-tech plastic substrate allows for integration of our PV modules into a variety of building materials, electronic products, military, and space applications, as well as other products and applications that may emerge. The unique attributes of our materials enable

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a reduction in the overall system cost, installation cost and logistical cost-per-watt ratios. For markets that place a high premium on weight, like space and near space markets, our materials provide attractive increases in the power-to-weight ratio. Our materials have higher power-to-area ratios and voltage-to-area ratios than do competing flexible PV thin films. These metrics will be critical as we position ourselves to compete in commercial roof-top applications and high value-added markets like military, space and EIPV solar module applications. We believe that, when employed on a sufficiently large commercial scale, our large-format, roll-to-roll manufacturing process and proprietary monolithic integration techniques will allow us to achieve a per watt manufacturing cost lower than most of our flexible, lightweight, thin film competitors. At sufficiently large commercial scale we believe overall grid parity is possible *i.e.,* the point at which the system level cost of our PV-generated power is equal to that of retail power distributed from the electric utility grid in certain geographic markets within five years

While focused on speed to market, we believe that quality and consistency of product will be paramount to our success in the marketplace. Consequently, our path to commercialization is defined by a highly disciplined, staged progression based upon the achievement of key milestones and supported by over fourteen years of concerted research and development activity by our scientists. Our progression also takes into account market conditions, as well as financing options. In keeping with our philosophy, we completed construction of a 1.5 MW production line in December 2007. In March 2008, we demonstrated initial operating capability (IOC) of our 1.5 MW production line by initiating production trials as an end-to-end integrated process. Early IOC production trials resulted in average thin-film device efficiencies of 9.5% and small area monolithically integrated module efficiencies of over 7%. Recent and ongoing production optimization trials have resulted in thin-film device efficiencies in the 9.5% to 11.5% range and corresponding module efficiencies in the 7.0% to 9.0% range. In the fourth quarter 2008 the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) independently verified that the modules produced on our 1.5 MW line measured as high as 9.64% in conversion efficiency. The test modules measured six inches wide by one foot long and serve as our building block for both BIPV and portable power products. During 2008 we focused on testing and qualifying our 1.5 MW production line in anticipation of commencing limited regular production. During the first quarter of 2009, we began regular production of monolithically integrated flexible CIGS modules from our 1.5 MW production line. We expect that process optimization will be an ongoing effort as we continuously strive for improvements in production yield, production throughput, and product efficiency that have a direct bearing on our cost competitiveness in the marketplace.

During 2008, we initiated the critical tasks of internal product testing and product development with customers. In 2009, we continued those tasks further and have commenced prototype development with our BIPV, EIPV and military customers by providing them test samples from our 1.5MW production line. At the same time we expect to complete the internal testing and product certification in the second half of 2009.

The Company's new manufacturing facility in Thornton, Colorado is in the final stages of completion and will be ready to accommodate installation of the equipment in second quarter of 2009. Production tooling and equipment for the 30 MW plant began arriving in the first quarter of 2009 and installation is scheduled to be completed in the first half of 2010. We expect to begin production with an annual rated capacity of 15 MW by the middle of 2010, and 30 MW of annual capacity by the end of 2010. We intend to incrementally expand our production capacity to 110 MW or greater by adding more capacity based on manufacturing developments, market conditions and availability of financing.

Commercialization and Manufacturing Expansion Plan

We intend to be the first company to manufacture large, roll-format, PV modules in commercial quantities that use CIGS on a flexible, plastic substrate. Our manufacturing expansion plan entails the

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design, installation, qualification, testing and operation of additional production tools to increase our rated production capacity. We intend to incrementally expand our aggregate production capacity to 30 MW by attaining the following milestones within the time frames indicated:

Second half of 2009: complete product certification with Underwriters Laboratory (UL) in the U.S. and Technischer Überwachungs-Verein (TÜV) in Europe from 1.5 MW production line.

Fourth quarter of 2009: begin qualification of production tools for the first 30 MW.

First half of 2010: begin production and ramp up of the first half of initial 30 MW capacity.

Second half of 2010: commence ramp up to full 30 MW of rated capacity.

Although we currently plan to expand our production capacity to 110 MW or more by adding more capacity, the actual timing and amount of production capacity for the initial 30 MW and follow on capacity that we install may significantly deviate due to market conditions, availability of financing, timeliness of delivery of production tools, product performance and other factors described in this Annual Report.

Advantages of CIGS on a Flexible Plastic Substrate

Thin-film PV solutions differ based on the type of semiconductor material chosen to act as a sunlight absorbing layer, and also on the type of substrate on which the sunlight absorbing layer is affixed. We believe that we are the only company currently focused on commercial scale production of PV modules using CIGS on a flexible, plastic substrate. We utilize CIGS as a semiconductor material because, at the laboratory level, it has a higher demonstrated cell conversion efficiency than amorphous silicon (a-Si) and cadmium telluride (CdTe). We also believe that CIGS offers other compelling advantages over both a-Si and CdTe, including:

CIGS versus a-Si: Although a-Si, like CIGS, can be deposited on a flexible substrate, its conversion efficiency, which already is generally much lower than that of CIGS, measurably degrades when it is exposed to ultraviolet light, including natural sunlight. To mitigate such degradation, manufacturers of a-Si solar cells are required to implement measures that add cost and complexity to their manufacturing processes.

CIGS versus CdTe: Although CdTe modules have achieved conversion efficiencies that are generally comparable to CIGS in production, we believe that CdTe has never been successfully applied to a flexible substrate on a commercial scale. We believe that the use of CdTe on a rigid, transparent substrate, such as glass, makes CdTe unsuitable for a number of the applications that we are targeting in the BIPV and other markets. We also believe that CIGS can achieve higher conversion efficiencies than CdTe.

Our choice of substrate material further differentiates us from other thin-film PV manufacturers. We believe that the use of a flexible, lightweight substrate which is easier to install provides clear advantages for commercial rooftops, higher value-added BIPV and other markets, where rigid substrates are unsuitable for many applications. We also believe that our use of a flexible, plastic substrate provides us significant cost advantages because it enables us to employ monolithic integration techniques that we believe are unavailable to manufacturers who use flexible, metal substrates. Accordingly, we are able to eliminate the need for costly back-end assembly of inter-cell connections. As the only company, to our knowledge, focused on the commercial production of PV modules using CIGS on a flexible, plastic substrate, we believe we have the opportunity both to penetrate the BIPV, aerospace, and other markets with a high quality, value- added product and also to compete in the commodity solar panel market as a low-cost producer.

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Competitive Strengths

We believe we possess a number of competitive strengths that provide us with an advantage over our competitors.

We are an early mover in CIGS technology with a proprietary, flexible, lightweight, high efficiency PV thin film product that positions us to penetrate a wide range of attractive high value-added markets such as BIPV, military, space and other markets. By applying CIGS to a flexible, plastic substrate, we have developed a PV module that is efficient, lightweight and malleable, providing unique opportunities for integration into building material products (such as roofing membranes, shingles, siding and facades, metal and composite panels) Commercial rooftops alone are a major segment of the world solar market. The market for electronic components (such as electronic packages, casings, and accessories as well as military portable power systems and space and near space solar power application solutions) also may prove to be a significant premium market. Relative to our thin film competitors, we believe that our early mover advantage in thin film CIGS on plastic technology has placed us on an accelerated path to commercialization with a superior product offering for these strategic market segments.

We have the ability to manufacture PV modules for different markets and for customized applications without altering our production processes. Our ability to produce PV modules in customized shapes and sizes or in a variety of shapes and sizes simultaneously, without interrupting our production flow provides us with flexibility in determining target markets and product applications, and allows us to respond quickly to changing market conditions. Many of our competitors are limited by their technology and/or their manufacturing processes to a more restricted set of product opportunities.

Our integrated, roll-to-roll manufacturing process and proprietary monolithic integration techniques provide us a cost advantage over our competitors. Historically, manufacturers have formed PV modules by manufacturing individual solar cells and then interconnecting them. Our large-format, roll-to-roll manufacturing process allows for integrated production. In addition, our proprietary monolithic integration techniques allow us to utilize laser patterning to create interconnects, thereby creating PV modules at the same time we create PV cells. In so doing, we are able to eliminate an entire back-end processing step, saving time as well as labor and manufacturing costs relative to our competitors.

Our strategic relationship with Norsk Hydro provides us with direct access to a potentially large customer base in the global BIPV market. Norsk Hydro is a major global supplier of aluminum-based building systems, and our relationship provides us with a strong, established development and marketing partner for accessing the BIPV market in an accelerated manner. Together with Norsk Hydro, we are in the process of developing a product line that would incorporate our PV modules into various Norsk Hydro products such as sun-shading systems, wall systems and facades.

Our proven research and development capabilities position us to continue the development of next-generation PV modules and technologies. Our ability to produce CIGS-based PV modules on a flexible plastic substrate is the result of a concerted research and development effort that began more than fourteen years ago. We continue to pursue research and development in an effort to drive efficiency improvements in our current PV modules and to work toward next-generation technologies and additional applications.

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Markets and Marketing Strategy

Our target markets include building integrated PV (BIPV) market, electronic integrated PV (EIPV) market, military and governmental portable power market, and space and near space markets.

In BIPV applications, solar modules are incorporated directly into building and construction materials. For BIPV we intend to be the supplier of choice by offering high-performance, lightweight, durable and flexible PV modules that can be integrated directly into building material products such as roofing membranes, roofing shingles, siding, facades, shading devices, parking structures, metal and composite panels. We anticipate that when integrated with our solar modules, traditional building materials will produce electricity from the integrated PV. Commercial rooftop applications may become an important market for the Company's laminated solar products where we are cooperating with three important strategic partners.

In EIPV applications, solar modules are incorporated directly into portable electronic devices or the surface of their accessories. For EIPV we intend to supply high voltages in small spaces for PV integration directly into electronic packages, casings, and accessories in the consumer electronics market.

Military and governmental portable power is an attractive market opportunity for us to provide light weight power generating products like solar blankets and solar tents that can be field deployed for powering the military's increasing energy requirements. By displacing conventional fuels, the military can become more cost effective by utilizing our PV materials where there is no reliably operating electric grid. During 2009 we intend to continue to develop the existing military portable power market by developing relationships with key strategic players currently serving this market as existing large military and governmental contractors. We envision the military market as a likely early market entry point for our lightweight portable power products because similar products have been in development and qualification testing for a number of years.

In space and near space market applications, solar PV modules are incorporated into satellites or aircraft and/or high altitude air ships. In the space, near space and military portable power markets, we believe that our power producing modules are uniquely suited for applications requiring mobility, durability and lightweight. In the space and near space market, we intend to use our durable and lightweight technology to provide both higher value and more capable solutions at cost effective system prices. We hope to develop customers in these markets based upon strategic relationships with large players in those application areas.

Our marketing and distribution strategy is based on the formation of strategic relationships with key partners, including original equipment manufacturers (OEMs), and system integrators and distributors, who deal directly with installers, contractors or end-users in our target markets. In 2007, we entered into a strategic relationship with Norsk Hydro Produksjon AS (together with its affiliates, Norsk Hydro),is a major global supplier of aluminum-based building systems and pursuant to our relationship, we intend to integrate our flexible PV modules into building products produced and sold by Norsk Hydro, including sun-shading systems, wall systems and facades. Also, in February 2008, we announced the mutual pursuit of a series of strategic relationships with ITOCHU Corporation (ITOCHU) pursuant to which ITOCHU could, among other things, manage our OEM relationships in Japan and support distribution of our PV modules into markets in which ITOCHU is pursuing solar installations. In 2008 we announced five other cooperative agreements, and are in discussions with a number of other market participants to establish similar non-exclusive relationships in a variety of geographic markets worldwide.

Until we commence production at our new production facility being constructed in Thornton, Colorado, which we currently expect will occur by mid 2010, we intend to supply our strategic partners

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with PV module samples produced on our 1.5 MW production line to support our partners' development, testing and certification of new integrated flexible PV products. This should enable them to identify and cultivate promising market segments. By cooperating with our strategic partners in this way, we hope to create sufficient and consistent demand for our PV modules by the time we commence large scale commercial production of our PV modules using our planned production tools for approximately 30 MW of rated capacity. We also intend to initiate sales of PV modules to these partners from our 1.5 MW production line. We envision that we ultimately will serve as a provider of high value-added thin film solar components to our strategic partners, who will be solely responsible for the marketing, sales and distribution of their integrated building and electronics products, as well as or our key partners in the government, military, space and near-space application markets. In so doing, we intend to position ourselves as a leading manufacturer and supplier of value-added lightweight, durable, and flexible PV components to these markets. By capitalizing on the lightweight features of our thin film PV products, we believe that we can reduce overall system installation and logistics costs, making our PV solutions more attractive to our strategic partners and their customers.

Although the BIPV, EIPV and military portable power solar panel application markets comprise our immediate target markets, in the longer term, we also intend to pursue opportunities in the space satellite and near-space markets. We expect the space satellite and the near-space markets to evolve more gradually than the terrestrial market principally due to the higher degree of product qualifications and flight testing that will be required. We anticipate that our pathway to the space and near-space markets will be through development of modules for experimental space qualification tests and then actual flight experiments with governmental customers, followed by full scale flight arrays on operational systems once the technology and arrays have been fully space qualified. We intend to pursue these opportunities because we believe that the space and near-space markets place a premium on performance and offer a correspondingly high-value opportunity for our technology.

Manufacturing and Manufacturing Strategy

We manufacture our products by affixing a thin CIGS layer to a flexible, plastic substrate, and by using proprietary monolithic integration techniques that enable us to form complete PV modules without engaging in costly back-end assembly of inter-cell connections. Historically, PV manufacturers made PV modules by bonding or soldering discrete PV cells together. This manufacturing step typically increased manufacturing costs and at times proved detrimental to the overall yield and reliability of the finished product. By eliminating this added step using our proprietary monolithic integration techniques, we believe that we can achieve cost savings in, and increase the reliability of, our PV modules. We also use a large-format, roll-to-roll manufacturing process that permits us to fabricate our flexible PV modules in an integrated sequential operation.

While focused on speed to market, we believe that quality and consistency of product will be paramount to our success in the marketplace. Consequently, our path to commercialization is defined by a highly disciplined, staged progression based upon the achievement of key milestones and supported by over fourteen years of concerted research and development activity by our scientists. In keeping with this philosophy, we completed construction of a 1.5 MW production line in December 2007 after having consistently achieved PV cell conversion efficiencies of approximately 10% to 12%, and PV module conversion efficiencies of approximately 6% to 8%, and as high as 9.6%, in a pre-production prototyping and test facility that we have operated since the fourth quarter of 2006. Over time and with further refinement of our existing processes, we believe that our PV modules should be able to achieve efficiencies of 10% to 12%, significantly greater than the 6% conversion efficiency threshold that we believe is necessary for our products to be commercially acceptable in the current marketplace. During 2008 we focused on testing and qualifying our 1.5 MW production line in anticipation of commencing limited regular production. During the first quarter of 2009, we began

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regular production of monolithically integrated flexible CIGS modules from our 1.5MW production line.

The design of the production equipment to be installed in our 30 MW expansion is based on our existing 1.5 MW production line. Our production parameters are currently being developed as we increase throughput rates on the 1.5 MW production line and once proven these will then be implemented in the 30 MW expansion line. Economies of scale should be achieved by applying these increased throughput rates to multiple lines and through increased utilization of ancillary equipment.

As planned we have taken delivery of a one meter wide CIGS deposition system that will be installed in the first half of 2009. Deployment of the one meter wide configuration into commercial production will depend on the outcome of the development work and the timing of our expansion. However, we currently consider the one meter web as a research and development project offering long term cost reduction upsides. Commercial expansion is currently planned with the existing one-third meter web used in the 1.5 MW production line.

We intend to continue to optimize our manufacturing processes including throughput, efficiency and yield to improve product performance and reduce manufacturing costs.

We also intend to identify and evaluate suitable locations for new production lines, domestically and abroad, that we believe will best serve our target markets and customers.

Competition

Today the market for PV products is dominated by large manufacturers of crystalline silicon technology. In 2008, the five largest of these manufacturers were; Q-cells (Germany), Suntech Power Holdings Co., Ltd. (China), Sharp (Japan), Kyocera (Japan), and Motech Industries (Taiwan). In all, there are over 25 manufacturers with annual cell production capacities in excess of 25 MW. We anticipate that while these leaders may continue to dominate the market with their silicon based products for several years, thin-film manufacturers will begin to capture an increasingly larger share of the market.

The landscape of thin-film manufacturers encompasses a broad mix of technology platforms at various stages of development, and consists of a large and growing number of medium and small sized companies. Some of the established crystalline silicon manufacturers have also pursued thin film technologies, either in conjunction with their crystalline efforts, or more recently as a way to diversify their technology portfolios and insulate themselves from silicon supply shocks.

The two largest thin-film PV manufacturers are First Solar, Inc. and Energy Conversion Devices, Inc. First Solar manufactures PV modules by depositing CdTe onto rigid glass plates using monolithic integration techniques similar to ours. Relative to our lightweight, flexible plastic substrates, PV modules using glass substrates are rigid and heavy. First Solar therefore primarily serves the commodity module markets initially targeting large scale, grid-connected solar power projects. Energy Conversion Devices manufactures thin-film a-Si cells on flexible metal foil. These cells must be individually assembled in series and parallel to form an integrated module similar to how c-Si products are manufactured. The additional integration steps required to produce Energy Conversion Devices modules add significant weight and cost and c-Si does not offer the same efficiency upside as CIGS. Both Energy Conversion Devices and First Solar are well established market leaders having occupied top 20 manufacturing positions since 2006.

We believe that our modules offer unique advantages. Our modules have no glass, thus have potentially lower installed balance of systems costs. We use monolithic integration, thus do not require the expensive back end process of wiring cells into modules. In essence we believe that, our features combine low cost and flexibility for monolithically integrated light weight flexible modules suitable for many market sectors with particular application to rooftops.

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Competitors currently developing or selling CIGS-based PV modules include AVANCIS GmbH & Co. KG, Global Solar Energy, Inc., HelioVolt Corporation, Honda Soltec Co. Ltd., MiaSolé, NanoSolar, Inc., Solyndra, SoloPower, Inc. and Würth Solar GmbH & Co. A number of manufacturers that traditionally have manufactured and sold c-Si-based modules have entered, or in the future may enter, the market for thin-film PV modules and, potentially, CIGS-based PV modules. These efforts have been initiated both through internal development and the acquisition of external companies.

Market conditions from 2004 until mid-2008 were ideal for new entrants looking to supply photovoltaic technology. The prevalence of capital and manufacturing subsidies led to a significant increase in the number of new companies pursuing crystalline and thin film technologies. As market dynamics have almost completely reversed in conjunction with the current economic downturn those companies that do not have a sufficiently differentiated product, particularly those offering low efficiency glass based modules, may find themselves unable to compete with establish players and unique technologies.

Research and Development and Intellectual Property

Our core group of scientists has worked together since 1993 in the research and development of CIGS and related PV technologies. We intend to continue to invest in research and development in order to provide near-term improvements to our manufacturing process and products, as well as to identify next-generation technologies relevant to both our existing and potential new markets. Our near-term R&D is focused on simplifying the manufacturing process even further. With regard to our next-generation technologies, we are pursuing multi-junction CIGS designs that we believe, if successfully deployed, would significantly increase the conversion efficiencies of our existing PV modules. We also are engaged in limited research and development activities related to longer term opportunities in the evolving space satellite and near-space markets. During 2008 and 2007 approximately 85% of our research and development activities related to optimizing our manufacturing process and the remaining 15% related to next generation technology including space and near-space research and development activities funded through our awarded government contracts. During 2008 and 2007 we incurred approximately $10.1 million and $8.6 million in research and development activities.

Our technology was initially developed at ITN by our founder and core scientific team beginning in 1994. In early 2006, ITN assigned to us its CIGS PV-specific technologies, and granted to us a perpetual, exclusive, royalty-free, worldwide license to use certain of ITN's existing and future proprietary process and control technologies that, although non-specific to CIGS PV, we believe will be useful in our production of PV modules for our target markets.

We protect our intellectual property through a combination of trade secrets and patent protections. We own the following patents and published patent applications:

1. "Apparatus and method of production of thin film photovoltaic modules "(US Patent No. 7,271,333) (issued September 18, 2007)

2. "Flexible High-Voltage Adaptable Current Photovoltaic Modules and Associated Methods" (PCT/US07/82306; US 11/877,632) (filed October 23, 2007)

3. "Flexible Photovoltaic Array With Integrated Wiring And Control Circuitry, And Associated Methods" (PCT/US07/82271; US 11/877,625) (filed October 23, 2007)

4. "Array of Monolithically Integrated Thin Film Photovoltaic Cells and Associated Methods" (PCT/US08/67772; US 12/143,713) (filed June 20, 2007)

5. "Methods for Fabricating p-Type Cadmium Selenide" (PCT/US08/70240; US 12/174,630) (filed July 16, 2008)

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6. "Hybrid Multi-Junction Photovoltaic Cells and Associated Methods" (PCT/US08/70240; US 12/174,630) (filed July 16, 2008)

In addition, we have one unpublished provisional patent in a related area filed February 5, 2009.

In early April 2006, we entered into a non-exclusive patent license agreement with Midwest Research Institute (MRI). MRI manages and serves as operating contractor for the National Renewable Energy Laboratory (NREL) under a prime contract with the U.S. Department of Energy. Pursuant to the prime contract, MRI acquired the rights to license certain inventions developed at NREL. We have acquired a world-wide, non-exclusive commercial license to the following U.S. patents and their foreign counterparts: U.S. Patent Nos. 5,356,839, 5,441,897 and 5,436,204; European Patent No. EP0694209 and European patent application serial no. 95929367.1 (for the European Union, Belgium, France, United Kingdom, Germany and Netherlands); Japanese Patent Nos. 3130943 and 3258667 and Japanese patent application serial no. 8-508088. The license is effective so long as any claim of the licensed inventions is enforceable. We also have obtained a non-exclusive license from the University of Delaware's Institute of Energy Conversion for U.S. Patent Nos. 6,310,281, 6,372,538, 6,537,845 and 6,562,405, as well as U.S. patent application serial No. 60/620,352. These patents and patent applications relate to the fabrication of CIGS on flexible plastic substrates, the use of laser patterning and thin-film deposition during the fabrication of flexible monolithically-integrated CIGS PV devices and certain process steps that we may use during the manufacturing process.

Suppliers

We rely on several unaffiliated companies to supply certain raw materials used during the fabrication of our PV modules. We acquire these materials on a purchase order basis and do not have long term contracts with the suppliers, although we may enter into such contracts in the future. We currently acquire all of our high-temperature plastic from Ube Industries, Ltd. (Japan), although alternative suppliers of similar materials exist. We purchase component molybdenum, copper, indium, gallium, selenium and indium tin oxides from a variety of suppliers. We also currently are in the process of identifying and negotiating arrangements with alternative suppliers of materials in the United States and Asia. We recently announced our intent to explore a strategic relationship with ITOCHU whereby, among other things, ITOCHU would help us source raw materials for our operations. The manufacturing equipment and tools used in our production process have been purchased from various suppliers in Europe, the United States and Asia. Although we have had good relations with our existing equipment and tools suppliers, we intend to monitor and explore opportunities for developing alternative sources.

Employees

As of February 2, 2009, we had 58 employees of which 7 were executive officers and 1 was part time. We expect the number of employees to grow significantly as we install additional equipment and increase manufacturing capacity.

Company History

We were formed in October 2005 from the separation by ITN of its Advanced Photovoltaic Division and all of that division's key personnel and core technologies. ITN, a private company incorporated in 1994, is an incubator dedicated to the development of thin-film, PV, battery, fuel cell and nano 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 us to commercialize its investment in CIGS PV technologies. In January 2006, ITN assigned to us all its CIGS PV technologies and trade secrets and granted to us a perpetual, exclusive, royalty-free worldwide license to use certain

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of ITN's proprietary process, control and design technologies in the production of CIGS PV modules. Upon receipt of the necessary government approvals in January 2007, ITN assigned government-funded research and development contracts to us and also transferred the key personnel working on the contracts to us. Today, ITN still provides to us, a variety of administrative and technical services such as facilities management, equipment maintenance, procurement, information technology and technical support services. ITN is wholly owned by Inica, Inc. (Inica). Dr. Mohan Misra, Chairman of our Board of Directors and our Chief Executive Officer, and an immediate family member own all of the outstanding shares of Inica.

Corporate Information

We are incorporated under the laws of Delaware, 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 on our website or any other website does not constitute part of this annual report.

Item 1A. Risk Factors

The risks included here are not exhaustive or exclusive. Other sections of this Annual Report may include additional factors which could adversely affect our business, results of operations and financial performance. We operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for management to predict all such risk factors, nor can it assess the impact of all such risk factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results.

We have a limited history of operations, have not generated any revenue from operations and have not commenced commercial production of our PV modules.

We have a limited operating history and have not generated any revenue from operations. We have not commenced commercial production of our PV modules on our 1.5 MW production line. Further, our plans call for expansion of production capacity, but we do not expect to achieve another approximately 30 MW of rated capacity until the middle of 2010. Our ability to achieve our business, commercialization and expansion objectives will depend on a number of factors, including whether:

- we successfully begin commercial production on our 1.5 MW line within our planned time frame;
- our products are successfully and timely certified for use in our target markets;
- we successfully qualify production tools to achieve the efficiencies and yields necessary to reach our cost targets as we expand our rated capacity;
- the cost models on which we intend to rely for the manufacture of our PV modules prove accurate;
- we raise sufficient capital to expand our total rated capacity to approximately 110 MW or more, and whether such capacity will enable us to reach the economies of scale we believe necessary to achieve profitability;
- we receive timely delivery of production tools from our equipment suppliers;
- we effectively manage the planned expansion of our operations; and

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we successfully develop and maintain strategic relationships with key partners, including OEMs, system integrators and distributors, who deal directly with end-users in our target markets.

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

The recent financial crisis could negatively affect our business, results of operations, and financial condition.

The recent financial crisis affecting the banking system and financial markets and the going concern threats to financial institutions have resulted in a tightening in the credit markets; a low level of liquidity in many financial markets; and extreme volatility in credit, fixed income, and equity markets. There could be a number of follow-on effects from the credit crisis on our business, including increased expense or inability to obtain debt financing or raise additional capital; insolvency of key suppliers, resulting in product delays; inability of customers to obtain credit to finance purchases of our products and/or customer insolvencies. The current volatility in the financial markets and overall economic uncertainty increase the risk that the actual amounts realized in the future on our assets will differ significantly from the fair values currently assigned to them.

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

We incurred net losses of $13.2 million in the fiscal year ended December 31, 2008 and reported an accumulated deficit of $25.1 million as of December 31, 2008. We expect to incur net losses for the foreseeable future. Our ability to achieve profitability depends on a number of factors, including the growth rate of the solar energy industry, market acceptance of thin-film and other PV modules, the competitiveness of our PV modules and our ability to increase production volumes. If we are unable to generate sufficient revenue to achieve profitability and positive cash flows, we might be unable to satisfy our commitments and may have to discontinue operations. We cannot assure you that we will be successful in establishing ourselves as a profitable enterprise.

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

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

If the supply of PV modules exceeds the demand for those modules, then we may be forced to reduce the price of our PV modules in order to compete effectively.

Some industry reports forecast overcapacity in the PV module market in ensuing years. In an overcapacity scenario, the supply of PV modules by manufacturers outstrips demand for those products. If either the overall PV module market or our target markets encounter an overcapacity scenario, we

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may be forced to scale back production or reduce the price of our PV modules in order to generate sales. In either case, our business, results of operations and financial condition could be materially and adversely affected.

A significant increase in the supply of silicon feedstock or the significant reduction in the manufacturing cost of c-Si-based PV modules could lead to pricing pressures on PV modules generally and force us to reduce the sales price of our PV modules.

During 2008 there was a significant increase in the supply of silicon feedstock and a significant reduction in the cost of c-Si-based PV modules. This lead to pricing pressures on PV modules generally. In the face of such current and future downward pricing pressures, we might be forced to reduce the sales prices of our PV modules, which, absent a commensurate decrease in our manufacturing costs, could materially and adversely affect our results of operations and financial condition and prevent us from achieving profitability.

We currently do not have certified PV modules and have recorded no sales of such products; further, we expect that significant PV module sales will not occur for some time.

We have recorded no sales of PV modules and have no contracts for such sales. Because we do not plan to commence commercial production until the second quarter of 2009, and because we believe that our PV modules will need to be certified in order for them to be commercially viable for sales into certain markets, it will be several months before we record significant PV module sales, if ever. 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. Further, because we will be required to invest substantial resources in pursuing our target markets in advance of any significant revenue stream that may result from such investments, an unanticipated or longer than expected delay of revenue ramp-up could put a strain on our resources, adversely affecting our business, results of operation and financial condition, and could require us to seek additional capital. See "Risk Factors Our planned expansion to approximately 110 MW of rated capacity will require additional capital which we may not be able to obtain on favorable terms, if at all or without dilution to our stockholders."

A failure or unanticipated delay in securing any necessary or desired certification for our PV modules from government or regulatory organizations could impair sales of our PV modules and materially and adversely affect our results of operations and financial condition.

In order for our PV modules to be commercially sold for use in certain target markets, they must first be certified by certain government or regulatory organizations, such as UL and TÜV. We believe that in some cases, these certifications would be sought by our customers and, in other cases, by us. A failure or unanticipated delay in securing any necessary or desired certification for our PV modules could impair sales of our PV modules and materially and adversely affect our business, results of operations and financial condition.

Failure to receive timely delivery of production tools from our equipment suppliers could delay our planned expansion of manufacturing capacity and materially and adversely affect our results of operations and financial condition.

Our planned expansion of manufacturing capacity and commercialization timeline depend on the timely delivery of production tools from our equipment suppliers. The relationships with our chosen equipment suppliers are relatively new, and at this point in time we cannot be certain that the equipment orders we place with these suppliers will be fulfilled as we expect or in a timely manner. If delivery of production tools is not made on schedule or at all, then we might be unable to carry out our commercialization and manufacturing expansion plans, produce PV modules in the volumes and at

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the times that we expect or generate sufficient revenue from operations, and our business, results of operations and financial condition could be materially and adversely affected.

Failure to expand our manufacturing capacity successfully would adversely impact our ability to sell PV modules into our target markets and would materially and adversely affect our business, results of operations and financial condition.

Our growth plan calls for the installation and operation of additional production tools to achieve the manufacturing capacities and cost efficiencies necessary to compete in our target markets. The successful completion and operation of future production tools will require substantial engineering resources and is subject to significant risks, including risks of cost overruns and delays, risks that we may not be able to successfully acquire, install, combine or operate the equipment needed, or the possibility that one or more of the production tools may never be qualified or become 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, obtain timely delivery of production tools, obtain on reasonable terms adequate facilities in which to install the production tools, or hire and train the additional employees and management needed to operate and maintain the production tools. Failure to meet these objectives on time and within our planned budget could materially and adversely affect our business, results of operations and financial condition.

Failure to consummate strategic relationships with key partners in our various target market segments, such as portable power applications for military and governmental agencies or space and near space high value added solar applications markets as well as the unique BIPV and EIPV markets, and the respective implementations of the right strategic partnerships to enter these various specified markets, could adversely affect our projected sales, growth and revenues.

We intend to sell thin-film PV modules for use in BIPV and EIPV products, such as roofing shingles, siding and facades, metal and composite panels, roofing membranes, electronic packages, casings and accessories, as well as for military and governmental portable power systems and space and near-space solar panel applications. Our marketing and distribution strategy is to form strategic relationships with suppliers to provide a foothold in these target markets. If we are unable to successfully establish working relationships with such market participants or if due to cost, technical or other factors, our PV modules prove unsuitable for use in such applications; our projected revenues and operating results could be adversely affected. Further, to the extent that we are able to establish strategic relationships with key partners and distributors, those relationships may be on a non-exclusive basis (for example, our strategic relationship with Norsk Hydro is non-exclusive), which means that our partners are not obligated to use us as their sole source of PV modules, and may instead choose to use the products of our competitors. Any such reduction in demand for our PV modules may have a material adverse effect on our revenues, results of operations and financial condition.

Our planned expansion to approximately 110 MW or more of rated capacity will require additional capital which we may not be able to obtain on favorable terms, if at all or without dilution to our stockholders.

Our planned expansion to approximately 110 MW or more of total rated capacity will require additional capital. We currently are unable to determine what forms of financing, if any, will be available to us. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our existing stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we raise additional funds through debt financing, which may involve restrictive covenants, our ability to operate our business may be restricted. We cannot assure you that additional financing will be available on terms favorable to us, or at all. If adequate funds are not available or are

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not available on acceptable terms, if and when needed, our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our products, expand capacity to approximately 110 MW or more of total rated capacity, or otherwise respond to competitive pressures could be significantly limited, and our business, results of operations and financial condition could be materially and adversely affected.

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

We will need to significantly expand our operations in order to reduce the incremental manufacturing costs of our PV modules, secure contracts of commercially material amounts with reputable customers and capture a meaningful share of our target markets. To manage the rapid expansion of our operations, we will be required to improve our operational and financial systems, procedures and controls and expand, train and manage our growing employee base. Our management team will also be required to maintain and cultivate our relationships with customers, suppliers and other third parties and attract new customers and suppliers. In addition, our current and planned operations, personnel, facility size and configuration, systems and internal procedures and controls might be inadequate or insufficient to support our future growth. If we cannot manage our growth effectively, we may be unable to take advantage of market opportunities, execute our business strategies or respond to competitive pressures, resulting in a material and adverse effect to our business, results of operations and financial condition.

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

As a public company, we are subject to numerous legal and accounting requirements that do not apply to private companies. The cost of compliance with many of these requirements is substantial, not only in absolute terms but, more importantly, in relation to the overall scope of the operations of a small company. 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.

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

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

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

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

Any delay in the implementation of, or disruption in the transition to, new or enhanced systems, procedures or controls may cause our operations to suffer, and we may be unable to conclude that our internal control over financial reporting is effective and to obtain an unqualified report on internal controls from our auditors as required under Section 404 of Sarbanes-Oxley. If we are unable to complete the required Section 404 assessment as to the adequacy of our internal control over financial reporting, if we fail to maintain or implement adequate controls, or if our independent registered public accounting firm is unable to provide us with an unqualified report as to the effectiveness of our internal control over financial reporting, our ability to obtain additional financing could be impaired. In addition, investors could lose confidence in the reliability of our internal control over financial reporting and in the accuracy of our periodic reports filed under the Securities Exchange Act of 1934, as amended (Exchange Act). A lack of investor confidence in the reliability and accuracy of our public reporting could cause our stock price to decline.

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

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

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

The solar energy industry is at a relatively early stage of development, and the extent to which PV modules, including our own, will be widely adopted is uncertain. If PV technology proves unsuitable for widespread adoption or if demand for PV modules fails to develop sufficiently, we may be unable to grow our business, generate sufficient sales to attain profitability or continue operations. Many factors, many of which are outside of our control, may affect the viability of widespread adoption of PV technology and demand for PV modules, including:

- the cost effectiveness of PV modules and installed PV systems relative to other renewable energy sources, such as wind, geothermal, tidal power and other PV technologies;
- the cost effectiveness of PV modules and installed PV systems relative to conventional carbon-based and other energy sources, such as coal, oil, natural gas and nuclear, and whether the levelized cost of PV can approach that of these conventional energy sources;
- whether PV-generated power reaches grid parity in the geographic markets where our products will be used;

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the availability and amount of government subsidies and incentives to support development of the solar energy industry;

the deregulation of the electric power industry and the broader energy industry;

the emergence of other disruptive technologies in the energy industry;

the ease with which PV solutions can penetrate and adapt to existing energy industry infrastructure;

the availability of raw materials used in the manufacture of PV products; and

availability of capital to fund development of technology in the solar energy market.

Reduced growth in or the reduction, elimination, modification or expiration of government subsidies and economic incentives for solar electricity applications could reduce demand for our products.

National, regional and local governmental bodies in many countries, most notably Germany, Italy, Spain, France, South Korea, Japan, Canada and the United States, have provided support in the form of feed-in tariffs, rebates, tax write-offs and other incentives to end-users, distributors, system integrators and manufacturers of PV products. If any of these subsidies or incentives is discontinued, reduced or substantially modified, if growth in any such subsidies or incentives is reduced, or if renewable portfolio standards or similar production requirements are changed or eliminated, demand for our PV modules in the affected country or countries could decline or never develop, and our results of operations and financial condition could be materially and adversely affected as a result.

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

The solar energy and renewable energy industries are both highly competitive and continually evolving as participants strive to distinguish themselves within their markets and compete with the larger electric power industry. We believe that our main sources of competition are c-Si PV manufacturers, other thin-film PV manufacturers and companies developing other solar solutions, such as solar thermal and concentrated PV technologies.

The thin-film component of the industry is largely made up of a broad mix of technology platforms at various stages of development, and consists of a large and growing number of medium- and small-sized companies. Two of the largest thin-film PV manufacturers are First Solar, Inc. and Energy Conversion Devices, Inc., each of which has reported an installed capacity of 100 MW or greater. First Solar manufactures PV modules using CdTe affixed to glass. Energy Conversion manufactures PV modules using a-Si affixed to flexible metal foil. Competitors currently developing or selling CIGS-based PV modules include AVANCIS GmbH & Co. KG, Global Solar Energy, Inc., HelioVolt Corporation, Honda Soltec Co. Ltd., MiaSolé, NanoSolar, Inc., Solyndra, SoloPower, Inc. and Würth Solar GmbH & Co. We believe that a number of manufacturers that traditionally have manufactured and sold c-Si-based modules have entered, or in the future may enter, the market for thin-film PV modules and, potentially, CIGS-based PV modules.

Many of our existing and potential competitors have substantially greater financial, technical, manufacturing and other resources than we do. A competitor's greater size provides them with a competitive advantage because they often can realize economies of scale and purchase certain raw materials at lower prices. Many of our competitors also have greater brand name recognition, established distribution networks and large customer bases. In addition, many of our competitors have well-established relationships with our current and potential partners and distributors and have extensive knowledge of our target markets. As a result of their greater size, these competitors may be able to devote more resources to the research, development, promotion and sale of their products or

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respond more quickly to evolving industry standards and changes in market conditions than we can. Our failure to adapt to changing market conditions and to compete successfully with existing or future competitors could materially and adversely affect our business, results of operations and financial condition.

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

Norsk Hydro currently owns approximately 35% of all issued and outstanding shares of our common stock and until June 15, 2009, Norsk Hydro is required to obtain Board approval for the purchase of more than 35% of the common shares outstanding. See "Certain Relationships and Related Transactions, and Director Independence Transactions Involving Norsk Hydro Produksjon AS." As a result, Norsk Hydro may have the ability to prevent any transaction that requires the approval of stockholders regardless of whether other stockholders believe that any such transaction is in their own best interests. Additionally, Norsk Hydro currently holds two seats on our Board of Directors, which afford Norsk Hydro greater control and influence over matters affecting our business.

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

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

Although our reporting currency is the U.S. dollar, we may conduct business and incur costs in the local currencies of other countries in which we operate, make sales or buy equipment or materials. As a result, we are subject to currency translation risk. For example, in 2007 we purchased equipment from suppliers in Japan, the United Kingdom and Germany, and our capital expenditures exceeded budgeted amounts due to the decline of the U.S. dollar versus the British pound and the euro. Until, and in some cases after, we place firm purchase orders for capital equipment with each of our suppliers, changes in currency exchange rates could significantly increase our capital expenditures beyond what we have budgeted. Further, changes in exchange rates between foreign currencies and the U.S. dollar could affect our net sales and cost of sales and could result in exchange losses. We cannot accurately predict future exchange rates or the overall impact of future exchange rate fluctuations on our business, results of operations and financial condition.

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

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

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yield PV modules with lower conversion efficiencies, higher failure rates and higher rates of degradation than PV modules manufactured with the raw materials from our current suppliers.

Any change to our relationship with ITN could disrupt certain aspects of our business operations, including our research and development activities.

Pursuant to a Service Center Agreement in place until December 31, 2009, we have the right to use certain of ITN's laboratories, equipment and research and development tools on an as needed basis. Also, pursuant to an Administrative Services Agreement in place until December 31, 2008, ITN provides us with certain administrative services at cost, such as facilities management, equipment maintenance, procurement, information technology and technical support. See "Certain Relationships and Related Transactions, and Director Independence Transactions with ITN Energy Systems, Inc." We have relied on these arrangements to conduct a large portion of our research and development activities, including those related to development and improvements of new PV technologies that may affect the viability of our products in the future. We also have relied on these arrangements for back office support services at what we believe are competitive prices. Any change to our existing relationship with ITN, including the sale of ITN to a third party or termination or alteration of the Service Center Agreement or Administrative Services Agreement, could disrupt our research and development activities and other aspects of our business. Among other things, we may be forced to seek and obtain access to different sources of laboratory equipment and tools, or we may be forced to find alternative providers of affected administrative services, or to perform administrative services ourselves. We cannot guarantee that we would be able to do so on the same or as favorable terms than we currently have with ITN, or at all; and the increased costs of alternative arrangements may materially and adversely affect our business, results of operations and financial condition.

Our search for and retention of a qualified President and Chief Executive Officer, or our inability to identify and retain a qualified Chief Executive Officer, could be disruptive to and harm our business.

Dr. Mohan Misra, Chairman of the Board has been serving, on an interim basis, as President and Chief Executive Officer since September 2008. If we fail to hire and retain a qualified person to permanently fill that position, we may not be able to satisfactorily manage our business or address the complexities of being a public company. Although we currently are interviewing candidates for the President and Chief Executive Officer position, we cannot assure you that we will find someone suitable to fill this position. There also are no assurances that our President and Chief Executive Officer, once retained, will work well with our current management team or that his or her transition into the role will be efficient. Our inability to find and employ a qualified President and Chief Executive Officer or to facilitate his or her smooth transition into the role could have a material adverse effect on our business, results of operations and financial condition.

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

Our success depends on the continuing efforts and abilities of our executive officers, including Dr. Mohan Misra, our interim President, Chief Executive Officer and our Chief Strategy Officer, Dr. Prem Nath, our Senior Vice President of Production Operations, and Dr. Joseph Armstrong, our Chief Technology Officer. Our future success also will depend on our ability to attract and retain highly skilled employees, including management, technical and sales personnel. In addition, none of our management or employees are subject to non-compete agreements. The loss of any of our key personnel, the inability to attract, retain or assimilate key personnel in the future, or delays in hiring required personnel could materially harm our business, results of operations and financial condition.

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

We do not have sufficient life cycle data for our thin-film PV modules to reliably predict their lifespan in the field. Pending collection of such data over time, we may not be able to offer customers warranty terms equivalent to those of our competitors, which may adversely impact sales or market acceptance of our PV modules. Further, even if we offer warranty terms equivalent to those of our competitors, at this time we cannot guarantee that our PV modules will perform as expected during the lifespan that our customers will expect. If our PV modules fail to perform as expected while under warranty, or if we are unable to support the warranties, sales of our PV modules may be adversely affected or our costs may increase, and our business, results of operations and financial condition could be materially and adversely affected.

Our failure to further refine our technology and develop and introduce improved PV modules could render our PV modules uncompetitive or obsolete and adversely affect sales of our PV modules and our ability to be profitable.

We will need to invest significant financial resources in research and development to keep pace with technological advances in the solar energy industry. However, research and development activities are inherently uncertain and we could encounter practical difficulties in commercializing our research results. Our expenditures on research and development may not produce corresponding benefits. Other companies are developing a variety of competing PV technologies and could produce PV modules that prove more cost-effective or have better performance or reliability than our PV modules. As a result, our PV modules may be rendered obsolete or unattractive by the technological advances of others, which could reduce sales of our PV modules and adversely affect our business, results of operations and financial condition.

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

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

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

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

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

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

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

We have applied for patent protection in the U.S. relating to certain existing and proposed technologies and processes and services. While we generally apply for patents in those countries where we intend to make, have made, use, or sell patented products, we may not accurately predict all of the countries where patent protection will ultimately be desirable. If we fail to timely file a patent application in any such country, we may be precluded from doing so at a later date. Furthermore, we cannot assure you that any of our patent applications will be approved. We also cannot assure you that the patents issued as a result of our foreign patent applications will have the same scope of coverage as our United States patents. The patents we own could be challenged invalidated or circumvented by others and may not be of sufficient scope or strength to provide us with any meaningful protection or commercial advantage. Further, we cannot assure you that competitors will not infringe our patents, or that we will have adequate resources to enforce our patents.

Many patent applications in the U.S. are maintained in secrecy for a period of time after they are filed, and since publication of discoveries in the scientific or patent literature tends to lag behind actual discoveries by several months, we cannot be certain that we will be the first creator of inventions covered by any patent application we make or that we will be the first to file patent applications on such inventions. Because some patent applications are maintained in secrecy for a period of time, there is also a risk that we could adopt a technology without knowledge of a pending patent application, which technology would infringe a third party patent once that patent is issued.

We also rely on unpatented proprietary technology. It is possible that others will independently develop the same or similar technology or otherwise obtain access to our unpatented technology. To protect our trade secrets and other proprietary information, we require our employees, consultants and advisors to execute proprietary information and invention assignment agreements when they begin working for us. We cannot assure you that these agreements will provide meaningful protection of our trade secrets, know-how or other proprietary information in the event of any unauthorized use, misappropriation or disclosure of any such trade secrets, know-how or other proprietary information. Despite our efforts to protect this information, unauthorized parties may attempt to obtain and use

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information that we regard as proprietary. If we are unable to maintain the proprietary nature of our technologies, we could be materially adversely affected.

Although we rely on copyright laws to protect the works of authorship created by us, we do not register the copyrights in all of our copyrightable works. Copyrights of U.S. origin must be registered before the copyright owner may bring an infringement suit in the United States. Furthermore, if a copyright of U.S. origin is not registered within three months of publication of the underlying work, the copyright owner is precluded from seeking statutory damages or attorneys' fees in any United States enforcement action, and is limited to seeking actual damages and lost profits. Accordingly, if one of our unregistered copyrights of U.S. origin is infringed by a third party, we will need to register the copyright before we can file an infringement suit in the United States, and our remedies in any such infringement suit may be limited.

In addition, when others 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 intellectual property rights that are licensed to us does not adequately protect those rights, our rights may be impaired, which may impact our ability to develop, market and commercialize our products. Further, if we breach the terms of any license agreement pursuant to which a third party licenses us intellectual property rights, our rights under that license may be affected and we may not be able to continue to use the licensed intellectual property rights, which could adversely affect our ability to develop, market and commercialize our products.

Further, some of our patents and related know how and other technology may cover inventions that were conceived or first reduced to practice under, or in connection with, U.S. government contracts or other federal funding agreements. Although we retain ownership of intellectual property developed during the performance of government contracts, the U.S. government may retain a nonexclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the invention throughout the world. Further, the federal government may retain the right to impose a compulsory license in certain circumstances through the exercise of "march-in" rights under which it can compel us to license the intellectual property. If the government were to exercise "march-in" rights, we could be forced to license intellectual property developed by us on terms unfavorable to us, and our business could be materially and adversely affected. Furthermore, our ability to exclusively license or assign the intellectual property developed under these federal funding agreements to third parties may be limited or subject to the U.S. government's approval or oversight. These limitations could have a significant impact on the commercial value of the developed intellectual property in the U.S., and similar rights may be present in other countries. If one or more governments should exercise such rights, our ability to achieve profitability could be compromised and our business prospects harmed.

Our means of protecting our intellectual property 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, which could result in significant costs or substantial damages to our business and our inability to manufacture, market or sell our products.

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

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

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pending patent applications owned by third parties that may relate to current and future generations of solar energy. The owners of these patents may assert that the manufacture, use or sale of any of our products infringes one or more claims of their patents. Moreover, because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued patents that materially and adversely affect our business. Third parties could also assert claims against us that we have infringed or misappropriated their intellectual property rights. Whether or not such claims are valid, we cannot be certain that we have not infringed the intellectual property rights of such third parties. Any infringement or misappropriation claim could result in significant costs or substantial damages to our business or an inability to manufacture market or sell any of our PV modules that are found to infringe or misappropriate. Even if obtaining a license were feasible, it could be costly and time consuming. Even if we were to prevail in any such action, the litigation could result in substantial cost and diversion of resources that could materially and adversely affect our business. The large number of patents, the rapid rate of new patent issuances, the complexities of the technology involved and uncertainty of litigation increase the risk of business assets and management's attention being diverted to patent litigation.

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

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

difficulty in procuring supplies and supply contracts abroad;

difficulty in enforcing agreements in foreign legal systems;

foreign countries imposing additional withholding taxes or otherwise taxing our foreign income, imposing tariffs or adopting other restrictions on foreign trade and investment, including currency exchange controls;

inability to obtain, maintain or enforce intellectual property rights;

risk of nationalization;

changes in general economic and political conditions in the countries in which we may operate, including changes in the government incentives we might rely on;

unexpected adverse changes in foreign laws or regulatory requirements, including those with respect to environmental protection, export duties and quotas;

difficulty with staffing and managing widespread operations;

trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make us less competitive in some countries; and

difficulty of and costs relating to compliance with the different commercial and legal requirements of the international markets in which we plan to offer and sell our PV modules.

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

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Our failure to secure proper sites and facilities in which to install manufacturing equipment could adversely affect our business and results of operations.

We intend to install manufacturing equipment both domestically and abroad. Selecting suitable locations for this equipment requires consideration of a variety of factors, including availability of a skilled workforce, size and configuration of facilities, proximity to customers, transportation and infrastructure, cost of land and facilities, currency exchange rates and the prevailing political and regulatory environment. A variety of factors related to the location and selection of such sites and facilities could cause our operations to miss our expectations, and adversely affect our business, results of operations and financial condition.

Our failure to qualify for Small Business Innovation Research funding could adversely impact our revenues from research and development contracts; further, upon the exercise of "march-in" rights by the federal government, we could be forced to license intellectual property developed by us on terms unfavorable to us.

We currently receive funding for research and development under the Small Business Innovation Research (SBIR) program. In 2008, our revenues generated from performance of these contracts totaled approximately $1.5 million. In order to continue to qualify for this funding, we must remain American-owned and independently operated and our size must remain under 500 employees. As a result of our relationship with Norsk Hydro and our planned expansion plans, we cannot guarantee that we will be able to continue to qualify for SBIR funding. If we fail to qualify for SBIR funding, our revenues from research and development could decline or cease, and our net income and financial condition could be could materially and adversely affected.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our facilities are located in Littleton, Colorado. We sublease approximately 14,200 square feet of office and manufacturing space at cost from ITN, which occupies space adjacent to ours. ITN leases the property from the Fontana Family Trust. The sublease expires in June 2010. In 2009, we expect to pay ITN approximately $19,000 per month in rent, plus pass-through expenses such as taxes, insurance, water and utilities. We may sublease additional space from ITN as the need arises.

On February 8, 2008, the Company acquired an approximately 120,000 square foot manufacturing and office facility in Thornton, Colorado, for approximately $5.5 million. The building purchase, improvements and expansion were partially financed by a $7.5 million loan from the Colorado Housing and Financing Authority. The facility is being renovated and reconfigured and expanded by approximately 30,000 square feet to accommodate 30 MW of rated production capacity.

Item 3. Legal Proceedings

None.

Item 4. Submission of Matters to a Vote of Security Holders

None.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our Common Stock is traded on the NASDAQ Global Market under the symbol "ASTI." The following table sets forth the high and low sales price information per share for our Common Stock for the last two completed fiscal years.

Price Range of Common Stock

	High	Low
Fiscal 2007		
First Quarter	$10.44	$ 2.41
Second Quarter	$11.34	$ 6.99
Third Quarter	$19.75	$ 6.50
Fourth Quarter	$28.35	$13.17
Fiscal 2008		
First Quarter	$27.95	$ 8.02
Second Quarter	$18.39	$10.10
Third Quarter	$10.31	$ 5.65
Fourth Quarter	$ 6.80	$ 2.57

Holders

As of December 31, 2008, the number of record holders of our Common Stock was 57, and there were no holders of Preferred Stock. The vast majority of our publicly-traded shares are held in street name, and we believe that the number of beneficial owners of our stock was approximately 11,200 as of February 4, 2009.

Dividends

The holders of Common Stock are entitled to receive such dividends as may be declared by our Board of Directors. During the years ended December 31, 2008 and 2007, we did not pay any dividends, and we do not expect to declare or pay any dividends in the foreseeable future. Payment of future dividends will be within the discretion of our Board of Directors and will depend on, among other factors, our retained earnings, capital requirements, and operating and financial condition.

Recent Sales of Unregistered Securities

The Company completed a private placement of securities with Norsk Hydro Produksjon AS (Hydro) in March 2007. Hydro is a subsidiary of Norsk Hydro ASA. Hydro purchased 1,600,000 shares of the Company's common stock (representing 23% of the Company's outstanding common stock post transaction) for an aggregate purchase price of $9,236,000. In connection with the private placement, Hydro was granted options to purchase additional shares and warrants.

In August 2007, Hydro acquired an additional 934,462 shares of the Company's common stock and 1,965,690 Class B warrants through the exercise of an option previously granted to Hydro and approved by Ascent's stockholders in June 2007. Gross proceeds to the Company were $10.48 million, and reflected per share and per warrant purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. After acquiring these additional shares, Hydro again held 23% of the total outstanding common shares, after

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its holdings were diluted as the result of the redemption of Class A warrants and 23% of total outstanding Class B warrants. Pursuant to a second option that was approved by Ascent's stockholders in June 2007, beginning December 13, 2007, Hydro was entitled to purchase additional shares and Class B warrants up to a maximum of 35% of each class of security.

In March 2008, Hydro acquired an additional 2,341,897 shares of the Company's common stock and 1,689,905 Class B warrants through the exercise of the second option previously granted to Hydro and approved by Ascent's stockholders in June 2007, resulting in Hydro ownership of approximately 35% of each class of security. Gross proceeds to the Company were $28.4 million, and reflected per share and per warrant purchase prices were equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. As a result of the Company's Secondary Public Offering in May 2008, Hydro's holdings were diluted to approximately 27%.

On October 8, 2008, Hydro acquired an additional 2,421,801 shares of the Company's common stock. The purchase resulted in a return to Hydro's ownership of approximately 35% of the Company's common stock. Gross proceeds to the company from the follow on investment were approximately $15 million, and reflect per share purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. Until June 15, 2009, the second option entitles Hydro to purchase from the Company additional restricted shares of common stock and Class B warrants to maintain ownership of up to 35% of issued and outstanding common stock and Class B warrants.

The sales to Hydro were effected pursuant to Section 4(2) of the Securities Act of 1933 and/or Regulation D promulgated thereunder.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. Selected Financial Data

Not applicable.

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Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our financial condition and results of operations should be read in conjunction with our audited financial statements and the notes to those financial statements appearing elsewhere in this Form 10-K. This discussion and analysis contains statements of a forward-looking nature relating to future events or our future financial performance. As a result of many factors, our actual results may differ materially from those anticipated in these forward- looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

Overview

We are a development stage company formed to commercialize flexible PV modules using proprietary technology. For the year ended December 31, 2008, we generated approximately $1.5 million in revenues, none of which resulted from our planned principal operations to commercialize flexible PV modules. As of December 31, 2008, we had an accumulated deficit of approximately $25.1 million. Under our current business plan, we expect losses to continue through 2009 at which point we plan to commence production on our initial 30 MW manufacturing line that is currently in development. To date, we have financed our operations primarily through public and private equity financings including our recent secondary public offering of 4,370,000 shares of common stock with net proceeds of approximately $56.8 million completed in May 2008, and an additional investment of approximately $15 million by our largest shareholder Norsk Hydro in October 2008. The proceeds from these stock sales are primarily being utilized to fund the equipment purchases for our 30 MW production facility in Thornton, Colorado.

While focused on speed to market, we believe that quality and consistency of product will be paramount to our success in the marketplace. Consequently, our path to commercialization is defined by a highly disciplined, staged progression based upon the achievement of key milestones and supported by over fourteen years of concerted research and development activity by our scientists. Our progression also takes into account market conditions, as well as financing options. In keeping with our philosophy, we completed construction of a 1.5 MW production line in December 2007. In March 2008, we demonstrated initial operating capability (IOC) of our 1.5 MW production line by initiating production trials as an end-to-end integrated process. Early IOC production trials resulted in average thin-film device efficiencies of 9.5% and small area monolithically integrated module efficiencies of over 7%. Recent and ongoing production optimization trials have resulted in thin-film device efficiencies in the 9.5% to 11.5% range and corresponding module efficiencies in the 7.0% to 9.0% range. In the fourth quarter 2008 the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) independently verified that the modules produced on our 1.5 MW line measured as high as 9.64% in conversion efficiency. The test modules measured six inches wide by one foot long and serve as our building block for both BIPV and portable power products. During 2008 we focused on testing and qualifying our 1.5 MW production line in anticipation of commencing limited regular production. During the first quarter of 2009, we began regular production of monolithically integrated flexible CIGS modules from our 1.5 MW production line. We expect that process optimization will be an ongoing effort as we continuously strive for improvements in production yield, production throughput, and product efficiency that have a direct bearing on our cost competitiveness in the marketplace.

During 2008, we initiated the critical tasks of internal product testing and product development with customers. In 2009, we continued those tasks further and have commenced prototype development with our BIPV, EIPV and military customers by providing them test samples from our 1.5MW production line. At the same time we expect to complete the internal testing and product certification in the second half of 2009.

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The Company's new manufacturing facility in Thornton, Colorado is in the final stages of completion and will be ready to accommodate installation of the equipment in second quarter of 2009. Production tooling and equipment for the 30 MW plant began arriving in the first quarter of 2009 and installation is scheduled to be completed in the first half of 2010. We expect to begin production with an annual rated capacity of 15 MW by the middle of 2010, and 30 MW of annual capacity by the end of 2010. We intend to incrementally expand our production capacity to 110 MW or greater by adding more capacity based on manufacturing developments, market conditions and availability of financing.

Commercialization and Manufacturing Expansion Plan

We intend to be the first company to manufacture large, roll-format, PV modules in commercial quantities that use CIGS on a flexible, plastic substrate. Our manufacturing expansion plan entails the design, installation, qualification, testing and operation of additional production tools to increase our rated production capacity. We intend to incrementally expand our aggregate production capacity to 30 MW by attaining the following milestones within the time frames indicated:

Second half of 2009: complete product certification with Underwriters Laboratory (UL) in the U.S. and Technischer Überwachungs-Verein (TÜV) in Europe from 1.5 MW production line.

Fourth quarter of 2009: begin qualification of production tools for the first 30 MW.

First half of 2010: begin production and ramp up of the first half of initial 30 MW capacity.

Second half of 2010: commence ramp up to full 30 MW of rated capacity.

Although we currently plan to expand our production capacity to 110 MW or more by adding more capacity, the actual timing and amount of production capacity for the initial 30 MW and follow on capacity that we install may significantly deviate due to market conditions, availability of financing, timeliness of delivery of production tools, product performance and other factors described in this Annual Report.

We therefore expect to have approximately 110 MW of rated production capacity in place by the end of 2011. Rated production capacity refers to our expected level of annual production upon optimization of our production process and is based on assumed production yields and module efficiencies. The actual production levels that we are able to realize at any point during our planned expansion will depend on a variety of factors, including our ability to optimize our production process to achieve targeted production yields and module efficiencies.

Although we currently plan to expand our production capacity in accordance with the timeline above, the actual timing and amount of production capacity that we install may significantly deviate from the above plan due to market conditions, availability of financing, timeliness of delivery of production tools, product performance and other factors described in this Annual Report. See "Significant Trends, Uncertainties and Challenges" below. We also recognize the importance of developing strategies and plans that may allow for the timely acceleration of our production beyond the current plan in order to meet market demand and the challenges from competitors who are presently expanding their operations.

Although we do not expect that minor delays in product certifications would significantly affect our ability to continue developing product applications with our customers, delays that extend significantly beyond mid-2009 likely would impact our ability to develop demand for our PV modules, and would affect our planned sales and results of operations in 2010, when we expect to have commenced production using our planned production tools for approximately 30 MW of rated capacity.

Using our 1.5 MW production line as a model, we have consummated the fixed price delivery contracts for the majority of the production tools for the 30 MW line. The equipment supplier schedules in the supply agreements provide for the installation of the majority of the production tools

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by the end of the third quarter of 2009. We plan to commence production ramp up to 30 MW of rated capacity by the end of the first quarter 2010. In order to qualify approximately 30 MW of rated capacity by the end of 2009, we intend to purchase and install production tools that will process one-third meter wide plastic rolls similar to those used in our existing 1.5 MW production line. Significant delays in achieving desired production yields, module efficiencies or other performance metrics on the 1.5 MW production line and/or delays in the delivery, installation and qualification of the 30 MW production tools may impact our real and projected product sales in 2010.

We have initiated engineering and development of the one meter wide production tools to support future expansion of rated capacity. Successfully transitioning to one meter wide rolls should significantly increase our throughput, thereby reducing the number of manufacturing tools and, hence, the amount of capital expenditures required for equipment and facilities. Generally speaking, we believe that all other process variables, such as speed, thickness and composition, should remain unchanged. Based upon discussions with our equipment suppliers, we have identified deposition of the CIGS layer in the one meter wide format as the most challenging aspect of transitioning to one meter wide rolls; consequently, we have initiated the development of one meter wide prototype CIGS and molybdenum production tools to enable us to begin evaluating and testing one meter wide area deposition sources and process control systems. The one meter CIGS prototype production tool is scheduled for installation in 2009 and the one meter molybdenum production tool is scheduled for delivery in 2010. We plan to conduct six to nine months of testing and evaluation prior to committing the capital in to procure the one meter format production tools to support further expansion of rated capacity. Our planned expansion to approximately 110 MW of rated capacity will require additional capital, which we may not be able to obtain on favorable terms, if at all or without dilution to our stockholders.

Capital Equipment Expenditures and Manufacturing Costs

Since our formation in October 2005, most of our cash outlays have gone toward the investment in capital equipment necessary to develop our manufacturing capabilities for producing the commercial products we envision. We expect this trend to continue into the foreseeable future as we expand to approximately 110 MW of rated capacity by the end of 2011. We will require additional capital and additional facilities to achieve our manufacturing expansion plans. If we are unable to secure the necessary capital or to manage the disbursement of capital taking into consideration any unforeseen factors, such as cost increases from our equipment suppliers and the potential negative changes in the value of the U.S. dollar against foreign currencies, our ability to expand our manufacturing capacity as planned, as well as our financial performance and results of operations, may be adversely affected.

We currently expect the capital expenditures to support the first 30 MW of rated capacity to total approximately $95 million to $100 million for manufacturing equipment and approximately $16 million for the acquisition and renovations of our new manufacturing facility in Thornton, Colorado. We also expect capital expenditures of approximately $8 million for installation, qualification and other associated pre-operating expenses related to the first 30 MW expansion. In addition, we have budgeted approximately $7 million in 2008 and 2009 for the procurement and installation of the one meter wide manufacturing development tools, sources, and sensor control systems. In order to install the next 30 MW and then additional 50 MW of rated capacity, we expect that we will require another approximately $225 million to $235 million for property, plant and equipment and approximately $15 million for installation, qualification and other associated pre-operating expenses. Capital expenditure estimates for our expansion reflect an increase from our previous estimates primarily due to higher costs for equipment infrastructure, as well as higher estimated costs for certain equipment.

Our major equipment suppliers are located in Japan, the United Kingdom and Germany. To manage the uncertainties related to the procurement of capital equipment, we have continued to work closely with our equipment suppliers to complete the engineering of our new tools and refine the estimates of our planned capital outlays. The production tool costs are subject to change until we place

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firm procurement orders with our suppliers. To manage the fluctuations of foreign exchange rates, we have implemented forward pricing contracts for certain agreements denominated in foreign currencies.

Significant Trends, Uncertainties and Challenges

We believe that the significant trends, uncertainties and challenges that directly or indirectly affect our financial performance and results of operations are:

Our ability to achieve desired production yields, module efficiencies and other performance targets, and to obtain necessary or desired certifications for our PV modules;

Our ability to expand production in accordance with our plans set forth above under "Commercialization and Manufacturing Expansion Plan" to add approximately 30 MW of rated capacity by the end of 2009,

another approximately 30 MW of rated capacity by the end of 2010 and another approximately 50 MW of rated capacity by the end of 2011, and to achieve certifications of our planned PV modules;

Our ability to achieve projected operational performance and cost metrics;

Our ability to consummate strategic relationships with key partners, including original equipment manufacturer (OEM) customers, system integrators, and distributors who deal directly with end-users in the BIPV, EIPV, portable power, and commodity solar panel markets;

The effect that currency fluctuations may have on our capital equipment purchases, manufacturing costs and the price of our planned PV modules;

Our ability to manage the planned expansion of our manufacturing facilities, operations and personnel; and

Our ability and the ability of our distributors, suppliers and customers to manage operations and orders during the global financial crisis; and

Our ability to identify and retain a qualified permanent president and chief executive officer.

Basis of Presentation: The Company's activities to date have substantially consisted of raising capital, research and development, and the development of a 1.5 MW production plant and additional 30 MW expansion plant. Revenues to date have been generated from the Company's governmental research and development (R&D) contracts and have not been significant. The Company's planned principal operations to commercialize flexible PV modules have not yet commenced. Accordingly, the Company is considered to be in the development stage, as defined in Statement of Financial Accounting Standards No. 7 (SFAS No. 7), "*Accounting and Reporting by Development Stage Enterprises*."

Cash Equivalents: The Company considers all highly liquid debt securities purchased with an original maturity of three months or less to be cash equivalents. The Company maintains cash balances which may exceed federally insured limits. The Company does not believe that this results in significant credit risk.

Investments: The Company accounts for investments in accordance with SFAS No. 115, "*Accounting for Certain Investments in Debt and Equity Securities.*" The Company has classified its investments as "available-for-sale". Such investments are carried at fair value, based on

quoted market prices with the unrealized holding gains and losses reported as Accumulated other comprehensive income (loss) in the stockholders' equity section of the balance sheet. Realized gains and losses on sales of securities are computed using the specific identification method. The Company evaluates declines in market value for potential impairment. If the decline results in a value below cost and is

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determined to be other than temporary, the investment is written down to its impaired value and a new cost basis is established.

Fair Value estimates: The fair value of an asset or liability is the amount at which it could be exchanged or settled in a current transaction between willing parties. The carrying value for cash and cash equivalents, investments, restricted cash, accounts receivable, accounts payable, accrued property and equipment, accrued expenses and other assets and liabilities approximate their fair values due to their short maturities. Effective January 1, 2008, the Company adopted SFAS No. 157, *"Fair Value Measurements"* (SFAS 157). In February 2008, the FASB issued FASB Staff Position No. FAS 157-2, *"Effective Date of FASB Statement No. 157"*, which provides a one year deferral of the effective date of SFAS 157 for non-financial assets and non-financial liabilities, except those that are recognized or disclosed in the financial statements at fair value at least annually. Therefore, the Company has adopted the provisions of SFAS 157 with respect to its financial assets and liabilities only. SFAS 157 defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. Fair value is defined under SFAS 157 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

Foreign Currency translation: Bank account balances related to our forward contracts are translated to U.S. dollars utilizing the period end exchange rate. Gains or losses on foreign currency translations are recorded in other income/loss in the statement of operations.

Revenue Recognition: Revenue to date is from governmental research and development contracts under terms that are cost plus fee or firm fixed price. Revenue from cost plus fee contracts is recognized as costs are incurred on the basis of direct costs plus allowable indirect costs and an allocable portion of the firm fixed fee. Revenue from firm fixed price contracts is recognized under the percentage-of-completion method of accounting, with costs and estimated profits included in contract revenue as work is performed. If actual and estimated costs to complete a contract indicate a loss, provision is made currently for the loss anticipated on the contract.

Patents: At such time as the Company is awarded patents, patent costs are amortized on a straight-line basis over the legal life, or over their estimated useful lives, whichever is shorter. As of December 31, 2008, the Company had $137,781 of net patent costs of which $29,417 represent costs net of amortization incurred for an awarded patent, and the remaining $108,364 represents costs incurred for patent applications filed. Amortization expense for the years ended December 31, 2008 and 2007 was $5,116 and $1,279, respectively.

Property and Equipment: Property and equipment are recorded at the original cost to the Company. Assets are being depreciated over estimated useful lives of one to ten years using the straight-line method, commencing when the asset is placed in service. Leasehold improvements are depreciated over the shorter of the remainder of the lease term or the life of the improvements. Upon retirement or disposal, the cost of the asset disposed of and the related accumulated depreciation are removed from the accounts and any gain or loss is reflected in income. Expenditures for repairs and maintenance are expensed as incurred.

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The Company computes depreciation expense using the straight-line method over the estimated useful lives of the assets, as presented in the table below. We amortize leasehold improvements over the shorter of their estimated useful lives or the remaining term of the lease.

	Useful Lives in Years
Buildings	40
Manufacturing machinery and equipment	5 - 10
Furniture, fixtures, computer hardware/software	3 - 7
Leasehold improvements	life of lease

Long-lived assets: We account for our long-lived, tangible assets and definitive-lived intangible assets in accordance with Statement of Financial Accounting Standards No. (SFAS, 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*). As a result, we assess long-lived assets classified as "held and used", including our property, plant and equipment, for impairment whenever long-lived asset may not be recoverable. These events would include significant current period operating or cash flow losses associated with the use of a long-lived asset or group of assets combined with a history of such losses, significant changes in the manner of use of assets and significant negative industry or economic trends. We evaluated our long-lived assets for impairment for the period ending December 31, 2008 and concluded that no valuation allowances were required.

Risks and Uncertainties: The Company's operations are subject to certain risks and uncertainties, including those associated with: the ability to meet obligations; continuing losses; fluctuation in operating results; funding expansions; strategic alliances; financing arrangement terms that may restrict operations; regulatory issues; and competition. Additionally, U.S. government contracts may be terminated prior to completion of full funding by the U.S. government.

Net loss per Common Share: Statement of Financial Accounting Standards No. 128, "*Earnings Per Share,"* provides for the calculation of "Basic" and "Diluted" earnings per share. Basic earnings per share include no dilution and are computed by dividing income available to common stockholders by the weighted-average number of shares outstanding during the period. Diluted earnings per share reflect the potential of securities that could share in the earnings of the Company, similar to fully diluted earnings per share. Common stock equivalents consisting of Class B warrants, IPO warrants (representative warrants), and stock options outstanding as of December 31, 2008 of approximately 12 million shares, have been omitted from loss per share because they are anti-dilutive. Basic and diluted loss per share was the same in each of the periods ended December 31, 2008 and 2007.

Research and Development Costs: Research and development costs are incurred during the process of researching and developing new products and enhancing our manufacturing processes and consist primarily of compensation and related costs for personnel, materials, supplies and equipment depreciation. We expense these costs as incurred until the resulting product has been completed and tested and is ready for commercial manufacturing. We also incur research and development expenses on our U.S. federal government research and development contracts and expense as incurred.

Incomes Taxes: Deferred income taxes are provided using the liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carry forwards and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of the changes in tax laws and rates as of the date of enactment. Interest and penalties, if applicable would be recorded in operations.

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In July 2006, the FASB issued FASB Interpretation (FIN 48),"*Accounting for Uncertainty in Income Taxes*." The Company adopted the provisions of FIN 48 on January 1, 2007. As defined, FIN 48 seeks to reduce the diversity in practice associated with certain aspects of the recognition and measurement related to accounting for income taxes. The Company became subject to the provisions of FIN 48 as of January 1, 2007, and has analyzed filing positions in all of the federal and state jurisdictions where it is required to file income tax returns, as well as all open tax years in these jurisdictions. The Company has identified its federal tax return and its Colorado tax return as "major" tax jurisdictions, as defined. The periods subject to examination for the Company's federal and state tax returns are tax years 2005 through 2007. The Company believes that its income tax filing positions and deductions will be sustained on audit and does not anticipate any adjustments that will result in a material adverse effect on the Company's financial condition, results of operations, or cash flows. Therefore, no reserves for uncertain income tax positions have been recorded pursuant to FIN 48. In addition, the Company did not record a cumulative effect adjustment related to the adoption of FIN 48.

Stock Based Compensation: The Company accounts for share-based payments under the provisions of Statement of Financial Accounting Standards No. 123 (revised 2004), "*Share-Based Payment,"* (SFAS 123(R)) which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees, officers, directors, and consultants, including employee stock options based on estimated fair values. SFAS 123(R) requires companies to estimate the fair value of share-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service period in the Company's Statements of Operations. Stock based compensation is based on awards ultimately expected to vest and is reduced for estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, as necessary, in subsequent periods if actual forfeitures differ from those estimates.

For purposes of determining estimated fair value of share-based payment awards on the date of grant under SFAS 123(R), the Company uses the Black-Scholes option-pricing model (Black-Scholes Model). The Black-Scholes Model requires the input of highly subjective assumptions. Because the Company's employee stock options may have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models may not provide a reliable single measure of the fair value of the Company's employee stock options. Management will continue to assess the assumptions and methodologies used to calculate estimated fair value of share-based compensation. Circumstances may change and additional data may become available over time, which result in changes to these assumptions and methodologies, which could materially impact the Company's fair value determination.

The application of the SFAS 123(R) accounting principles may be subject to further interpretation and refinement over time. There are significant differences among option valuation models, and this may result in a lack of comparability with other companies that use different models, methods and assumptions. If factors change and the Company employs different assumptions in the application of SFAS 123(R) in future periods, or if the Company decides to use a different valuation model, the compensation expense that the Company records in the future under SFAS 123(R) may differ significantly from what it has recorded in the current period and could materially affect its loss from operations, net loss and net loss per share.

Comprehensive income (loss): Our comprehensive income (loss) consists of our net income (loss), and changes in unrealized gains or losses on available for sale investments, the impact of which has been excluded from net loss. We present our comprehensive income (loss) in the Statements of Stockholders' Equity and Comprehensive Income and (Loss). Our accumulated other comprehensive income (loss) is presented as a component of equity in our Balance Sheets and consists of the

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cumulative amount of unrealized gains or losses on available-for-sale investments that we have incurred since the inception of our business.

Reclassifications: Certain reclassifications have been made to the 2007 and 2006 financial information to conform to the 2008 presentation. Such reclassifications had no effect on net loss and are primarily related to reclassifying costs between Research and development costs and General and administrative expenses in the Statements of Operations.

Use of Estimates: The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Recent Accounting Pronouncements: Effective January 1, 2008, the Company adopted SFAS No. 159 "*The Fair Value Option for Financial Assets and Financial Liabilities"* (SFAS 159). SFAS 159 allows an entity the irrevocable option to elect fair value for the initial and subsequent measurement for specified financial assets and liabilities on a contract-by-contract basis. The Company did not elect to adopt the fair value option under this Statement.

In March 2008, the FASB issued SFAS No. 161, *"Disclosures about Derivative Instruments and Hedging Activities an amendment of FASB Statement No. 133"* (SFAS 161), which expands the disclosure requirements for derivative instruments and hedging activities. SFAS 161 specifically requires entities to provide enhanced disclosures addressing the following: (a) how and why an entity uses derivative instruments; (b) how derivative instruments and related hedged items are accounted for under SFAS 133 and its related interpretations; and (c) how derivative instruments and related hedged items affect an entity's financial position, financial performance, and cash flows. SFAS 161 is effective for fiscal years and interim periods beginning after November 15, 2008. The Company is currently evaluating the potential impact, if any, of the adoption of SFAS 161 on its financial position, results of operations and disclosures.

In April 2008, the FASB issued FASB Staff Position (FSP) FSP 142-3, "Determination of the Useful Life of Intangible Assets." This FSP amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, "Goodwill and Other Intangible Assets." The intent of this FSP if to improve the consistency between the useful life of a recognized intangible asset under Statement 142 and the period of expected cash flows to measure the fair value of the asset under FASB Statement No. 141 (Revised 2007), "Business Combinations," and other U.S. generally accepted accounting principles (GAAP). This FSP is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. Early adoption is prohibited. The Company does not expect the adoption of FAS 142-3 to have a material effect on its results of operations and financial condition.

In May 2008, the FASB issued SFAS No. 162, "The Hierarchy of Generally Accepted Accounting Principles," which becomes effective upon approval by the SEC. The standard sets forth the sources of accounting principles and provides entities with a framework for selecting the principles used in the preparation of financial statements that are presented in conformity with GAAP. It is not expected to change any of our current accounting principles or practices and therefore, is not expected to have a material impact on our financial statements.

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Results of Operations

Comparison of the Years Ended December 31, 2008 and 2007

Certain reclassifications have been made to the 2007 financial information to conform to the 2008 presentation. Such reclassifications had no effect on net loss and are primarily related to reclassifying costs between R&D costs and G&A expenses in the Statement of Operations. Our activities to date have substantially consisted of raising capital, business and product development, research and development and the development of our 1.5 MW production line and the construction of our 30 MW production line.

Research and Development Revenues. Our R&D revenues were $1,499,729 for the year ended December 31, 2008 compared to $1,002,674 for the year ended December 31, 2007 an increase of $497,055. The majority of our R&D revenues during the year ended December 31, 2008 and 2007 were revenues earned on our government R&D contracts. The increase in 2008 primarily relates to two government contracts awarded in June 2008.

Research and Development. R&D costs include the costs incurred for pre-production activities on our 1.5 MW line and our planned 30 MW line and costs related to our governmental contracts. R&D costs were $10,066,055 for the year ended December 31, 2008 compared to $4,802,538 for the year ended December 31, 2007, an increase of $5,263,517. Costs related to pre-production activities increased $4,654,519. The pre-production cost increases were comprised of materials and equipment related costs of approximately $1,760,000, depreciation and amortization of approximately $1,304,000, personnel related costs of approximately $890,000, facility related costs of approximately $705,000, and stock compensation expense of approximately $122,000. Governmental R&D expenditures increased by $608,998 related to the contracts awarded June 2008.

General and Administrative. G&A expenses were $5,669,746 for the year ended December 31, 2008 compared to $4,126,451 for the year ended December 31, 2007, an increase of $1,543,295. This increase is comprised of costs associated with increased headcount of approximately $719,000, approximately $412,000 for severance related costs, increases in supplies and mailing, trade show, and facilities costs of approximately $387,000 and an increase in stock compensation expense of approximately $25,000.

Interest Expense. Interest expense was $3,438 for the year ended December 31, 2008 compared to $424 for the year ended December 31, 2007, an increase of $3,014. The increase in Interest expense relates to the amortization of the commitment fee related to our CHFA loan. During 2008, $315,610 of interest incurred on the CHFA loan was capitalized. No interest was capitalized in 2007.

Interest Income. Interest income was $2,145,370 for the year ended December 31, 2008 compared to $1,423,320 for the year ended December 31, 2007, an increase of $722,050. Interest income represents interest on cash and short term investments. The increase in Interest income is due to higher balances of cash and short term investments during 2008 as compared to 2007.

Realized Loss on Investments. Realized losses on investments were $32,103 for the year ended December 31, 2008 compared to $0 for the year ended December 31, 2007, an increase of $32,103. Losses on our investments, primarily corporate securities, comprised the net loss during 2008.

Realized Loss on Forward Contracts and Unrealized Losses on Forward Contracts. For the year ended December 31, 2008, the unrealized loss on forward contracts was $766,403 and the realized loss was $322,430. Although the hedging activity is designed to fix the dollar amount to be expended, the asset purchased is recorded at the spot rate in effect as of the date of the payment to the supplier. The difference between the spot rate and the forward rate has been reported as a loss on forward contract.

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The forward contract was 100% effective in fixing the amount to be paid to the supplier in dollar terms as of the date the forward contract was entered into.

Net Loss. Our Net Loss was $13,215,076 for the year ended December 31, 2008 compared to a Net Loss of $6,503,419 for the year ended December 31, 2007, an increase in Net Loss of $6,711,657. The increase in Net Loss can be summarized in variances in significant account activity as follows:

	Increase (decrease) to Net Loss For the Year Ended December 31, 2008
Contract revenues	$ 497,055
Research and development costs	
Manufacturing R&D	(4,532,679)
Government R&D	(608,998)
Non-cash stock based compensation	(121,840)
General and administrative expenses	
Corporate G&A	(1,518,615)
Non-cash stock based compensation	(24,680)
Interest expense	(3,014)
Interest income	722,050
Realized Loss on investments	(32,103)
Realized Loss on forward contract	(322,430)
Unrealized Loss on forward contracts	(766,403)
Increase to Net Loss	$ (6,711,657)

Comparison of the Years Ended December 31, 2007 and 2006

Certain reclassifications have been made to the 2007 and 2006 financial information to conform to the 2008 presentation. Such reclassifications had no effect on net loss and are related to reclassifying costs between Research and development expenses and General and administrative expenses.

Research and Development Contract Revenues. Our R&D revenues were $1,002,674 for the year ended December 31, 2007. There were no R&D contract revenues for the year ended December 31, 2006. Our revenues during the year ended December 31, 2007 were earned on our government R&D contracts novated January 1, 2007 from ITN and new government R&D contracts awarded to us in 2007.

Research and Development Expenses. R&D expenses were $4,802,538 for the year ended December 31, 2007 compared to $832,891 for the year ended December 31, 2006, an increase of $3,969,647. The increase is comprised of $2,648,064 related to personnel, materials and facilities required to optimize our manufacturing processes in advance of commencing full-scale production on our 1.5 MW production line, $799,509 of direct costs and related overhead on our government R&D contracts that began on January 1, 2007, and an increase in stock compensation expense of approximately $522,074 for our manufacturing and R&D personnel.

General and Administrative Expenses. General and administrative expenses (G&A) were $4,126,451 for the year ended December 31, 2007 compared to $2,542,413 for the year ended December 31, 2006, an increase of $1,584,038. The increase is comprised of two components, an increase in corporate G&A expenses of $720,177 and an increase in non-cash stock-based compensation expense of $863,861. The increase in corporate G&A expenses corresponds with our increase in headcount and increases in corporate activity such as legal fees, SEC reporting costs, stock and corporate registration fees, and travel and insurance costs. The significant increase in stock

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compensation expense for the year ended December 31, 2007 is primarily due to the requirements of SFAS 123(R) and EITF 96-18 for measurement of stock-based compensation to non-employees as vesting occurs and for unvested shares as of the balance sheet date. Since our stock price as of December 31, 2007 was significantly higher than as of December 31, 2006, this requirement resulted in an increased fair value calculation related to stock-based payments to non-employees. Additional grants of our stock options during 2007 also contributed to the increase.

Interest Expense. Interest expense was $424 for the year ended December 31, 2007 compared to $1,080,691 for the year ended December 31, 2006, a decrease of $1,080,267. Interest expense in 2006 resulted from interest on the bridge loan notes and related bridge rights and financing transactions of which $800,000 was non-cash related to the valuation and subsequent amortization of the bridge loan rights. In July 2006, the bridge loan was repaid in full with the proceeds from our initial public offering (IPO).

Interest Income. Interest income was $1,423,320 for the year ended December 31, 2007 compared to $275,083 for the year ended December 31, 2006, an increase of $1,148,237. Interest income represents interest on cash and short term investments. The increase in Interest income was due to higher balances of cash and short term investments during 2007 as compared to 2006.

Net Loss. Net loss was $6,503,419 for the year ended December 31, 2007 compared to a net loss of $4,180,912 for the year ended December 31, 2006, an increase in net loss of $2,322,507. This increase can be summarized in variances in significant account activity as follows:

	Increase (decrease) to Net loss For the Year Ended December 31, 2007
R&D Contract Revenues	$ (1,002,674)
R&D Expenses	
Manufacturing R&D	2,648,064
Government R&D	799,509
Non-cash stock-based compensation	522,074
General and administrative expenses	
Corporate G&A	720,177
Non-cash stock-based compensation	863,861
Interest expense	(1,080,267)
Interest income	(1,148,237)
Increase to Net Loss	$ 2,322,507

Liquidity and Capital Resources

During the year ended December 31, 2008, we completed the following financing transactions:

On March 28, 2008, Norsk Hydro acquired an additional 2,341,897 restricted shares of our common stock and 1,689,905 Class B warrants upon exercise of one of the options granted to Norsk Hydro on March 13, 2007. The exercise of the option resulted in proceeds to us of approximately $28.4 million, and reflected per share and per warrant purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. After acquiring these additional shares, Norsk Hydro held approximately 35% of each of our total outstanding common shares and Class B warrants. As a result of the Company's Secondary Public Offering in May 2008, Hydro's holdings were diluted to approximately 27%. On October 8, 2008, Hydro acquired an additional 2,421,801 shares of our common stock. The purchase resulted in a return to Hydro's ownership of

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approximately 35% of our common stock. Gross proceeds to the company from the follow on investment were approximately $15 million, and reflect per share purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. Until June 15, 2009, the second option entitles Hydro to purchase from the Company additional restricted shares of common stock and Class B warrants to maintain ownership of up to 35% of issued and outstanding common stock and Class B warrants.

On January 4, 2008, warrants that had been issued to the representative of the underwriters in our IPO were exercised resulting in the issuance of 75,000 shares of common stock and 75,000 Class B warrants for total proceeds to us of approximately $495,000.

During January and May 2008, a total of 98,800 Class B public warrants were exercised resulting in proceeds to us of approximately $1,086,800.

On May 15, 2008, the SEC declared effective our Registration Statement on Form S-3 (Reg. No. 333-149740), and we completed our Secondary Public Offering of 4,370,000 shares of common stock, which included 570,000 shares issued upon the underwriter's exercise of its overallotment in full. The offering price of $14.00 per share resulted in gross proceeds of $61,180,000. After deducting underwriting discounts and commissions and offering expenses of approximately $4,361,000, net proceeds to the Company were approximately $56,819,000. JP Morgan was the managing underwriter of our Secondary Public Offering.

For the year ended December 31, 2008, our cash used in operations was approximately $9.1 million compared to approximately $4.3 million for the year ended December 31, 2007. For the year ended December 31, 2008 approximately $50.7 million had been expended in capital to complete our 1.5 MW production line and facility modifications, initial payments on our 30 MW and one meter wide development and production tools, and acquisition and renovations to the Thornton, Colorado facility for our manufacturing expansion. Approximately $7.2 million of the total $12.2 million costs incurred in 2008 for our facility expansion was financed through a loan with CHFA.

As of December 31, 2008, we had approximately $87.4 million in cash, restricted cash and investments. We currently expect the capital expenditures needed to support the first 30 MW of rated capacity will total approximately $95 million to $100 million for production and manufacturing equipment and approximately $16 million for the acquisition of the building and renovations of our 30 MW Thornton facility. We also expect capital expenditures of approximately $8 million for installation, qualification and other associated pre-operating expenses related to the expansion. In addition, we have budgeted approximately $7 million for the procurement and installation of the one meter wide manufacturing development tools, sources, and sensor control systems. We made actual cash payments of approximately $34 million for the 30 MW production and manufacturing development tools as of December 31, 2008 and expect to make the remaining payments in 2009 and the first half of 2010. Remaining expenditures to complete the Thornton facility in 2009 are estimated to be approximately $4 million.

During the year ended December 31, 2008, the use of cash for operational expenses averaged approximately $758,000 per month and were related to pre-manufacturing activities, research and technology development, business development and general corporate expenses. We expect operational expenses to increase in 2009 as we commence commercial production and increase the size of our workforce. Our average monthly operational expense for year ended December 31, 2008 of approximately $758,000 is net of average monthly R&D revenues from our governmental contracts of approximately $125,000 and average monthly interest income net of interest expense of approximately $179,000. A significant component of our costs for the year ended December 31, 2008 related to the ongoing qualification of our 1.5 MW line and continuing corporate costs related to building the required infrastructure to support our 1.5 MW manufacturing operations and expansion plans. We

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anticipate that our operational expenditures will continue to increase throughout 2009 due to the planned hiring of additional personnel for both our 1.5 MW production line and the installation and qualification of our new 30 MW of rated production capacity in Thornton, Colorado. As of December 31, 2008, we had 56 full-time employees of which 32 were manufacturing personnel. We plan to increase our staff during 2009, principally in the manufacturing area.

We do not expect that our sales revenue from the 1.5 MW production line will be sufficient to support our operations and cash requirements, and it is unlikely that our sales revenue will support our operating cash requirements unless we achieve actual production capacity of at least 30 MW per year. Our original equipment delivery schedule called for installation of all of the 30 MW production equipment during 2009. Due to the recent financial crisis affecting the financial markets, our ability to obtain credit or to raise additional capital has become increasingly difficult. In order to preserve cash we have extended the equipment delivery schedule related to the first 30 MW of annual rated production capacity to 2010. We now expect to begin production using equipment with an annual rated production capacity of approximately 15 MW in early 2010, and full 30 MW of annual rated production capacity by the middle of 2010.

On January 9, 2009, we filed a "shelf" Registration Statement on Form S-3 with the Securities and Exchange Commission ("SEC"). The SEC declared the registration statement effective on January 16, 2009. With the shelf registration, we may from time to time sell common stock, preferred stock, warrants or some combination in one or more offerings totaling up to $150 million.

Off Balance Sheet Transactions

As of December 31, 2008, we did not have any off balance sheet arrangements as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

Please refer to our Financial Statements below, beginning on page F-1 which are incorporated herein by reference.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There has been no change of accountants or any disagreement with accountants on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure required to be reported under this Item.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934, as amended (Exchange Act) is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission (SEC) rules and forms. Our disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosures. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures.

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Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives, and management necessarily is required to use its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our management conducted an evaluation required by Rules 13a-15 and 15d-15 under the Exchange Act of the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15 and 15d-15 under the Exchange Act as of December 31, 2008. Based on this evaluation, our management concluded that as of December 31, 2008, the design and operation of our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2008 based on the framework in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2008. Our management reviewed the results of their assessment with the Audit Committee.

Attestation Report of Registered Public Accounting Firm

Hein & Associates LLP, the registered public accounting firm that audited the financial statements included in this Annual Report, has issued an attestation report on the effectiveness or our internal control over financial reporting as of December 31, 2008.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Ascent Solar Technologies, Inc,

We have audited Ascent Solar Technologies, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Managements' Report on Internal Controls over financial reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provide a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Ascent Solar Technologies, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008 based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the balance sheets and the related statements of operations, stockholders' equity and comprehensive income, and cash flows of Ascent Solar Technologies, Inc., and our report dated March 12, 2009 expressed an unqualified opinion.

/s/ Hein & Associates LLP

Denver, Colorado
March 12, 2009

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Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2008 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance

Our executive officers and directors and their ages and positions with the Company as of February 28, 2009, are as follows:

Name	Age	Position
Mohan S. Misra, Ph.D.	64	Chairman of the Board, Interim President and Chief Executive Officer, Chief Strategy Officer
Gary Gatchell	51	Chief Financial Officer and Secretary
Prem Nath, Ph.D.	59	Senior Vice President of Production Operations
Ashutosh Misra	43	Senior Vice President and General Manager Thornton Plant
Joseph Armstrong, Ph.D.	51	Vice President and Chief Technology Officer
Bruce Berkoff	48	Chief Marketing Officer
Joseph McCabe	48	Vice President Business Development
Janet Casteel	48	Chief Accounting Officer and Treasurer
Stanley A. Gallery	51	Director
Einar Glomnes	39	Director
Amit Kumar, Ph.D.	44	Director
Joel S. Porter	61	Director
T.W. Fraser Russell, Ph.D.	74	Director
Richard Erskine	52	Director
Richard J. Swanson	74	Director

Mohan S. Misra, Ph.D. has served as Chairman of our Board of Directors since October 2005, and as our Chief Strategy Officer since April 2007. Dr. Misra has served as our interim President and Chief Executive Officer since September 2008. He founded and has served as chief executive officer of ITN since 1994. Before founding ITN, Dr. Misra spent 19 years with Martin Marietta Corporation (now Lockheed Martin Corporation) in the areas of material research, development and manufacturing. While at Martin Marietta, Dr. Misra worked first as manager of Research and Technology, and then led the company's development of long term technology strategies. Dr. Misra has helped develop and implement several key technologies for aerospace applications including thin-film PV products, smart materials, advanced composites and lightweight structures. Dr. Misra holds a B.S. degree in Metallurgical Engineering from Benaras Hindu University in India, an M.S. degree in Metallurgical Engineering from the University of Washington and a Ph.D. in Metallurgical Engineering from the Colorado School of Mines. Dr. Misra is the uncle of Ashutosh Misra, our Senior Vice President of Operations and Corporate Affairs.

Gary Gatchell has served as our Chief Financial Officer and Secretary since March 2008. Prior to joining Ascent Solar, Mr. Gatchell served as the Chief Financial Officer of Carrier Access Corporation, a telecommunications equipment provider (Carrier Access). Mr. Gatchell joined Carrier Access, a NASDAQ listed company, in June 2005 to reorganize that company's finance and administration infrastructure. Prior to joining Carrier Access, from 1999 to 2004, Mr. Gatchell served as the Chief Financial Officer of Voyant Technologies, Inc., a leading provider of audio conferencing equipment that was acquired by Polycom, Inc., and as an audit manager at KPMG. Mr. Gatchell brings to Ascent Solar a strong background in public company financial reporting and internal controls. Mr. Gatchell also has experience with private and public capital funding, as well as mergers and acquisitions activity on both the buy-side and sell-side. Mr. Gatchell is a registered Certified Public Accountant and has a Master's degree in Accountancy from the University of Denver. Mr. Gatchell is a member of the AICPA and CSCPA.

Prem Nath, Ph.D. was promoted to Senior Vice President of Production Operations in January 2009. Dr. Nath served as our SVP of Manufacturing from July 2006 to January 2009. From 1998 until July 2006, he served as Vice President of Product Manufacturing and Development at United Solar

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Ovonic (Uni-Solar) and as Chief Operating Officer of Uni-Solar's Mexican subsidiary. Dr. Nath has over 25 years of professional experience in the development, testing and manufacture of thin-film PV technology and is a named inventor on over 50 U.S. patents covering processes, products and materials. Dr. Nath holds a M.S. degree in Physics from Punjab University in India, a Master of Technology degree in Solid State Physics from the Indian Institute of Technology (IIT) and a Ph.D. in Materials Science from IIT. Dr. Nath also worked as a post-doctoral fellow at the University of California at Los Angeles.

Ashutosh Misra has served as our Senior Vice President and General Manager Thornton-Plant in February 2009. Mr. Misra served as our SVP of Operations and Corporate Affairs from April 2007 to February 2009. Until that time, Mr. Misra served as a member of our Board of Directors from our inception in October 2005 and participated actively as corporate advisor in guiding the management team with day-to-day operations. Mr. Misra also served as Executive Vice President at ITN, where he was responsible for day to day business operations. From November 2002 until March 2005, Mr. Misra served as the president and chief executive officer of Data Access America, a wholly owned subsidiary of Data Access India, Limited, a telecommunications carrier based in India. Prior to joining ITN in 1998 Mr. Misra worked for MTI International for over 8 years as Operations Manager and was responsible for setting up electronic manufacturing and related facilities in the United States, Mexico, Singapore, Indonesia, and India. Mr. Misra holds a Bachelor of Engineering Degree in Electronics and Telecommunications from Bangalore University in India, and a M.S. degree in Electrical Engineering from the University of Wisconsin, Milwaukee. Mr. Misra is the nephew of Dr. Mohan Misra, our Chairman.

Joseph Armstrong, Ph.D. has served as our Vice President and Chief Technology Officer since October 2005. Dr. Armstrong worked at ITN beginning in 1995, and served as the Manager of ITN's Advanced PV Division from 1995 until joining Ascent in October 2005. While at ITN, Dr. Armstrong led its advancement into thin-film flexible PV products for space and near-space applications and started its development of thin-film battery technologies, a complement to Ascent's thin-film PV technology. Prior to joining ITN, Dr. Armstrong was employed for 10 years by Martin Marietta Corporation, where he managed PV research projects. He is a named inventor on four U.S. patents in areas including shape memory alloys, thin-film PV technology and electronic circuit assembly. Dr. Armstrong holds a B.S. degree in Physics from Lewis University in Illinois and a M.S. degree and Ph.D. in Solid State Physics from the University of Denver.

Bruce Berkoff has served as our Chief Marketing Officer since September 2008. Mr. Berkoff has over 25 years of executive experience in engineering, product development and marketing for technology companies. Before joining Ascent, Mr. Berkoff has served on various public company boards, currently sitting on those for LG Display (NYSE: LPL) and Unipixel (UNXL.OB). Since December 2006, he has served as the Chairman of the LCD TV Association, and from January 2006 until November 2006, he held positions with Enuclia Semiconductor, first as President and Chief Executive Officer, then as Chairman of the Board of Directors. From November 1999 until December 2005, Mr. Berkoff served as the Chief Marketing Officer and EVP of LG Philips LCD Co., Ltd.(LPL), a global market leader in TFT-LCD displays. Mr. Berkoff also has held management positions at Philips Components FDS, UMAX Computer Corp., Radius Inc. and SuperMac Technologies. Mr. Berkoff holds an A.B. degree from Princeton University and a M.A. degree in Biophysics from the University of California at Berkeley.

Joseph C. McCabe has served as our Vice President of Business Development since January 2007. From 1985 until November 2006, Mr. McCabe was the owner and principal of an energy technology consulting firm. In that capacity, he served as a consultant or contractor on projects for the California Energy Commission, the Sacramento Municipal Utility District, Shell Oil and various architecture and engineering firms, and he possesses experience in the area of BIPV products and technologies. Mr. McCabe is a licensed Professional Engineer and holds a B.S. degree in Mechanical Engineering

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degree from the University of Dayton, an M.S. degree in Nuclear and Energy Engineering from the University of Arizona, and a Masters of Business Administration from Regis University in Denver, Colorado. Mr. McCabe is Chairman of the Solar Electric Division of the American Solar Energy Society (ASES) and is a member of the International Electrotechnical Commission (IEC) Technical Committee 82 for Solar Photovoltaic Energy System (TC82).

Janet Casteel has served as our Chief Accounting Officer and Treasurer since February 2006. She served on a part-time basis as our Treasurer and Controller between October 2005 and February 2006, during which time she also served as the part-time business manager of ITN. From 1996 until February 2006, Ms. Casteel served in the capacity of controller and business manager of ITN. At ITN, she supervised the financial and accounting staffs and was responsible for negotiation and administration of ITN's government and commercial contracts, as well as its agreements with subcontractors. Prior to ITN she worked as audit manager at Coopers & Lybrand. She is a registered certified public accountant and a member of the AICPA and CSCPA. Ms. Casteel holds an Associate Degree in Business Administration from Nebraska College of Business and a B.S. degree in Accounting from Metropolitan State College in Denver.

Stanley A. Gallery has served on our Board of Directors since October 2005. Since 1984, Mr. Gallery has been the chief executive officer of Carts of Colorado, Inc., a provider of mobile merchandising for the food service industry. He also has served as the managing partner of G3 Holdings LLC since 1997, which makes real estate and other investments. Mr. Gallery is co-charter/organizer of First Western Trust Bank of Colorado and is on the board of its holding company, First Western Investment Management. Prior to joining Ascent, Mr. Gallery served on the board of directors of ITN from 2001 until joining our Board in October 2005. Mr. Gallery is also on the board of Craig Hospital and Colorado Neurological Institute, both located in the Denver area.

Einar Glomnes has served on our Board of Directors since March 2007. Since April 2007, Mr. Glomnes has served as the head of Hydro Solar, a division of Norsk Hydro ASA. Norsk Hydro Produksjon AS, a subsidiary of Norsk Hydro ASA, is our largest shareholder. Prior to heading Hydro Solar, Mr. Glomnes served as a Vice President in the business development arm of Norsk Hydro Oil & Energy from 2006 until 2007, and as a lawyer in the legal department of Norsk Hydro ASA from 2004 to 2006. Prior to joining Norsk Hydro ASA, Mr. Glomnes served as a lawyer with the Schjødt Law Firm in Norway and as a management consultant with McKinsey & Company. Mr. Glomnes also serves as a member of the board of directors of Norson AS, a PV ingot and wafer company based in Norway, as a member of the board of directors of Convexa Capital IX AS, a venture capital company based in Norway with global investments in solar energy related companies, and as the chairman of Verdane Capital, a private equity investment firm. Mr. Glomnes holds a law degree from the University of Oslo, Norway, and an L.L.M. degree from Columbia University School of Law, New York.

Amit Kumar, Ph.D. has served on our Board of Directors since March 2007. Dr. Kumar has served as the President and Chief Executive Officer of CombiMatrix Corporation, a developer of DNA microarrays, since September 2001. He also serves on the board of directors of Aeolus Pharmaceuticals, Inc. and Tacere Therapeutics. Dr. Kumar holds a B.S. degree in Chemistry from Occidental College. After joint studies at Stanford University and the California Institute of Technology (Caltech), he received his Ph.D. from Caltech before completing a post-doctoral fellowship at Harvard University.

Joel S. Porter has served on our Board of Directors since June 2007. Mr. Porter is the President of Centennial Consulting Services, Inc., a consulting firm created after Mr. Porter's retirement from Lockheed Martin in the spring of 2003 as Vice President for International Program Development and Systems Analysis. Mr. Porter had served for approximately 28 years at Lockheed Martin in a variety of management roles. He holds a Bachelor of Aerospace Engineering degree and an M.S. degree in Industrial Management from the Georgia Institute of Technology. He also is a graduate of the Program for Management Development at the Harvard Business School.

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T.W. Fraser Russell, Ph.D. has served on our Board of Directors since October 2005. Dr. Russell has served as the Allan P. Colburn Professor in the Department of Chemical Engineering at the University of Delaware since 1981. Dr. Russell is a member of the National Academy of Engineering, a fellow of the American Institute of Chemical Engineers and a registered professional engineer in the State of Delaware. He is the co-inventor on four U.S. patents for the continuous deposition of PV material on moving substrates and is the author of over 100 engineering and scientific papers. He has an industrial background in process design, and he has served as a consultant to a number of firms in the chemical processing industries. Dr. Russell holds a B.Sc. degree and a M.Sc. degree from the University of Alberta in Canada and a Ph.D. from the University of Delaware.

Richard Erskine was appointed as a member of the Board on October 14, 2008, to serve as a Class 3 director until the 2009 annual meeting of stockholders and until his successor is duly qualified and elected. Mr. Erskine has served as Senior Vice President of Solar Business Development of Hydro Solar, a division of Norsk Hydro ASA. Norsk Hydro Produksjon AS, a subsidiary of Norsk Hydro ASA, is our largest shareholder. Prior to rejoining Hydro, Mr. Erskine was Executive Vice President of Petroleum Services at Norwegian-based AGR Group ASA. He previously served as managing director of Norsk Hydro Technology Ventures AS. Mr. Erskine holds a B.Sc. degree in Chemical Engineering from University of Manchester Institute of Science and Technology, a M.Sc. degree in Petroleum Engineering from Imperial College London and an M.B.A. degree from the Norwegian School of Management.

Richard J. Swanson has served on our Board of Directors since January 2007. Since 1991, Mr. Swanson has been a consultant with Vistage International, Inc. (formerly TEC), which focuses on strategic coaching for chief executive officers of public and private companies. Since 1980, he has served as the founder and president of Investment Partners, Inc., which engages in the restructuring and recapitalization of troubled companies, and of Real Estate Associates, Inc., which focuses on real estate acquisition and development. He served as a director and chair of the audit committee of AHPC Holdings, Inc., a publicly-traded Illinois-based company in the health care supply field from 1998 until 2007, and serves as a director and chair of the audit committee of ADA-ES, LLC, a publicly-traded industrial technology company in Colorado. Mr. Swanson holds a B.A. in History from the University of Colorado and an M.B.A. from the Harvard Business School.

Board of Directors

Our Bylaws provide that the size of our Board of Directors is to be determined from time to time by resolution of the Board of Directors, but shall consist of at least two and no more than eight members. Our Board of Directors currently consists of eight members, five of whom are independent under the rules of the NASDAQ Global Market. Our Certificate of Incorporation provides that the Board of Directors will be divided into three classes as nearly equal in number of directors as possible. Our Class 1 directors are Dr. Amit Kumar, Joel Porter and Richard Swanson. Our Class 2 directors are Stanley Gallery and Dr. T.W. Fraser Russell. Our Class 3 directors are Einar Glomnes, Dr. Mohan Misra and Richard Erskine. The terms of our Class 1 directors and Richard Erskine expire at our 2009 annual meeting of stockholders.

Our Board of Directors has three standing committees: an Audit Committee, a Compensation Committee and a Nominating and Governance Committee. Each committee operates pursuant to a charter than can be found at our website *www.ascentsolar.com*.

Stockholder Nominations

On February 10, 2009, our Board approved our Second Amended and Restated Bylaws (Amended Bylaws), which modifies the procedures by which the Company accepts stockholder proposals and nominations, as well as the manner for calling special meetings of our stockholders. In accordance with the Amended Bylaws, a stockholder wishing to nominate a director for election at an annual or special

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meeting of stockholders must timely submit a written proposal of nomination to our Board, care of the Company's Secretary. To be timely, a written proposal of nomination for an annual meeting of stockholders must be received at least 90 calendar days but no more than 120 calendar days before the first anniversary of the date on which we held our annual meeting of stockholders in the immediately preceding year; provided, however, that in the event that the date of the annual meeting is advance or delayed more than 30 calendar days from the first anniversary of the annual meeting of stockholders in the immediately preceding year, the written proposal must be received: (i) at least 90 calendar days but no more than 120 calendar days prior to the date of the annual meeting; or (ii) no more than 10 days after the date we first publicly announce the date of the annual meeting. A written proposal of nomination for a special meeting of stockholders must be received no earlier than 120 calendar days prior to the date of the special meeting nor any later than the later of: (i) 90 calendar days prior to the date of the special meeting; and (ii) 10 days after the date the Corporation first publicly announces the date of the special meeting.

Each written proposal for a nominee must contain: (i) the name, age, business address and telephone number, and residence address and telephone number of the nominee; (ii) the current principal occupation or employment of each nominee, and the principal occupation or employment of each nominee for the prior ten (10) years; (iii) a complete list of companies, whether publicly traded or privately held, on which the nominee serves (or, during any of the prior ten (10) years, has served) as a member of the board of directors; (iv) the number of shares of capital stock of Ascent that are owned of record and beneficially by each nominee; (v) a statement whether the nominee, if elected, intends to tender, promptly following such person's failure to receive the required vote for election or reelection at the next meeting at which the nominee would face election or reelection, and irrevocable resignation effective upon acceptance of such resignation by the Board; (vi) a completed and signed questionnaire, representation and agreement relating to voting agreements or commitments to which the nominee is a party; (vii) other information concerning the nominee that would be required in a proxy statement soliciting the nominee's election; and (viii) information about, and representations from, the stockholder making the nomination.

Upon receipt of a written proposal of nomination meeting these requirements, the Nominating and Governance Committee of the Board will evaluate the nominee in accordance with its committee charter.

Code of Ethics

We have adopted a code of ethics that applies to our principal executive officer, principal financial officer, principal accounting officer and other senior finance and accounting staff. The code is designed to, among other things, deter wrongdoing and to promote the honest and ethical conduct of our officers and employees. The text of our code of ethics can be found on our Internet website at www.ascentsolar.com. If we effect an amendment to, or waiver from, a provision of our code of ethics, we intend to satisfy our disclosure requirements by posting a description of such amendment or waiver on that Internet website or via a Form 8-K current report. The information contained on our website is not part of this Annual Report.

Audit Committee of the Board of Directors

Audit Committee. Our Audit Committee oversees our accounting and financial reporting processes, internal systems of accounting and financial controls, relationships with independent auditors, and audits of financial statements. Specific responsibilities include the following:

selecting, hiring and terminating our independent auditors;

evaluating the qualifications, independence and performance of our independent auditors;

approving the audit and non-audit services to be performed by our independent auditors;

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reviewing the design, implementation, adequacy and effectiveness of our internal controls and critical accounting policies;

reviewing and monitoring the enterprise risk management process;

overseeing and monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters;

reviewing, with management and our independent auditors, any earnings announcements and other public announcements regarding our results of operations; and

preparing the report that the Securities and Exchange Commission requires in our annual proxy statement.

Our Audit Committee is comprised of Mr. Gallery, Dr. Kumar and Mr. Swanson. Mr. Swanson serves as Chairman of the Audit Committee. The Board has determined that all members of the Audit Committee are independent under the rules of the NASDAQ Global Market, and that Mr. Swanson qualifies as an "audit committee financial expert," as defined by the rules of the Securities and Exchange Commission.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors, officers, and persons that own more than 10 percent of a registered class of our equity securities to file reports of ownership and changes in ownership with the SEC. Officers, directors, and greater than 10 percent stockholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

Based solely upon our review of the copies of such forms received by us during the fiscal year ended December 31, 2008, we believe that each person who, at any time during such fiscal year, was a director, officer, or beneficial owner of more than 10 percent of our common stock complied with all Section 16(a) filing requirements during such fiscal year, except that Stanley Gallery, Dr. Amit Kumar, Joel Porter, Dr. T.W. Fraser Russell, Richard Swanson and Dr. Mohan Misra each filed one late Form 4 describing a change of ownership in our securities.

Item 11. Executive Compensation

Compensation Philosophy and Processes

We seek to provide a level of compensation for our executive officers that is competitive with publicly-traded companies similar in both size and industry. We hope to attract, retain, and reward executive officers who contribute to our success, to align executive officer compensation with our performance, and to motivate executive officers to achieve our business objectives. We compensate our senior management through a mix of base salary, bonus and equity compensation.

Our Compensation Committee determines and recommends to our Board of Directors the compensation of our executive officers. The Compensation Committee also administers our stock option plan and restricted stock plan. The Compensation Committee reviews base salary levels for our executive officers at the end of each fiscal year and recommends raises and bonuses based upon our achievements, individual performance, and competitive and market conditions. The Compensation Committee may delegate certain of its responsibilities, as it deems appropriate, to other committees or to our officers, but it has not elected to do so. The Compensation Committee has engaged management consultants to provide a market analysis of cash, equity and short term incentives for comparisons to our current compensation package and based on that analysis provide recommendations of compensation adjustments and overall compensation philosophy to the Compensation Committee.

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Executive Officer Compensation

The following Summary Compensation Table sets forth certain information regarding the compensation of our principal executive and principal financial officers and the three other most highly compensated executive officers (together, the "named executive officers") at the end of our last fiscal year for services rendered in all capacities to us during the years ended December 31, 2008, 2007 and 2006.

Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)(1)	Option Awards ($)(2)	All Other Comp. ($)	Total ($)
Mohan Misra Chief Executive Officer(3)	2008	178,680	90,915	44,550	210,229	16,832	541,206
	2007	65,185	25,000			3,206	93,391
	2006						
Gary Gatchell Chief Financial Officer(4)	2008	111,835	19,689	660,400	52,557		844,481
	2007						
	2006						
Prem Nath Senior VP Production Operations(5)	2008	178,704	90,000		262,787		531,491
	2007	162,274	48,710		157,560	51,408	419,952
	2006	64,741	20,160		210,000	24,489	319,390
Ashutosh Misra Senior VP and General Manager Thornton Plant(6)	2008	163,398	29,462		131,393		324,253
	2007	104,611	28,800		128,289	34,750	296,450
	2006						
Bruce Berkoff Chief Marketing Officer(7)	2008	40,335			486,000		526,335
	2007						
	2006						
Matthew Foster Former Chief Executive Officer(8)	2008	152,742	75,000			37,348	265,090
	2007	180,891	67,922		118,170		366,983
	2006	175,238	21,000		213,000		409,238

(1) Represents fair market value of restricted stock awards or units granted during the year ended December 31, 2008.

(2) Represents fair market value of options granted during the year ended December 31, 2008, 2007 and 2006, calculated using the Black-Scholes option pricing model and related assumptions as disclosed in Note 9, "*Stock Based Compensation*," of our financial statements attached hereto.

(3) Mohan Misra began employment with us on April 30, 2007 as Chief Strategy Officer. Salary represents eight months of annual salary for 2007. On September 19, 2008, Mr. Misra was named interim President and Chief Executive Officer. Salary for 2008 represents approximately nine and one half months as Chief Strategy Officer and two and one half months as President and Chief Executive Officer. Mr. Misra's salary as Chief Strategy Officer was based on a minimum of twenty hours per week and as President and Chief Executive Officer, a minimum of thirty hours per week. All other compensation for Mr. Misra for 2008 and 2007 consists of personal car reimbursement costs of $16,053 and $3,206, respectively and $779 excess group term life coverage for 2008.

(4) Gary Gatchell began employment with us on March 31, 2008 as Chief Financial Officer. Salary represents nine months of annual salary for 2008.

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(5) Prem Nath began employment with us on July 31, 2006 as Senior VP of Manufacturing. Salary for 2006 represents approximately five months of annual salary for 2006. All other compensation for 2007 and 2006 consists of relocation costs.

(6) Ashutosh Misra began employment with us on April 30, 2007 as Senior VP of Operations. Salary represents eight months of annual salary for 2007. All other compensation represents approximately $21,250 in consulting fees paid to Mr. Misra in 2007 prior to his employment on April 30, 2007, and approximately $13,500 in fees paid in connection with his service on the Board of Directors prior to April 30, 2007.

(7) Bruce Berkoff began employment with us on September 29, 2008 as Chief Marketing Officer. Salary represents three months of annual salary for 2008.

(8) Matthew Foster ceased employment with us on October 19, 2008. Salary represents approximately ten and a half months of annual salary for 2008. All other compensation for 2008 consists of $32,069 severance, $2,227 vacation pay-out, $2,737 COBRA payments and $315 excess group term life coverage.

The following table sets forth information concerning the outstanding equity awards granted to the named executive officers as of December 31, 2008.

Outstanding Equity Awards at Fiscal Year-End

	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options(#)					
Name	Exercisable	Unexercisable	Option Exercise Price($/sh)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested	Market Value of Shares or Units of Stock That Have Not Vested
Mohan Misra(1)	50,000		$ 0.10	11/18/2015		
		80,000	$ 3.17	12/02/2018		
	50,000	80,000			2,500	$ 9,400
Ashutosh Misra(2)						
	5,000		$ 0.10	11/18/2015		
	20,000		$ 8.33	07/30/2017		
	4,500	4,500	$ 17.75	12/03/2017		
		50,000	$ 3.17	12/02/2018		
	29,500	54,500				
Prem Nath(3)						
	33,333	33,334	$ 2.73	07/31/2016		
	6,000	6,000	$ 17.75	12/03/2017		
		100,000	$ 3.17	12/02/2018		
	39,333	139,334				
Gary Gatchell(4)						
	20,000	20,000	$ 3.17	12/02/2018	40,000	$ 150,400
Bruce Berkoff(5)						
		100,000	$ 6.27	9/29/2018		
Matthew Foster(6)						
	75,000		$ 4.25	02/27/2016		
	9,000		$ 17.75	12/03/2017		

84,000

Vesting dates of securities underlying unexercised options and stock awards not yet vested as of December 31, 2008:

(1) $3.17 options 20,000 vest 1/01/09, 20,000 vest 1/01/10, 20,000 vest 1/01/11, 20,000 vest 1/01/12. Stock awards not yet vested 2,500 shares vest 12/31/09 subject to meeting Company performance targets.

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(2) $17.75 options 4,500 vest 12/03/09; $3.17 options 12,500 vest 1/01/09, 12,500 vest 1/01/10, 12,500 vest 1/01/11, 12,500 vest 1/01/12.

(3) $2.73 options 33,334 vest 7/31/09; $17.75 options 6,000 vest 12/03/09; $3.17 options 25,000 vest 1/01/09, 25,000 vest 1/01/10, 25,000 vest 1/01/11, 25,000 vest 1/01/12.

(4) $3.17 options 5,000 vest 1/01/09, 5,000 vest 1/01/10, 5,000 vest 1/01/11, 5,000 vest 1/01/12. Stock awards not yet vested 20,000 vest 12/31/09, 10,000 shares vest 12/31/10, 10,000 shares vest 12/31/11, vesting subject to meeting Company performance targets.

(5) $6.27 options 25,000 vest 9/29/09, 25,000 vest 9/29/10, 25,000 vest 9/29/11, 25,000 vest 9/29/12.

(6) On October 19, 2008, under the terms of Separation agreement and General Release, all outstanding options were immediately vested.

Director Compensation

In 2008, each of our independent directors each received an annual cash retainer of $20,000 and restricted stock awards equal to $30,000 divided by the closing price of the Company's common stock as of July 1, 2008. In addition, our independent directors received restricted stock awards equal to $8,000 divided by the closing price of the Company's common stock as of July 1, 2008 for serving as a committee member, $20,000 divided by the closing price of the Company's common stock as of July 1, 2008 for serving as audit committee chairperson, $15,000 divided by the closing price of the Company's common stock as of July 1, 2008 for serving as compensation committee chairperson and $15,000 divided by the closing price of the Company's common stock as of July 1, 2008 for serving as Nominating and Governance Committee chairperson.

The following Director Compensation Table summarizes the compensation of our directors for services rendered to Ascent Solar during the year ended December 31, 2008:

Director Compensation Table

Name	Fees Earned or Paid in Cash	Stock Awards(1)	Option Awards	Total	Options Outstanding
Mohan S. Misra	$	$	$	$	130,000
Stanley A. Gallery	20,000	60,988		80,988	8,000
T.W. Fraser Russell	20,000	45,988		65,988	8,000
Richard J. Swanson	20,000	57,994		77,994	16,000
Amit Kumar	20,000	52,994		72,994	8,000
Joel S. Porter	20,000	30,000		50,000	5,000
Einar Glomnes	2,250				
Richard Erskine					

(1) Represents fair market value of restricted stock granted during the year ended December 31, 2008.

In addition to the fees listed above, we reimburse the directors for their travel expenses incurred in attending meetings of the Board or its committees. The directors did not receive any other compensation or personal benefits.

Compensation Committee Interlocks and Insider Participation

None of the members of our Compensation Committee is an officer or employee of the Company. None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our Board of Directors or Compensation Committee.

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REPORT OF THE COMPENSATION COMMITTEE OF THE BOARD OF DIRECTORS

The Compensation Committee has reviewed and discussed with management the compensation disclosure included in this Annual Report and, based on such review and discussions, the Compensation Committee recommended to the Board that the compensation disclosure be included in this Annual Report.

Respectfully submitted,

COMPENSATION COMMITTEE

Stanley Gallery, Chairman
T.W. Fraser Russell
Richard Swanson

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table shows information regarding the beneficial ownership of our common stock as of December 31, 2008.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and generally includes any shares over which a person exercises sole or shared voting or investment power. Shares of common stock subject to options or warrants that are currently exercisable or exercisable within 60 days of December 31, 2008 are considered outstanding and beneficially owned by the person holding the options for the purpose of computing the percentage ownership of that person but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated, each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned. The address for each director or named executive officer is c/o Ascent Solar Technologies, Inc., 8120 Shaffer Parkway, Littleton, Colorado 80127.

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This table assumes 20,946,382 shares of common stock outstanding as of December 31, 2008, assuming no exercise of outstanding options.

Name of Beneficial Owner	No. of Shares Beneficially Owned	Percentage
Officers and Directors		
Mohan S. Misra, Ph.D.(1)	1,261,000	6.0%
Gary Gatchell(2)	58,500	*
Prem Nath, Ph.D(3)	74,333	*
Ashutosh Misra(4)	82,000	*
Joseph Armstrong, Ph.D.(5)	75,765	*
Bruce Berkoff	0	*
Joseph McCabe(6)	26,950	*
Janet Casteel(7)	46,826	*
Stanley A. Gallery(8)	119,491	*
Einar Glomnes(9)	0	*
Amit Kumar, Ph.D.(10)	11,983	*
Joel S. Porter(11)	8,006	*
T.W. Fraser Russell, Ph.D.(12)	28,608	*
Richard Erskine(13)	15,190	*
Richard J. Swanson(14)	19,591	*
All directors and executive officers as a group (15 persons)	1,828,243	8.4%
5% Stockholders(15)		
Norsk Hydro Produksjon AS(16)	7,349,160	35.0%

*

Less than 1.0%.

(1)

Includes options to purchase 70,000 shares of common stock that are vested within 60 days of December 31, 2008. Also includes 806,000 shares of common stock that are held by ITN because ITN is wholly-owned by Inica, Inc., which is owned by Dr. Misra and an immediate family member. Also includes 385,000 shares over which Dr. Misra has sole voting and dispositive power. This information is pursuant to a Schedule 13G filed by ITN, Inica, Inc. and Dr. Misra on February 12, 2009 and a Form 4 filed by ITN on February 9, 2009.

(2)

Includes 40,000 shares of restricted stock, 13,500 shares of common stock and options to purchase, 5,000 shares of common stock that are vested within 60 days of December 31, 2008.

(3)

Includes 10,000 shares of common stock and options to purchase 64,333 shares of common stock that are vested within 60 days of December 31, 2008.

(4)

Includes 36,000 shares of common stock and options to purchase 42,000 shares of common stock that are vested within 60 days of December 31, 2008, and 4,000 Class B warrants that are immediately exercisable.

(5)

Includes 47,333 shares of common stock and options to purchase 28,432 shares of common stock that are vested within 60 days of December 31, 2008.

(6)

Includes 4,200 shares of common stock and options to purchase 22,750 shares common stock that are vested within 60 days of December 31, 2008.

(7)

Includes 17,000 shares of common stock and options to purchase 29,826 shares of common stock that are vested within 60 days of December 31, 2008.

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(8) Includes 111,491 shares of common stock and options to purchase 8,000 shares of common stock that are vested within 60 days of December 31, 2008.

(9) Does not include securities held by Norsk Hydro Produksjon AS, our largest stockholder. Mr. Glomnes is the head of Hydro Solar, an affiliate of Norsk Hydro Produksjon AS, and disclaims beneficial ownership of our securities held by Norsk Hydro Produksjon AS.

(10) Includes 3,983 shares of common stock and options to purchase 8,000 shares of common stock that are vested within 60 days of December 31, 2008.

(11) Includes 3,006 shares of common stock and options to purchase 5,000 shares common stock that are vested within 60 days of December 31, 2008.

(12) Includes 20,608 shares of common stock and options to purchase 8,000 shares of common stock that are vested within 60 days of December 31, 2008.

(13) Includes 15,190 Class B warrants that are immediately exercisable. Does not include securities held by Norsk Hydro Produksjon AS, our largest stockholder. Mr. Erskine is Senior Vice President of Solar Business Development of Hydro Solar, an affiliate of Norsk Hydro Produksjon AS, and disclaims beneficial ownership of our securities held by Norsk Hydro Produksjon AS.

(14) Includes 3,591 shares of common stock and options to purchase 16,000 shares of common stock that are vested within 60 days of December 31, 2008.

(15) Information regarding these stockholders is based solely upon filings made by them with the Securities and Exchange Commission.

(16) The reported address of Norsk Hydro Produksjon AS is Drammensveien 264, N-0240, Oslo, Norway. Assumes the exercise by Norsk Hydro Produksjon AS of remaining shares of its Tranche 2 Option to acquire 51,000 shares of common stock and 33,398 Class B warrants in addition to the 7,298,160 shares of common stock and 3,655,595 Class B warrants it currently holds. Until June 2009, Norsk Hydro Produksjon AS may only exercise that number of Class B warrants necessary to maintain ownership of 35% of our outstanding common stock. This table assumes the exercise of additional shares Norsk Hydro Produksjon AS can purchase under its Tranche 2 Option in order to obtain ownership of 35% of our common stock.

2005 Stock Option Plan

Our Option Plan provides for the grant of incentive or non-statutory stock options to our employees, directors and consultants. A total of 1,500,000 shares of common stock are reserved for issuance under the Option Plan. The Board of Directors and our stockholders approved the plan and its amendments.

The Option Plan is administered by the Compensation Committee of our Board of Directors. Subject to the provisions of the Option Plan, the Committee determines who will receive the options, the number of options granted, the manner of exercise and the exercise price of the options. The term of incentive stock options granted under the Option Plan may not exceed ten years, or five years for options granted to an optionee owning more than 10% of our voting stock. The exercise price of an incentive stock option granted under the Option Plan must be equal to or greater than the fair market value of the shares of our common stock on the date the option is granted. The exercise price of a non-qualified option granted under the Option Plan must be equal to or greater than 85% of the fair market value of the shares of our common stock on the date the option is granted. An incentive stock option granted to an optionee owning more than 10% of our voting stock must have an exercise price

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equal to or greater than 110% of the fair market value of our common stock on the date the option is granted.

2008 Restricted Stock Plan

The Board of Directors adopted the Company's 2008 Restricted Stock Plan with stockholder approval on July 1, 2008. The Restricted Stock Plan reserves up to 750,000 shares of our common stock for restricted stock awards and restricted stock units to eligible employees, directors and consultants of the Company.

The Restricted Stock Plan is administered by the Compensation Committee of the Board of Directors, which determines the terms of the restricted shares. According to the terms of the Restricted Stock Plan, no individual may be granted, in any fiscal year, more than 200,000 shares. Vesting of shares of restricted stock granted under the Stock Plan may occur over a specified period of time or based upon performance metrics announced at the time of grant.

As of December 31, 2008, there were outstanding options to purchase 1,092,200 shares of common stock under the 2005 Stock Option Plan and 42,500 unvested restricted stock awards under the 2008 Restricted Stock Plan. The following table sets forth information as of December 31, 2008 relating to all of our equity compensation plans:

	Number of securities to be issued upon exercise of outstanding options, warrants and rights and unvested restricted stock	Weighted-average exercise price of outstanding options, warrants and rights and unvested restricted stock	Number of securities remaining available for future issuance under equity compensation plans
2005 Stock Option Plan approved by security holders	1,092,200	$ 4.94	73,500
2008 Restricted Stock Plan approved by security holders	42,500	$ 14.51	680,154
Equity compensation plans not approved by security holders			
Total:	1,134,700		753,654

Item 13. Certain Relationships and Related Transactions, and Director Independence

Transactions Involving ITN Energy Systems, Inc.

We were formed in October 2005 to commercialize certain technologies developed by ITN. ITN is wholly owned by Inica, Inc., a Colorado corporation (Inica). Dr. Mohan Misra, Chairman of our Board of Directors, our interim President and Chief Executive Officer, and an immediate family member of his, own all of the outstanding shares of Inica.

Sublease Agreement. In 2006, we subleased approximately 9,500 square feet of office and manufacturing space at cost from ITN. As of January 1, 2007, we increased our sublease to approximately 14,200 square feet of office and manufacturing space at cost from ITN. The sublease expires in June 2010. In 2008, we paid $18,911 per month of rent per month, plus pass-through expenses such as taxes, insurance, water and utilities. Total costs incurred under the Sublease Agreement for the year ended December 31, 2008 were approximately $289,000. In 2009, we expect to pay $18,991 per month in rent to ITN, plus pass-through expenses.

Administrative Services Agreement. ITN has agreed to perform administrative services for us at cost, including services such as facilities management, equipment maintenance, procurement, information technology and technical support. The cost for those services in 2008 was approximately

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$1,338,000. In addition the Company reimbursed ITN approximately $711,000 for costs paid by ITN on behalf of the Company. Although we expect to pay ITN approximately the same amount for those services in 2009, the costs may increase due to commencement of commercial operations and our planned expansion.

Service Center Agreement. From time to time, we may find our own facilities inadequate or unsuitable to handle specific or special tasks or processes, but discover that ITN has such capability. Under a Service Center Agreement, we have the right to use, on an as needed and as available basis, certain of ITN's laboratories, equipment and research and development tools. When we have made periodic use of the laboratories, equipment and tools, we have paid ITN in accordance with ITN's costs. Although the Service Center Agreement expires in December 2009, it is automatically renewable on a month-to-month basis. In 2008, we paid ITN approximately $518,000 under the Service Center Agreement. Although we expect to pay ITN approximately the same amount under the Service Center Agreement in 2009, the costs may increase if we more actively pursue R&D activities.

License Agreement. ITN has granted us a perpetual, royalty-free, worldwide license to use certain trade secrets and other patents, inventions, and trade secrets that ITN may develop or have the right to license that are necessary for use in our PV business. This license is exclusive to us for use in the PV business. The license is perpetual and may only be terminated by ITN in the event of a material breach by us that we fail to cure within thirty days notice of such breach.

In connection with our formation, in early 2006, ITN assigned to us its CIGS PV-specific technologies, and granted to us a perpetual, exclusive, royalty-free, worldwide license to use certain of ITN's existing and future proprietary process and control technologies that, although non-specific to CIGS PV, we believe will be useful in our production of PV modules for our target markets. See "Business Research and Development and Intellectual Property." After obtaining necessary approvals and pursuant to a novation, ITN also transferred several government-sponsored CIGS PV research and development contracts to us. At the time the contracts were transferred to us in early 2007, the contracts had a remaining contract value of approximately $1.6 million.

Transactions Involving Norsk Hydro Produksjon AS

In March 2007, we sold 1,600,000 shares of our restricted common stock to Norsk Hydro Produksjon AS in a private placement pursuant to Rule 506 of Regulation D and Section 4(2) of the Securities Act. 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 our issued and outstanding common stock, Class A warrants and Class B warrants.

In March 2008, Hydro acquired an additional 2,341,897 shares of the Company's common stock and 1,689,905 Class B warrants through the exercise of the Tranche 2 Option previously granted to Hydro and approved by Ascent's stockholders in June 2007, resulting in Hydro ownership of approximately 35% of each class of security. Gross proceeds to the Company were $28.4 million, and reflected per share and per warrant purchase prices were equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. As a

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result of the Company's Secondary Public Offering in May 2008, Hydro's holdings were diluted to approximately 27%.

On October 8, 2008, Hydro acquired an additional 2,421,801 shares of the Company's common stock. The purchase resulted in a return to Hydro's ownership of approximately 35% of the Company's common stock. Gross proceeds to the company from the follow on investment were approximately $15 million, and reflect per share purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. Until June 15, 2009, the Tranche 2 option entitles Hydro to purchase from the Company additional restricted shares of common stock and Class B warrants to maintain ownership of up to 35% of issued and outstanding common stock and Class B warrants.

In connection with the sale of these securities, Norsk Hydro received: piggyback registration rights that enable them to require us to register for resale the shares held by them if we engage in a registered public offering; and demand registration rights that become effective in March 2008. Norsk Hydro also holds pre-emptive rights with respect to certain equity issuances by us (on terms no less favorable than any such issuance) in order to maintain its percentage ownership in our common stock, but the pre-emptive rights do not apply to bona fide underwritten public offerings by us.

Future Transactions

Future transactions with our officers, directors or greater than five percent stockholders will be on terms no less favorable to us than could be obtained from independent third parties, and all such transactions will be reviewed and subject to approval by members of our Audit Committee, which will have access, at our expense, to our or independent legal counsel.

Director Independence

The Board of Directors has determined that the following directors are "independent" a required by applicable laws and regulations, by the listing standards of The NASDAQ Stock Market and by our corporate governance guidelines: Stanley Gallery, Dr. Amit Kumar, Joel Porter, Dr. T.W. Fraser Russell and Richard Swanson. The board of directors has also concluded that the members of each of the audit, nominating and governance and compensation committees are comprised solely of "independent" directors in accordance with these same standards.

Executive Employment Agreements

We have executive employment agreements with Mohan Misra, our interim President and Chief Executive Officer and Chief Strategy Officer, Gary Gatchell, our Chief Financial Officer and Secretary, Prem Nath, our Senior Vice President of Production Operations, Ashutosh Misra, our Senior Vice President of Operations and Corporate Affairs, Bruce Berkoff, our Chief Marketing Officer, Joseph Armstrong, our Vice President and Chief Technology Officer and Janet Casteel, our Chief Accounting Officer and Treasurer.

Each executive employment agreement has a term of three or four years and has expired or will expire: in December 2008 in the case of Dr. Armstrong; in February 2009 in the case of Ms. Casteel; in July 2009 in the case of Dr. Nath; in April 2010 in the cases of Dr. M. Misra and Mr. A. Misra; in March 2012 in the case of Mr. Gatchell; and in September 2012 in the case of Mr. Berkoff. Under the terms of each agreement, in addition to each of their base salaries: Ms. Casteel may receive a discretionary bonus of up to 15% of that base salary based upon her individual performance and our performance as a company; Dr. Armstrong may receive a discretionary bonus of up to 15% of that base salary based upon his individual performance and our performance as a company; Dr. Nath may receive a discretionary bonus of up to 50% of that base salary based upon his individual performance; Dr. M. Misra may receive a discretionary bonus of up to 50% of that base salary based upon his

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individual performance and our overall performance as a company; and Mr. A. Misra, Mr. Gatchell and Mr. Berkoff may receive a discretionary bonus of up to 30% of that base salary based upon their individual performance and our overall performance as a company. Base salary is subject to increase from time to time in the normal course of business. Bonuses are not ensured and are awarded at the discretion of the Board. Each agreement may be terminated without notice if for cause, but 30 days' advance notice is required for termination without cause. Further, if Mr. Gatchell, Dr. Nath, Dr. M. Misra or Mr. A. Misra is terminated without cause during the term of his employment agreement, he will be entitled to receive his base salary for a period of twelve months after termination. If Dr. Armstrong, Ms. Casteel or Mr. Berkoff is terminated without cause during the term of his or her agreement, he or she will be entitled to receive his or her base salary for a period of six months after termination. In the event of a merger of the Company with or into another corporation, the sale of substantially all of the assets of the Company, or termination of an executive officer without cause, then some or all of any unvested options, shares of restricted stock or restricted stock units granted to the executive officer may be subject to accelerated vesting in accordance with the terms of the executive's employment agreement, separation or severance agreement, or the Company's Restated 2005 Stock Option Plan and 2008 Restricted Stock Plan, both as amended.

Separation Agreement

On September 19, 2008, Matthew Foster resigned from his position as President and Chief Executive Officer. Dr. Mohan Misra, our Chairman and Chief Strategy Officer, was appointed as the Company's interim President and Chief Executive Officer until a permanent replacement is hired.

In addition to any benefits owed under Mr. Foster's executive employment contract, pursuant to a Separation Agreement and General Release, vesting of Mr. Foster's stock options vesting accelerated to October 19, 2008 and he received a severance payment of $75,000. The Company also will contribute to Mr. Foster's COBRA premium for a period of twelve months. On October 19, 2008, we entered into a consulting agreement with Mr. Foster. Pursuant to the terms of the agreement, Mr. Foster is to expend up to 10 hours per week assisting us with business development, investor relations, strategic planning, assessment of competition and competitive environment, global expansion strategy and management advisory services. In consideration for these services, we agreed to pay Mr. Foster a monthly consulting fee of $10,000.

Item 14. Principal Accounting Fees and Services

Principal Accounting Fees and Services

Fees for audit and related services by our accounting firm, Hein & Associates LLP, for the years ended December 31, 2008 and 2007 were as follows:

	2008	2007
Audit fees	$234,000	$112,000
Audit related fees		
Total audit and audit related fees	$234,000	$112,000
Tax fees		
All other fees		
Total Fees	$234,000	$112,000

Audit fees of Hein & Associates LLP for fiscal 2008 and 2007 were incurred during the examination of the financial statements, audit of internal controls over financial reporting, interim reviews of the quarterly financial statements, and consents and comfort letters.

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Audit Committee Pre-Approval Policies and Procedures

The Audit Committee charter provides that the Audit Committee will pre-approve all audit services and non-audit services to be provided by our independent auditors before the accountant is engaged to render these services. The Audit Committee may consult with management in the decision-making process, but may not delegate this authority to management. The Audit Committee may delegate its authority to pre-approve services to one or more committee members, provided that the designees present the pre-approvals to the full committee at the next committee meeting. All audit and non-audit services performed by our independent accountants have been pre-approved by our Audit Committee to assure that such services do not impair the auditors' independence from us.

Attendance at Annual Meeting

Representatives of Hein & Associates LLP are expected to be present at the annual meeting, will have the opportunity to make a statement if they desire to do so, and are expected to be available to respond to appropriate questions.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee has reviewed and discussed the audited financial statements with management. The Audit Committee has discussed with the independent accountants the matters required to be discussed by Statement on Accounting Standards No. 61. The Audit Committee also has received the written disclosures and the letter from the independent accountants required by Independence Standards Board Standard No. 1 and has discussed with the independent accountants the accountants' independence. Based on the reviews and discussions referred to above, the Audit Committee recommended to the Company's Board of Directors that the audited financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2008

Respectfully submitted,

AUDIT COMMITTEE

Richard Swanson, Chairman
Stanley Gallery
Amit Kumar

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PART IV

Item 15. Exhibits, Financial Statement Schedules

a. The following exhibits are filed as part of, or are incorporated by reference into, this report:

Exhibit No.	Description
3.1	Registrant's Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
3.2	Registrant's 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 January 23, 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 January 23, 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 January 23, 2006 (Reg. No. 333-131216), as amended)
4.4	Form of Unit Certificate (incorporated by reference to Exhibit 4.4 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
4.5	Form of 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)
4.6	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)
10.1	Amended and Restated 2005 Stock Option Plan and Form of Stock Option Agreement (Approved by Board of Directors on April 16,2007; Adopted by Stockholders on June 15, 2007) (incorporated by reference to Exhibit 10.1 to our June 30, 2007 Quarterly Report on Form 10-QSB filed July 31, 2007)
10.2	Employment Agreement with Matthew Foster (incorporated by reference to Exhibit 10.9 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.3	Employment Agreement with Dr. Joseph Armstrong (incorporated by reference to Exhibit 10.10 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.4	Employment Agreement with Janet Casteel (incorporated by reference to Exhibit 10.14 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)

10.5 Employment Agreement with Dr. Prem Nath (incorporated by reference to Exhibit 10.4 to our Annual Report on Form 10-KSB filed March 30, 2007)

10.6 Employment Agreement with Joseph McCabe (incorporated by reference to Exhibit 10.5 to our Annual Report on Form 10-KSB filed March 30, 2007)

10.7 Employment Agreement with Mohan S. Misra (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed April 27, 2007)

10.8 Employment Agreement with Ashutosh Misra (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed April 27, 2007)

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Exhibit No.	Description
10.9	Amendment to Employment Agreement with Prem Nath (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed January 11, 2008)
10.10	Amendment to Employment Agreement with Matthew Foster (incorporated by reference to Exhibit 10.1 to our current report on 8-K filed December 14, 2007)
10.11	Securities Purchase Agreement by and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.1 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)[CTR]
10.12	Invention and Trade Secret Assignment Agreement and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.2 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)[CTR]
10.13	Patent Application Assignment Agreement by and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.3 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.14	License Agreement by and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.4 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)[CTR]
10.15	Sublease Agreement (incorporated by reference to Exhibit 10.5 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.16	Service Center Agreement by and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.6 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.17	Manufacturing Line Agreement by and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.7 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.18	Amendment No. 1 to Manufacturing Line Agreement between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.7A to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.19	Administrative Services Agreement by and between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.8 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.20	Amendment No. 1 to Administrative Services Agreement between the Registrant and ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.8A to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)

10.21	2005 Stock Option Plan and Form of Stock Option Agreement (incorporated by reference to Exhibit 10.11 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.22	Bridge Unit Purchase and Investor Subscription agreement with forms of promissory note and bridge right (incorporated by reference to Exhibit 10.12 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.23	Amendment No. 1 to Bridge Unit Purchase and Investor Subscription Agreement (incorporated by reference to Exhibit 10.13 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.24	Amendment to Annex B to Bridge to Bridge Unit Purchase and Investor Subscription Agreement (incorporated by reference to Exhibit 10.13A to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)

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Exhibit No.	Description
10.25	Non-Exclusive Patent License Agreement with Midwest Research Institute (incorporated by reference to Exhibit 10.15 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216) , as amended)
10.26	Letter Agreement with the University of Delaware (incorporated by reference to Exhibit 10.16 to our Registration Statement on Form SB-2 filed January 23, 2006 (Reg. No. 333-131216), as amended)
10.27	License Agreement between UD Technology Corporation and Ascent Solar Technologies, Inc. (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed November 29, 2007)[CTR]
10.28	Novation Agreement with ITN Energy Systems, Inc. and the United States Government (incorporated by reference to Exhibit 10.23 to our Annual Report on Form 10-KSB filed March 30, 2007)
10.29	Amendment to Service Center Agreement with ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.24 to our Annual Report on Form 10-KSB filed March 30, 2007)
10.30	Amendment to Sublease Agreement with ITN Energy Systems, Inc. (incorporated by reference to Exhibit 10.25 to our Annual Report on Form 10-KSB filed March 30, 2007)
10.31	Securities Purchase Agreement with Norsk Hydro Produksjon AS (incorporated by reference to Exhibit 99.1 to our current report on form 8-K filed March 13, 2007)
10.32	Stockholders' Agreement with Norsk Hydro Produksjon AS (incorporated by reference to Exhibit 99.2 to our current report on form 8-K filed March 13, 2007)
10.33	Registration Rights Agreement with Norsk Hydro Produksjon AS (incorporated by reference to Exhibit 99.3 to our current report on form 8-K filed March 13, 2007)
10.34	Voting Agreement with Norsk Hydro Produksjon AS (incorporated by reference to Exhibit 99.4 to our current report on form 8-K filed March 13, 2007)
10.35	Consulting Agreement with Ashutosh Misra (incorporated by reference to Exhibit 10.30 to our Annual Report on Form 10-KSB filed March 30, 2007)
10.36	Contract to Buy and Sell Real Estate and Closing Statement with JN Properties (incorporated by reference to Exhibit 10.36 to our Annual Report on Form 10-K filed March 14, 2008)
10.37	Construction Loan Agreement with Colorado Housing and Finance Authority (incorporated by reference to Exhibit 10.37 to our Annual Report on Form 10-K filed March 14, 2008)
10.38	Promissory Note with Colorado Housing and Finance Authority (incorporated by reference to Exhibit 10.38 to our Annual Report on Form 10-K filed March 14, 2008)

10.39 Construction and Permanent Loan Commitment with Colorado Housing and Finance Authority (incorporated by reference to Exhibit 10.39 to our Annual Report on Form 10-K filed March 14, 2008)

10.40 Norsk Hydro Cooperation Agreement (incorporated by reference to Exhibit 10.1 to our current report on form 8-K filed December 19, 2007)

10.41 Amendment No. 1 to Securities Purchase Agreement with Norsk Hydro Produksjon AS (incorporated by reference to Exhibit 10.41 to our Annual Report on Form 10-K filed March 14, 2008)

10.42 Employment Agreement with Gary Gatchell (incorporated by reference to Exhibit 99.1 to our Current Report on Form 8-K filed March 31, 2008)

10.43 Restricted Stock Award Agreement with Gary Gatchell (incorporated by reference to Exhibit 10.43 to our Quarterly Report on Form 10-Q filed April 29, 2008)

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Exhibit No.	Description
10.44	Amendment to Employment Agreement with Mohan Misra (incorporated by reference to Exhibit 44 to our Quarterly Report on Form 10-Q filed August 8, 2008)
10.45	Second Amended and Restated 2005 Stock Option Plan and Form of Stock Option Agreement (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-8 filed July 30, 2008 (Reg. No. 333-152642))
10.46	2008 Restricted Stock Plan (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-8 filed July 30, 2008 (Reg. No. 333-152643))
10.47	Amended 2008 Restricted Stock Plan and Form of Restricted Stock Award Agreement and Form of Restricted Stock Unit Agreement (incorporated by reference to Exhibit 10.47 to our Quarterly Report on Form 10-Q filed November 10, 2008)
10.48	Executive Employment Agreement with Bruce I. Berkoff (incorporated by reference to Exhibit 10.47 to our Quarterly Report on Form 10-Q filed November 10, 2008)
10.49	Separation Agreement and General Release with Matthew Foster (incorporated by reference to Exhibit 10.47 to our Quarterly Report on Form 10-Q filed November 10, 2008)
10.50	Amendment No. 1 to Separation Agreement and General Release with Matthew Foster (incorporated by reference to Exhibit 10.47 to our Quarterly Report on Form 10-Q filed November 10, 2008)
10.51	Consultant Agreement with Matthew Foster (incorporated by reference to Exhibit 10.47 to our Quarterly Report on Form 10-Q filed November 10, 2008)
10.52	Loan Modification Agreement with Colorado Housing and Finance Authority*
14.1	Code of Ethics (incorporated by reference to Exhibit 10.30 to our Annual Report on Form 10-KSB filed March 30, 2007)
14.2	Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to our current report on form 8-K filed February 17, 2009)
23.1	Consent of Independent Registered Public Accounting Firm*
31.1	Chief Executive Officer Certification pursuant to section 302 of the Sarbanes-Oxley Act of 2002*
31.2	Chief Financial Officer Certification pursuant to section 302 of the Sarbanes-Oxley Act of 2002*
32.1	Chief Executive Officer Certification pursuant to section 906 of the Sarbanes-Oxley Act of 2002*
32.2	Chief Financial Officer Certification pursuant to section 906 of the

Sarbanes-Oxley Act of 2002*

*
Filed herewith

CTR
Portions of this exhibit have been omitted pursuant to a request for confidential treatment.

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ASCENT SOLAR TECHNOLOGIES, INC.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on the 12th day of March, 2009.

ASCENT SOLAR TECHNOLOGIES

By: /s/ MOHAN MISRA

Mohan Misra, Ph.D.
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated. Signature Capacities Date

Signature	Capacities	Date
/s/ MOHAN MISRA Mohan Misra, Ph.D.	Chairman of the Board of Directors, President & Chief Executive Officer (Principal executive officer)	March 12, 2009
/s/ GARY GATCHELL Gary Gatchell	Chief Financial Officer (Principal financial officer)	March 12, 2009
/s/ AMIT KUMAR Amit Kumar, Ph.D.	Director	March 12, 2009
/s/ T.W. FRASER RUSSELL T.W. Fraser Russell, Ph.D.	Director	March 12, 2009
/s/ STANLEY A. GALLERY Stanley A. Gallery	Director	March 12 , 2009
/s/ JOEL S. PORTER Joel S. Porter	Director	March 12, 2009
/s/ RICHARD ERSKINE Richard Erskine	Director	March 12, 2009
/s/ RICHARD SWANSON Richard Swanson	Director	March 12, 2009
/s/ EINAR GLOMNES	Director	March 12, 2009

Einar Glomnes

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Report of Independent Registered Public Accounting Firm

Financial Statements

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
Ascent Solar Technologies, Inc.
Littleton, Colorado

We have audited the accompanying balance sheets of Ascent Solar Technologies, Inc. (a Development Stage Company as defined by SFAS No. 7) as of December 31, 2008 and 2007 and the related statements of operations, stockholders' equity and comprehensive income (loss) and cash flows for the years ended December 31, 2008, 2007 and 2006 and for the period from inception (October 18, 2005) through December 31, 2008. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Ascent Solar Technologies, Inc. as of December 31, 2008 and 2007, and the results of its operations and its cash flows for the years ended December 31, 2008, 2007 and 2006 and for the period from inception (October 18, 2005) through December 31, 2008 in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Ascent Solar Technologies, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 12, 2009 expressed an unqualified opinion on the effectiveness of Ascent Solar Technologies, Inc.'s internal control over financial reporting.

***HEIN** & ASSOCIATES LLP*

Denver, Colorado
March 12, 2009

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

BALANCE SHEETS

	December 31, 2008	December 31, 2007
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 32,913,304	$ 580,746
Restricted cash	2,300,000	
Investments	52,136,902	37,120,000
Accounts receivable contracts	336,236	204,351
Other current assets	746,687	349,062
Total current assets	88,433,129	38,254,159
Property and Equipment:	28,446,433	1,766,294
Less accumulated depreciation and amortization	(1,521,922)	(115,051)
	26,924,511	1,651,243
Other Assets		
Deposits on manufacturing equipment	38,644,881	9,720,309
Patents, net of amortization of $6,395 and $1,279, respectively	137,781	91,215
Other non-current assets	71,563	100,000
	38,854,225	9,911,524
Total Assets	$ 154,211,865	$ 49,816,926
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 265,415	$ 257,529
Related party payables	263,280	264,797
Accrued expenses	934,433	652,524
Accrued property and equipment	5,115,163	
Current portion of long-term debt	187,150	
Forward contract liabilities	766,403	
Total current liabilities	7,531,844	1,174,850
Deferred Rent	12,012	20,021
Long-Term Debt	7,049,902	
Commitments and Contingencies (Notes 8 & 15)		
Stockholders' Equity:		
Preferred stock, $0.0001 par value, 25,000,000 shares authorized, no shares outstanding		
Common stock, $0.0001 par value, 75,000,000 shares authorized; 20,946,382 and 11,435,901 shares issued and outstanding at December 31, 2008 and December 31, 2007, respectively	2,095	1,144
Additional paid in capital	164,391,585	60,512,476
Deficit accumulated during the development stage	(25,106,641)	(11,891,565)
Accumulated other comprehensive income	331,068	
Total stockholders' equity	139,618,107	48,622,055

Total Liabilities and Stockholders' Equity	$154,211,865	$ 49,816,926

The accompanying notes are an integral part of these financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

STATEMENTS OF OPERATIONS

	For the Years Ended December 31,			For the Period from inception (October 18, 2005) through December 31,
	2008	2007	2006	2008
Research and Development Revenues	$ 1,499,729	$ 1,002,674	$	$ 2,502,403
Costs and Expenses				
Research and development	10,066,055	4,802,538	832,891	15,701,484
General and administrative	5,669,746	4,126,451	2,542,413	13,543,104
Total Costs and Expenses	15,735,801	8,928,989	3,375,304	29,244,588
Loss from Operations	$ (14,236,072)	$ (7,926,315)	$ (3,375,304)	$ (26,742,185)
Other Income/(Expense)				
Interest expense	(3,438)	(424)	(1,080,691)	(1,087,293)
Interest income	2,145,370	1,423,320	275,083	3,843,773
Realized loss on investments	(32,103)			(32,103)
Realized loss on forward contracts	(322,430)			(322,430)
Unrealized loss on forward contracts	(766,403)			(766,403)
	1,020,996	1,422,896	(805,608)	1,635,544
Net Loss	$ (13,215,076)	$ (6,503,419)	$ (4,180,912)	$ (25,106,641)
Net Loss Per Share (Basic and diluted)	$ (0.78)	$ (0.70)	$ (1.45)	
Weighted Average Common Shares Outstanding (Basic and diluted)	16,895,179	9,237,252	2,881,639	

The accompanying notes are an integral part of these financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS)

For the Period from inception (October 18, 2005) through December 31, 2008

	Common Stock		Preferred Stock		Additional Paid-In	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Income	Equity
Balance at inception, October 18, 2005								
Proceeds from sale of common stock (11/05 @ $.04 per share)	972,000	$ 97		$	$ 38,783	$	$	$ 38,880
Stock based compensation:								
Founders stock					933,120			933,120
Stock options					26,004			26,004
Net loss						(1,207,234)		(1,207,234)
Balance, December 31, 2005	972,000	$ 97		$	$ 997,907	$ (1,207,234)	$	$ (209,230)
Transfer of assets at historical cost (1/06 @ $0.03 per share)	1,028,000	103			31,097			31,200
Proceeds from IPO (7/06 @ $5.50 per unit)	3,000,000	300			16,499,700			16,500,000
IPO costs					(2,392,071)			(2,392,071)
Stock issued to bridge loan lenders (7/06 @ $2.75 per share)	290,894	29			799,971			800,000
Exercise of stock options (9/06 & 12/06 @ $0.10 per share)	31,200	3			3,117			3,120
Stock based compensation stock options					348,943			348,943
Net loss						(4,180,912)		(4,180,912)
Balance, December 31, 2006	5,322,094	$ 532		$	$ 16,288,664	$ (5,388,146)	$	$ 10,901,050
Exercise of stock options (1/07 - 12/07 @ $.10) (7/07 - 12/07 @ $4.25) (9/07 - 12/07 @ $2.51 - $2.76)	169,963	17			346,417			346,434
Conversion of Class A public warrants at $6.60	3,098,382	310			20,449,011			20,449,321
Redemption of Class A public warrants at $0.25 per share					(48,128)			(48,128)
Conversion of Class B public warrants at $11.00 per share	11,000	1			120,999			121,000
Stock based compensation stock options					1,734,879			1,734,879
Proceeds from private placement:								
Common stock (3/07 @ $5.77 and 8/07 @ $7.198)	2,534,462	254			15,962,003			15,962,257
Class B public warrants (8/07 @ $1.91)					3,754,468			3,754,468
Private placement costs					(75,807)			(75,807)
Exercise of representative's warrants (9/07 - 11/07 @ $6.60 per unit)	300,000	30			1,979,970			1,980,000
Net loss						(6,503,419)		(6,503,419)
Balance, December 31, 2007	11,435,901	$ 1,144		$	$ 60,512,476	$ (11,891,565)	$	$ 48,622,055

The accompanying notes are an integral part of these financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS) (Continued)

For the Period from inception (October 18, 2005) through December 31, 2008

	Common Stock		Preferred Stock		Additional Paid-In	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Income	Equity
Balance, December 31, 2007	11,435,901	$ 1,144		$	$ 60,512,476	$ (11,891,565)	$	$ 48,622,055
Exercise of stock options (1/08 - 12/08 @ $0.10, $2.73, $2.90 & $4.25)	133,137	13			120,520			120,533
Issuance of Restricted Stock	69,846	7			(7)			
Conversion of Class B public warrants at $11.00 per share	98,800	10			1,086,790			1,086,800
Stock based compensation					1,881,399			1,881,399
Proceeds from private placement:								
Common stock (3/08 @ $9.262)	4,763,698	476			36,647,217			36,647,693
Class B public warrants (3/08 @ $3.954)					6,681,884			6,681,884
Exercise of representative's warrants (1/08 @ $6.60 per unit)	75,000	8			494,992			495,000
Proceeds from shareholder under Section 16(b)					148,109			148,109
Proceeds from secondary public offering (5/08 @ $14.00)	4,370,000	437			61,179,563			61,180,000
Costs of secondary public offering					(4,361,358)			(4,361,358)
Components of comprehensive loss								
Net loss						(13,215,076)		(13,215,076)
Unrealized gain on investments							331,068	331,068
Total comprehensive loss						(13,215,076)	331,068	(12,884,008)
Balance, December 31, 2008	20,946,382	$ 2,095		$	$ 164,391,585	$ (25,106,641)	$ 331,068	$ 139,618,107

The accompanying notes are an integral part of these financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

STATEMENTS OF CASH FLOWS

	For the Years Ended December 31,			For the Period from inception (October 18, 2005) through December 31,
	2008	2007	2006	2008
Operating Activities:				
Net loss	$ (13,215,076)	$ (6,503,419)	$ (4,180,912)	$ (25,106,641)
Adjustments to reconcile net loss to cash used in operating activities:				
Depreciation and amortization	1,415,424	102,416	12,635	1,531,754
Stock based compensation	1,881,399	1,734,879	348,943	4,924,345
Realized loss on forward contract	322,430			322,430
Unrealized loss on forward contracts	766,403			766,403
Charge off of deferred financing costs to interest expense			198,565	198,565
Charge off of bridge loan discount to interest expense			800,000	800,000
Changes in operating assets and liabilities:				
Accounts receivable	(131,885)	(204,351)		(336,236)
Related party receivables		4,440	(4,440)	
Other current assets	(397,625)	(233,840)	(115,222)	(746,687)
Accounts payable	7,885	184,486	30,070	265,415
Related party payable	(1,517)	80,843	135,076	263,280
Deferred rent	(8,009)	10,109	9,912	12,012
Accrued expenses	281,909	530,887	8,026	934,434
Net cash used in operating activities	(9,078,662)	(4,293,550)	(2,757,347)	(16,170,926)
Investing Activities:				
Purchases of available-for-sale-securities	(552,312,954)	(97,116,344)	(46,244,450)	(695,673,748)
Maturities and sales of available for-sale securities	537,627,120	69,881,344	36,359,450	643,867,914
Purchase of property and equipment	(16,522,290)	(1,662,650)	(97,399)	(26,263,553)
Deposits on manufacturing equipment	(34,189,688)	(9,350,309)	(370,000)	(35,928,785)
Restricted cash for manufacturing equipment	(2,300,000)			(2,300,000)
Patent activity costs	(51,682)	(53,647)	(12,611)	(119,219)
Deposit on Building		(100,000)		(100,000)
Net cash used in investing activities	(67,749,494)	(38,401,606)	(10,365,010)	(116,517,391)
Financing Activities:				
Proceeds from bridge loan financing			1,600,000	1,600,000
Repayment of bridge loan financing			(1,600,000)	(1,600,000)
Payment of debt financing costs	(75,000)		(171,401)	(273,565)
Payment of equity offering costs	(4,361,358)	(75,807)	(2,251,064)	(6,829,237)
Proceeds from debt	7,237,052			7,437,052
Repayment of debt			(200,000)	(200,000)
Proceeds from shareholder under Section 16(b)	148,109			148,109
Proceeds from issuance of stock and warrants	106,211,911	42,613,480	16,503,120	165,367,390
Redemption of Class A warrants		(48,128)		(48,128)
Net cash provided by financing activities	109,160,714	42,489,545	13,880,655	165,601,621
Net change in cash and cash equivalents	32,332,558	(205,611)	758,298	32,913,304
Cash and cash equivalents at beginning of period	580,746	786,357	28,059	

Cash and cash equivalents at end of period	$ 32,913,304	$ 580,746	$ 786,357	$ 32,913,304
Supplemental Cash Flow Information:				
Cash paid for interest	$	$ 424	$ 84,819	$ 85,243
Cash paid for income taxes	$	$	$	$
Non-Cash Transactions:				
ITN initial contribution of assets for equity	$	$	$ 31,200	$ 31,200

The accompanying notes are an integral part of these financial statements.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS

NOTE 1. ORGANIZATION

Ascent Solar Technologies, Inc. (Ascent or the Company) was incorporated on October 18, 2005 from the separation by ITN Energy, Inc. (ITN) of its Advanced Photovoltaic Division and all of that division's key personnel and core technologies. ITN, a private company incorporated in 1994, is an incubator dedicated to the development of thin-film, photovoltaic (PV) battery, fuel cell and nano technologies. Through its work on research and development contracts for private and governmental entities, ITN developed proprietary processing and manufacturing know-how applicable to PV products generally, and to Copper-Indium-Gallium-diSelenide (CIGS) PV products in particular. ITN formed Ascent to commercialize its investment in CIGS PV technologies. In January 2006, in exchange for 1,028,000 shares of common stock of Ascent, ITN assigned to Ascent all ITN's CIGS PV technologies and trade secrets and granted to Ascent a perpetual, exclusive, royalty-free worldwide license to use ITN's proprietary process, control and design technologies in the production of CIGS PV modules. Upon receipt of the necessary government approvals in January 2007, ITN assigned government-funded research and development contracts to Ascent and also transferred the key personnel working on the contracts to Ascent. Today, ITN still provides Ascent a variety of administrative and technical services such as facilities management, equipment maintenance, procurement, and technical support services.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation: The Company's activities to date have substantially consisted of raising capital, research and development, and the development of a 1.5 MW production plant and additional 30 MW expansion plant. Revenues to date have been generated from the Company's governmental research and development (R&D) contracts and have not been significant. The Company's planned principal operations to commercialize flexible PV modules have not yet commenced. Accordingly, the Company is considered to be in the development stage, as defined in Statement of Financial Accounting Standards No. 7 (SFAS No. 7), "*Accounting and Reporting by Development Stage Enterprises*."

Cash Equivalents: The Company considers all highly liquid debt securities purchased with an original maturity of three months or less to be cash equivalents. The Company maintains cash balances which may exceed federally insured limits. The Company does not believe that this results in significant credit risk.

Investments: The Company accounts for investments in accordance with SFAS No. 115, "*Accounting for Certain Investments in Debt and Equity Securities.*" The Company has classified its investments as "available-for-sale". Such investments are carried at fair value, based on quoted market prices with the unrealized holding gains and losses reported as Accumulated other comprehensive income (loss) in the stockholders' equity section of the balance sheet. Realized gains and losses on sales of securities are computed using the specific identification method. The Company evaluates declines in market value for potential impairment. If the decline results in a value below cost and is determined to be other than temporary, the investment is written down to its impaired value and a new cost basis is established.

Fair Value estimates: The fair value of an asset or liability is the amount at which it could be exchanged or settled in a current transaction between willing parties. The carrying value for cash and cash equivalents, investments, restricted cash, accounts receivable, accounts payable, accrued property and equipment, accrued expenses and other assets and liabilities approximate their fair values due to

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

their short maturities. Effective January 1, 2008, the Company adopted SFAS No. 157, *"Fair Value Measurements"* (SFAS 157). In February 2008, the FASB issued FASB Staff Position No. FAS 157-2, *"Effective Date of FASB Statement No. 157"*, which provides a one year deferral of the effective date of SFAS 157 for non-financial assets and non-financial liabilities, except those that are recognized or disclosed in the financial statements at fair value at least annually. Therefore, the Company has adopted the provisions of SFAS 157 with respect to its financial assets and liabilities only. SFAS 157 defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. Fair value is defined under SFAS 157 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

Foreign Currency translation: Bank account balances related to our forward contracts are translated to U.S. dollars utilizing the period end exchange rate. Gains or losses on foreign currency transactions are recorded in other income/loss in the statement of operations.

Revenue Recognition: Revenue to date is from governmental research and development contracts under terms that are cost plus fee or firm fixed price. Revenue from cost plus fee contracts is recognized as costs are incurred on the basis of direct costs plus allowable indirect costs and an allocable portion of the firm fixed fee. Revenue from firm fixed price contracts is recognized under the percentage-of-completion method of accounting, with costs and estimated profits included in contract revenue as work is performed. If actual and estimated costs to complete a contract indicate a loss, provision is made currently for the loss anticipated on the contract.

Patents: At such time as the Company is awarded patents, patent costs are amortized on a straight-line basis over the legal life, or over their estimated useful lives, whichever is shorter. As of December 31, 2008, the Company had $137,781 of net patent costs of which $29,417 represent costs net of amortization incurred for an awarded patent, and the remaining $108,364 represents costs incurred for patent applications filed. Amortization expense for the years ended December 31, 2008 and 2007 was $5,116 and $1,279, respectively.

Property and Equipment: Property and equipment are recorded at the original cost to the Company. Assets are being depreciated over estimated useful lives of one to ten years using the straight-line method, commencing when the asset is placed in service. Leasehold improvements are depreciated over the shorter of the remainder of the lease term or the life of the improvements. Upon retirement or disposal, the cost of the asset disposed of and the related accumulated depreciation are removed from the accounts and any gain or loss is reflected in income. Expenditures for repairs and maintenance are expensed as incurred.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The Company computes depreciation expense using the straight-line method over the estimated useful lives of the assets, as presented in the table below. We amortize leasehold improvements over the shorter of their estimated useful lives or the remaining term of the lease.

	Useful Lives in Years
Buildings	40
Manufacturing machinery and equipment	5 - 10
Furniture, fixtures, computer hardware/software	3 - 7
Leasehold improvements	life of lease

Long-lived assets: We account for our long-lived, tangible assets and definitive-lived intangible assets in accordance with Statement of Financial Accounting Standards No. (SFAS, 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*). As a result, we assess long-lived assets classified as "held and used", including our property, plant and equipment, for impairment whenever long-lived asset may not be recoverable. These events would include significant current period operating or cash flow losses associated with the use of a long-lived asset or group of assets combined with a history of such losses, significant changes in the manner of use of assets and significant negative industry or economic trends. We evaluated our long-lived assets for impairment for the period ending December 31, 2008 and concluded that no valuation allowances were required.

Risks and Uncertainties: The Company's operations are subject to certain risks and uncertainties, including those associated with: the ability to meet obligations; continuing losses; fluctuation in operating results; funding expansions; strategic alliances; financing arrangement terms that may restrict operations; regulatory issues; and competition. The recent financial crisis and the resulting tightening in the credit markets have made it more difficult to raise additional capital to fulfill our expansion business plan. Additionally, U.S. government contracts may be terminated prior to completion of full funding by the U.S. government.

Net loss per Common Share: Statement of Financial Accounting Standards No. 128, "*Earnings Per Share,"* provides for the calculation of "Basic" and "Diluted" earnings per share. Basic earnings per share include no dilution and are computed by dividing income available to common stockholders by the weighted-average number of shares outstanding during the period. Diluted earnings per share reflect the potential of securities that could share in the earnings of the Company, similar to fully diluted earnings per share. Common stock equivalents consisting of Class B warrants, IPO warrants (representative warrants), and stock options outstanding as of December 31, 2008 of approximately 12 million shares, have been omitted from loss per share because they are anti-dilutive. Basic and diluted loss per share was the same in each of the periods ended December 31, 2008 and 2007.

Research and Development Costs: Research and development costs are incurred during the process of researching and developing new products and enhancing our manufacturing processes and consist primarily of compensation and related costs for personnel, materials, supplies and equipment depreciation. We expense these costs as incurred until the resulting product has been completed and tested and is ready for commercial manufacturing. We also incur research and development expenses on our U.S. federal government research and development contracts and expense as incurred.

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Incomes Taxes: In July 2006, the FASB issued FASB Interpretation (FIN 48), "*Accounting for Uncertainty in Income Taxes*." The Company adopted the provisions of FIN 48 on January 1, 2007. Deferred income taxes are provided using the liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carry forwards and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of the changes in tax laws and rates as of the date of enactment. Interest and penalties, if applicable would be recorded in operations.

In July 2006, the FASB issued FASB Interpretation (FIN 48), "*Accounting for Uncertainty in Income Taxes*." The Company adopted the provisions of FIN 48 on January 1, 2007. As defined, FIN 48 seeks to reduce the diversity in practice associated with certain aspects of the recognition and measurement related to accounting for income taxes. The Company became subject to the provisions of FIN 48 as of January 1, 2007, and has analyzed filing positions in all of the federal and state jurisdictions where it is required to file income tax returns, as well as all open tax years in these jurisdictions. The Company has identified its federal tax return and its Colorado tax return as "major" tax jurisdictions, as defined. The periods subject to examination for the Company's federal and state tax returns are tax years 2005 through 2007. The Company believes that its income tax filing positions and deductions will be sustained on audit and does not anticipate any adjustments that will result in a material adverse effect on the Company's financial condition, results of operations, or cash flows. Therefore, no reserves for uncertain income tax positions have been recorded pursuant to FIN 48. In addition, the Company did not record a cumulative effect adjustment related to the adoption of FIN 48.

Stock Based Compensation: The Company accounts for share-based payments under the provisions of Statement of Financial Accounting Standards No. 123 (revised 2004), "*Share-Based Payment,"* (SFAS 123(R)) which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees, officers, directors, and consultants, including employee stock options based on estimated fair values. SFAS 123(R) requires companies to estimate the fair value of share-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service period in the Company's Statements of Operations. Stock based compensation is based on awards ultimately expected to vest and is reduced for estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, as necessary, in subsequent periods if actual forfeitures differ from those estimates.

For purposes of determining estimated fair value of share-based payment awards on the date of grant under SFAS 123(R), the Company uses the Black-Scholes option-pricing model (Black-Scholes Model). The Black-Scholes Model requires the input of highly subjective assumptions. Because the Company's employee stock options may have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models may not provide a reliable single measure of the fair value of the Company's employee stock options. Management will continue to assess the

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

assumptions and methodologies used to calculate estimated fair value of share-based compensation. Circumstances may change and additional data may become available over time, which result in changes to these assumptions and methodologies, which could materially impact the Company's fair value determination.

The application of the SFAS 123(R) accounting principles may be subject to further interpretation and refinement over time. There are significant differences among option valuation models, and this may result in a lack of comparability with other companies that use different models, methods and assumptions. If factors change and the Company employs different assumptions in the application of SFAS 123(R) in future periods, or if the Company decides to use a different valuation model, the compensation expense that the Company records in the future under SFAS 123(R) may differ significantly from what it has recorded in the current period and could materially affect its loss from operations, net loss and net loss per share.

Comprehensive income (loss): Our comprehensive income (loss) consists of our net income (loss), and changes in unrealized gains or losses on available for sale investments, the impact of which has been excluded from net loss. We present our comprehensive income (loss) in the Statements of Stockholders' Equity and Comprehensive Income and (Loss). Our accumulated other comprehensive income (loss) is presented as a component of equity in our Balance Sheets and consists of the cumulative amount of unrealized gains or losses on available-for-sale investments that we have incurred since the inception of our business.

Reclassifications: Certain reclassifications have been made to the 2007 and 2006 financial information to conform to the 2008 presentation. Such reclassifications had no effect on net loss and are primarily related to reclassifying costs between Research and development costs and General and administrative expenses in the Statements of Operations.

Use of Estimates: The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Recent Accounting Pronouncements: Effective January 1, 2008, the Company adopted SFAS No. 159 "*The Fair Value Option for Financial Assets and Financial Liabilities"* (SFAS 159). SFAS 159 allows an entity the irrevocable option to elect fair value for the initial and subsequent measurement for specified financial assets and liabilities on a contract-by-contract basis. The Company did not elect to adopt the fair value option under this Statement.

In March 2008, the FASB issued SFAS No. 161, *"Disclosures about Derivative Instruments and Hedging Activities an amendment of FASB Statement No. 133"* (SFAS 161), which expands the disclosure requirements for derivative instruments and hedging activities. SFAS 161 specifically requires entities to provide enhanced disclosures addressing the following: (a) how and why an entity uses derivative instruments; (b) how derivative instruments and related hedged items are accounted for under SFAS 133 and its related interpretations; and (c) how derivative instruments and related hedged items affect an entity's financial position, financial performance, and cash flows. SFAS 161 is effective

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

for fiscal years and interim periods beginning after November 15, 2008. The Company is currently evaluating the potential impact, if any, of the adoption of SFAS 161 on its financial position, results of operations and disclosures.

In April 2008, the FASB issued FASB Staff Position (FSP) FSP 142-3, "Determination of the Useful Life of Intangible Assets." This FSP amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, "Goodwill and Other Intangible Assets." The intent of this FSP is to improve the consistency between the useful life of a recognized intangible asset under Statement 142 and the period of expected cash flows to measure the fair value of the asset under FASB Statement No. 141 (Revised 2007), "Business Combinations," and other U.S. generally accepted accounting principles (GAAP). This FSP is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. Early adoption is prohibited. The Company does not expect the adoption of FAS 142-3 to have a material effect on its results of operations and financial condition.

In May 2008, the FASB issued SFAS No. 162, "The Hierarchy of Generally Accepted Accounting Principles," which becomes effective upon approval by the SEC. The standard sets forth the sources of accounting principles and provides entities with a framework for selecting the principles used in the preparation of financial statements that are presented in conformity with GAAP. It is not expected to change any of our current accounting principles or practices and therefore, is not expected to have a material impact on our financial statements.

NOTE 3. LIQUIDITY AND CONTINUED OPERATIONS

As discussed in Note 1, the Company is in the development stage and is currently incurring significant losses from operations. As of December 31, 2008, the Company had $87.4 million in cash, restricted cash and investments of which approximately $50 million will be used in 2009 for progress payments to our equipment suppliers for our 30 MW line and $4 million for facility infrastructure for our 30 MW expansion. An additional $26 million is required in 2010 for final payments to our equipment suppliers on the 30MW line.

The Company expects to commence commercial production on its 1.5 MW production line in 2009. We do not expect that sales revenue from the 1.5 MW production line will be sufficient to support operations and cash requirements, and it is unlikely that sales revenue will support operating cash requirements unless we achieve actual production capacity of at least 30 MW per year. Our original equipment delivery schedule called for installation of all of the 30 MW production equipment during 2009. Due to the recent financial crisis affecting the financial markets, our ability to obtain credit or to raise additional capital has become increasingly difficult. In order to preserve cash we have extended the equipment delivery schedule related to the first 30MW of annual rated production capacity to 2010. We now expect to begin production using equipment with an annual rated production capacity of approximately 15 MW in early 2010, and full 30 MW of annual rated production capacity by the middle of 2010.

The Company expects its current cash balance to be sufficient to cover its operational expenditures through 2009 based on currently known factors, although it expects that it will need to raise additional capital prior to early 2010 to complete its expansion plans.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 4. FAIR VALUE MEASUREMENTS

Effective January 1, 2008, the Company adopted SFAS No. 157, *"Fair Value Measurements"* (SFAS 157). In February 2008, the FASB issued FASB Staff Position No. FAS 157-2, *"Effective Date of FASB Statement No. 157"*, which provides a one year deferral of the effective date of SFAS 157 for non-financial assets and non-financial liabilities, except those that are recognized or disclosed in the financial statements at fair value at least annually. Therefore, the Company has adopted the provisions of SFAS 157 with respect to its financial assets and liabilities only. SFAS 157 defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. Fair value is defined under SFAS 157 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value under SFAS 157 must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value which are the following:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

In accordance with SFAS 157, the following table represents the Company's fair value hierarchy for its financial assets measured at fair value on a recurring basis and its classification on the balance sheet as of December 31, 2008:

	Level 1	Level 2	Level 3	Total	Cash Equivalents	Investments
Financial Assets:						
U.S. government securities	$22,950,215	$22,790,989	$	$45,741,204	$ 991,993	$44,749,211
Money market funds	26,355,379			26,355,379	26,355,379	
Corporate securities		12,082,525		12,082,525	4,699,834	7,382,691
Municipal bonds		5,000		5,000		5,000
	$49,305,594	$34,878,514	$	$84,184,108	$32,047,206	$52,136,902
Financial Liabilities:						
Derivative liability	$	$ 766,403	$	$ 766,403		

The adoption of this statement did not have a material impact on the Company's results of operations and financial condition.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 5. INVESTMENTS

The Company accounts for investments in accordance with SFAS No. 115, "*Accounting for Certain Investments in Debt and Equity Securities.*" Securities held by the Company as of December 31, 2008 are classified as available-for-sale and consisted of U.S. government securities, corporate securities, and municipal bonds. Such investments are carried at fair value, based on quoted market prices with the unrealized holding gains and losses reported as Accumulated other comprehensive income in the stockholders' equity section of the balance sheet. Realized gains and losses on sales of securities are computed using the specific identification method. The Company evaluates declines in market value for potential impairment. If the decline results in a value below cost and is determined to be other than temporary, the investment is written down to its impaired value and a new cost basis is established. A summary of available-for-sale securities as of December 31, 2008 is as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
U.S. government securities	$44,393,482	$ 375,293	$ (19,564)	$44,749,211
Corporate securities	7,407,352	900	(25,561)	7,382,691
Municipal bonds	5,000			5,000
Total	$51,805,834	$ 376,193	$ (45,125)	$52,136,902

Contractual maturities of our available-for-sale investments as of December 31, 2008 were as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
One year or less	$46,821,291	$ 313,569	$ (43,919)	$47,090,941
One year to two years	4,984,543	62,624	(1,206)	5,045,961
Total	$51,805,834	$ 376,193	$ (45,125)	$52,136,902

We recognized a gross realized loss of $32,103 on the sale of available-for-sale investments for the year ended December 31, 2008. The realized loss is included in our Statements of Operations.

We typically invest in highly-rated securities with low probabilities of default. Our investment policy specifies minimum investment grade criteria, types of acceptable investments, concentration limitations and duration.

NOTE 6. ACCOUNTS RECEIVABLE CONTRACTS

Effective January 1, 2007, the Company completed the novation, or transfer, of approximately $3.5 million in government funded research and development contracts (R&D contracts) from ITN to the Company. The various contracts are being performed for U.S. government customers that include the Air Force Research Laboratory and the National Aeronautics and Space Administration. In addition to approximately $1.6 million of future revenues to be provided under the transferred contracts, the key scientists, engineers, and process technicians responsible for deliverables under the transferred contracts were also transferred from ITN to become full-time Ascent employees. In 2007 and 2008, additional R&D contracts were awarded to the Company of approximately $3.4 million.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 6. ACCOUNTS RECEIVABLE CONTRACTS (Continued)

Accounts receivable consists mainly of billed and unbilled amounts under these R&D contracts. Management deems all accounts receivable to be collectible.

The following table summarizes components of accounts receivable:

	As of December 31,	
	2008	2007
Billed receivables	$273,995	$176,168
Unbilled receivables	62,241	28,183
Total	$336,236	$204,351

Unbilled receivables represent costs incurred but not yet billed, including retainage amounts by the government on contracts that have not been closed out at the end of the period.

Provisional Indirect Cost Rates During 2007 and 2008, the Company billed the government under cost-based R&D contracts at provisional billing rates which permit the recovery of indirect costs. These rates are subject to audit on an annual basis by the government agencies' cognizant audit agency. The cost audit will result in the negotiation and determination of the final indirect cost rates. The Company has not been audited and has not received final rate determinations for the year ended December 31, 2007 and or December 31, 2008. The final rates, if different from the actual, may create an additional receivable or liability. In the opinion of management, re-determination of any cost-based contracts will not have a material effect on the Company's financial position or results of operations.

Contract Status The Company has authorized but not completed contracts on which work is in process as follows:

	As of December 31,	
	2008	2007
Total contract price of initial contract awards, including exercised options and approved change orders (modifications)	$ 6,889,991	$ 5,228,023
Completed to date(1)	(4,307,951)	(2,828,453)
Authorized backlog	$ 2,582,040	$ 2,399,570

(1) Includes work performed by ITN prior to January 1, 2007.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 7. PROPERTY AND EQUIPMENT

The following table summarizes property and equipment:

	As of December 31,	
	2008	2007
Furniture, fixtures, computer hardware and computer software	$ 715,310	$ 149,970
Manufacturing machinery and equipment	12,257,585	891,417
Leasehold improvements	789,342	724,907
Net depreciable property, plant and equipment	13,762,237	1,766,294
Building	5,634,060	
Building construction in process	9,050,136	
Net property, plant and equipment	28,446,433	1,766,294
Less: Accumulated depreciation and amortization	(1,521,922)	(115,051)
Property and equipment, net	$26,924,511	$1,651,243

Depreciation and amortization expense for the years ended December 31, 2008 and 2007 was $1,406,871 and $102,416, respectively.

We incurred and capitalized interest costs related to our construction loan for our facility expansion into our property and equipment as follows during the year ended December 31, 2008:

	As of December 31,	
	2008	2007
Interest cost incurred	$ 319,048	$424
Interest cost capitalized	(315,610)	
Interest expense, net	$ 3,438	$424

NOTE 8. DEPOSITS ON MANUFACTURING EQUIPMENT

As of December 31, 2008, the Company had entered into purchase agreements of approximately $102 million for the acquisition of manufacturing production tools and approximately $7 million for one meter wide manufacturing development tools for the Company's planned expansion to approximately 30 MW of rated capacity and planned future implementation of one meter wide substrates. As of December 31, 2008, the Company had made progress payments of approximately $38.6 million on these purchase agreements which are reflected on the Balance Sheet as Deposits on manufacturing equipment. Generally, these purchase agreements have milestone-based deliverables, such as the Company's acceptance of design requirements and successful installation and commissioning of the equipment.

NOTE 9. DEBT

In January 2006, the Company completed a $1.6 million bridge loan (Bridge Financing) from lenders (Bridge Noteholders) to help meet the Company's working capital needs. The loans (Bridge Loans) accrued interest at an annual rate of 10% and were due and payable upon the earlier of

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ASCENT SOLAR TECHNOLOGIES, INC.
(A Development Stage Company as Defined by SFAS No. 7)

NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 9. DEBT (Continued)

January 2007 or the completion of Ascent's public offering of equity securities with gross proceeds of at least $5,000,000 (Qualified Public Offering). In July 2006, with the proceeds from a Qualified Public Offering (*i.e.,* the Company's initial public offering or IPO), the Company repaid the Bridge Loans including accrued interest.

In connection with the Bridge Loans, the Company issued rights (Bridge Rights) to the Bridge Noteholders. One Bridge Right was issued for every $25,000 loaned. In July 2006, upon completion of the IPO, the holders of Bridge Rights received restricted units. The holder of each Bridge Right received that number of units equal to $25,000 divided by the IPO price of the units of $5.50 for a total of 290,894 units. The units are identical to those offered in Ascent's IPO and consisted of one share of common stock, one redeemable Class A public warrant and two non-redeemable Class B warrants. In September 2006, the SEC declared effective the Company's Registration Statement on Form SB-2 (Reg. No. 333-137008) for the shares and warrants underlying the 290,894 units issued in connection with the Bridge Rights. The Registration Statement on Form SB-2 subsequently was converted to a Registration Statement on Form S-3.

Paulson Investment Company, Inc. acted as the placement agent for the Bridge Financing. The Company paid Paulson Investment Company, Inc. a commission equal to 10% of the gross proceeds from the Bridge Financing, plus reasonable out-of-pocket expenses. The Bridge Loans and the Bridge Rights were allocated for accounting purposes based on the relative fair values of the Bridge Loans without the Bridge Rights and the Bridge Rights themselves at the time of issuance. The actual value of the Bridge Loans and the Bridge Rights was computed at $1,600,000 each for a total value of $3,200,000. Since they were each of equal value, the $1,600,000 of proceeds was allocated 50% to the Bridge Loans and 50% to the Bridge Rights (*i.e.,* $800,000 each). The Bridge Rights of $800,000 were accounted for as paid-in capital.

The discount for the commission ($160,000) and the Bridge Rights ($800,000) were amortized into interest expense over the life of the loans. In July 2006 with the repayment of the Bridge Loans, the remaining unamortized balance of the discount for commission and Bridge Rights of $960,000, was recognized as interest expense in the Statements of Operations.

On February 8, 2008, the Company acquired an approximately 120,000 square foot manufacturing and office facility in Thornton, Colorado, for approximately $5.5 million. The purchase was financed by a promissory note, deed of trust and construction loan agreement with the Colorado Housing Authority ("CHFA") ("Construction Loan"), which provided the Company borrowing availability of up to $7.5 million for the building and building improvements. The Company paid approximately $1.3 million in cash and was advanced approximately $4.2 million from CHFA to fund the initial acquisition of the property. The Construction Loan terms required payments of interest only at 6.6% on the outstanding balance. On January 29, 2009, the Construction Loan was converted to a permanent loan pursuant to a loan modification agreement between the Company and CHFA ("Permanent Loan"). The Permanent Loan has an interest rate of 6.6% and the principal will be amortized over a period of approximately 19 years and 1 month consistent with a maturity date 20 years after the incurrence of the promissory note and construction loan agreement on February 8, 2008. An additional $75,000 loan commitment fee was paid in 2008 and reflected on the balance sheet in non-current assets. This fee is being amortized into interest expense over the 20 year life of the Construction and Permanent Loan. As of December 31, 2008, we have expended approximately $6.7 million in building improvements of which

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 9. DEBT (Continued)

$3 million was funded by CHFA. We will continue to complete building improvements in the first quarter 2009 estimated at $4.1 million. Additional infrastructure costs related to the build-out of two additional structures, electrical upgrade and other utilities have increased our budget for our building improvements since originally projected early in 2008. We will incur a prepayment penalty if the Permanent Loan is prepaid prior to December 31, 2015 equal to the sum of (i) the present value of the total principal and interest payments due under the Note from the prepayment date to December 31, 2015, and (ii) the present value of the remaining principal balance of the Note that would have been due as of December 31, 2015, less the principle amount of the Note outstanding. Further, pursuant to certain negative covenants contained in the deed of trust associated with the permanent loan, until the Permanent Loan is repaid and all of our secured obligations performed in full, we may not, among other things, without CHFA's prior written consent (which by the terms of the deed of trust is subject to a reasonableness requirement): create or incur additional indebtedness (other than obligations created or incurred in the ordinary course of business); merge or consolidate with any other entity; or make loans or advances to our officers, shareholders, directors or employees.

The outstanding balance of the Construction Loan was $7,237,052 as of December 31, 2008, which was due on January 31, 2009. On January 29, 2009, the date of the closing of our Permanent Loan of $7,500,000, our future principal payments were due as follows:

2009	$ 187,150
2010	217,463
2011	232,257
2012	248,059
2013	264,935
Thereafter	6,350,136
	$ 7,500,000

NOTE 10. DERIVATIVE FINANCIAL INSTRUMENTS

The Company is actively engaged in purchasing manufacturing equipment internationally and is exposed to foreign currency risk. In July 2008, the Company entered into fair value hedges utilizing forward contracts designed to match scheduled contractual payments to equipment suppliers which are denominated in euros. The total notional value of the forward contracts was €6.4 million with various contract settlement dates beginning September 15, 2008 through July 31, 2009. The Company elected not to use hedge accounting under SFAS 133 and accordingly, the unrealized losses on each forward contract were determined at the balance sheet date based upon current market rates and are reported as Unrealized losses on forward contracts in the Statement of Operations. Upon settlement of the forward contracts, realized gains or losses are reported in the Statement of Operations as Realized gains or losses on forward contracts. As of December 31, 2008, the unrealized loss on these forward contracts was $766,403 and the realized loss was $322,430. Although the hedging activity is designed to fix the dollar amount to be expended, the asset purchased is recorded at the spot rate in effect as of the date of the payment to the supplier. The difference between the spot rate and the forward rate has been reported as a loss on forward contract. The forward contract was 100% effective in fixing the amount to be paid to the supplier in dollar terms as of the date the forward contract was entered into.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 10. DERIVATIVE FINANCIAL INSTRUMENTS (Continued)

During the fourth quarter 2008, a forward contract for delivery of € 358,880 was settled and deposited in a bank account for future payments to our equipment supplier. Period end translation adjustments related to the Euros on deposit in our bank account are accounted for as realized gains and losses on forward contract transactions. Included in cash and cash equivalents is $503,567 related to 360,437 euros held as of December 31, 2008. In connection with the forward contracts, the Company has a $2.3 million deposit account with the bank holding the forward contracts which is reflected as restricted cash on the December 31, 2008 balance sheet. Derivative financial instruments are not used for speculative or trading purposes. See Note 4 for information about the fair value measurement of our derivative financial instruments.

NOTE 11. STOCKHOLDERS' EQUITY

The Company's 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. In November 2005, the Company issued 972,000 shares of common stock at a price of $0.04 per share. The Company has recorded for financial statement purposes the 972,000 shares at a fair value of $1.00 per share. The Statements of Stockholders' Equity reflects compensation expense of $933,120 related to the recording of this stock transaction. In January 2006, in consideration of certain asset transfers, licenses and service agreements, the Company issued 1,028,000 shares of common stock to ITN Energy Systems, Inc.

Preferred stock, $0.0001 par value per share, may be issued in classes or series. Designations, powers, preferences, rights, qualifications, limitations and restrictions are determined by the Company's Board of Directors.

Initial Public Offering: On July 10, 2006, the SEC declared effective the Company's Registration Statement on Form SB-2 (Reg. No. 333-131216), and the Company completed its IPO of 3,000,000 units on July 14, 2006. Each unit consisted of one share of common stock, one redeemable Class A warrant and two non-redeemable Class B warrants. The managing underwriter of the IPO was Paulson Investment Company, Inc. The IPO price was $5.50 per unit. The gross proceeds of the offering were $16,500,000. Ascent's net proceeds from the offering, after deducting the underwriter's discount of $1,097,250 and other fees and expenses, aggregated approximately $14,000,000.

The common stock and Class A and Class B warrants traded only as a unit through August 9, 2006, after which the common stock, the Class A warrants and the Class B warrants began trading separately.

Class A warrants. On May 24, 2007, the Company publicly announced that it intended to redeem its outstanding Class A warrants. The Class A warrants became eligible for redemption by the Company at $0.25 per warrant on April 16, 2007, when the last reported sale price of the Company's common stock had equaled or exceeded $9.35 for five consecutive trading days. There were 3,290,894 Class A warrants issued in connection with the Company's initial public offering, including the warrants issued to the Bridge Noteholders. The Class A warrants were exercisable at a price of $6.60 per share.

The exercise period ended June 22, 2007. During the exercise period, 3,098,382 Class A warrants (94.1% of the total outstanding) were exercised for an equal number of shares of common stock, and the Company received $20,449,321 in proceeds from the warrant exercises. At the end of the exercise period, 192,512 Class A warrants remained outstanding. The Company has set aside funds with its

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 11. STOCKHOLDERS' EQUITY (Continued)

warrant transfer agent to redeem the outstanding warrants for $0.25 per warrant, or a total cost of $48,128. As of December 31, 2008, 9,090 Class A warrants remain unredeemed.

Class B warrants. The Class B warrants included in the units became exercisable on August 10, 2006. The exercise price of a Class B public warrant is $11.00. The Class B warrants expire on July 10, 2011. The Company does not have the right to redeem the Class B warrants. During the years ended December 31, 2008 and 2007, 98,800 and 11,000 Class B warrants, respectively were exercised resulting in proceeds to the Company of approximately $1,086,800 and $121,000 respectively. As of December 31, 2008, 10,502,583 Class B warrants were outstanding.

IPO warrants. Warrants to purchase 300,000 units at $6.60 were issued to underwriters of the Company's initial public offering in July 2006 (representative's warrants). A unit consists of one share of common stock, one Class A redeemable warrant and two Class B non-redeemable warrants. The warrants expire on July 10, 2011. Upon exercise of the representative's warrants, holders will be forced to choose whether to exercise the underlying Class A warrants or hold them for redemption. As noted above, on June 25, 2007, any Class A warrants then outstanding expired and became redeemable.

Representative's warrants to purchase 150,000 units have been exercised as of December 31, 2007, as have the 150,000 underlying Class A warrants resulting in an issuance of 300,000 shares of common stock and 300,000 Class B warrants for total proceeds to the Company of $1.98 million. During the year ended December 31, 2008 an additional 37,500 units have been exercised, as have the 37,500 underlying Class A warrants resulting in an issuance of 75,000 shares of common stock and 75,000 Class B warrants for total proceeds to the Company of $495,000. 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 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. As of December 31, 2008, 112,500 representative's warrants remained unexercised.

Private Placement of Securities: The Company completed a private placement of securities with Norsk Hydro Produksjon AS (Hydro) in March 2007. Hydro is a subsidiary of Norsk Hydro ASA. Hydro purchased 1,600,000 shares of the Company's common stock (representing 23% of the Company's outstanding common stock post transaction) for an aggregate purchase price of $9,236,000. The Company recorded $75,807 of costs associated with the private placement as a reduction to Additional paid in capital on the Company's Balance Sheets. In connection with the private placement, Hydro was granted options to purchase additional shares and warrants.

In August 2007, Hydro acquired an additional 934,462 shares of the Company's common stock and 1,965,690 Class B warrants through the exercise of an option previously granted to Hydro and approved by Ascent's stockholders in June 2007. Gross proceeds to the Company were $10.48 million, and reflected per share and per warrant purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. After acquiring these additional shares, Hydro again held 23% of the total outstanding common shares, after its holdings were diluted as the result of the redemption of Class A warrants and 23% of total outstanding Class B warrants. Pursuant to a second option that was approved by Ascent's stockholders in June 2007, beginning December 13, 2007, Hydro was entitled to purchase additional shares and Class B warrants up to a maximum of 35% of each class of security.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 11. STOCKHOLDERS' EQUITY (Continued)

In March 2008, Hydro acquired an additional 2,341,897 shares of the Company's common stock and 1,689,905 Class B warrants through the exercise of the second option previously granted to Hydro and approved by Ascent's stockholders in June 2007, resulting in Hydro ownership of approximately 35% of each class of security. Gross proceeds to the Company were $28.4 million, and reflected per share and per warrant purchase prices were equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. As a result of the Company's Secondary Public Offering in May 2008, Hydro's holdings were diluted to approximately 27%.

On October 8, 2008, Hydro acquired an additional 2,421,801 shares of the Company's common stock. The purchase resulted in a return to Hydro's ownership of approximately 35% of the Company's common stock. Gross proceeds to the company from the follow on investment were approximately $15 million, and reflect per share purchase prices equal to the average of the closing bids of each security, as reported by NASDAQ, for the five consecutive trading days preceding exercise. Until June 15, 2009, the second option entitles Hydro to purchase from the Company additional restricted shares of common stock and Class B warrants to maintain ownership of up to 35% of issued and outstanding common stock and Class B warrants.

Other Proceeds: During the three months ended March 31, 2008, the Company received proceeds from a greater than 10% shareholder equal to the profits realized on the sale of the Company's stock that was purchased and sold within a six month or less time frame. Under Section 16(b) of the Securities and Exchange Act, the profit realized from this transaction by the greater than 10% shareholder must be disgorged to the Company under certain circumstances. The Company has recorded the proceeds received on this transaction of $148,109 as Additional paid in capital and is reflected on the Statements of Stockholders' Equity.

Secondary Public Offering: On May 15, 2008, the SEC declared effective the Company's Registration Statement on Form S-3 (Reg. No. 333-149740), and the Company completed its Secondary Public Offering of 4,370,000 shares of common stock, which included 570,000 shares issued upon the underwriter's exercise of their overallotment in full. The offering price of $14.00 per share resulted in proceeds of $61,180,000. After deducting underwriting discounts and commissions and offering expenses of approximately $4,361,000, net proceeds to the Company were approximately $56,819,000. JP Morgan was the managing underwriter of the Secondary Public Offering.

As of December 31, 2008, the Company had 20,946,382 shares of common stock and no shares of preferred stock outstanding.

NOTE 12. STOCK BASED COMPENSATION

Stock Option Plan: The Company's 2005 Stock Option Plan, as amended (Stock Option Plan) provides for the grant of incentive or non-statutory stock options to the Company's employees, directors and consultants. The Board of Directors adopted and the stockholders approved an increase in the total shares of common stock reserved for issuance under the Stock Option Plan from 1,000,000 to 1,500,000 on July 1, 2008.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 12. STOCK BASED COMPENSATION (Continued)

Restricted Stock Plan: The Board of Directors adopted the Company's 2008 Restricted Stock Plan with stockholder approval on July 1, 2008. The Restricted Stock Plan reserves up to 750,000 shares of our common stock for restricted stock awards and restricted stock units to eligible employees, directors and consultants of the Company.

The Stock Option Plan and the Restricted Stock Plan are administered by the Compensation Committee of the Board of Directors, which determines the terms of the options and shares, including the exercise price, expiration date, vesting schedule and number of shares. The term of any incentive stock option granted under the Stock Option Plan may not exceed ten years, or five years for options granted to an optionee owning more than 10% of the Company's voting stock. The exercise price of an incentive stock option granted under the Option Plan must be equal to or greater than the fair market value of the shares of the Company's common stock on the date the option is granted. An incentive stock option granted to an optionee owning more than 10% of the Company's voting stock must have an exercise price equal to or greater than 110% of the fair market value of the Company's common stock on the date the option is granted. The exercise price of a non-statutory option granted under the Option Plan must be equal to or greater than 85% of the fair market value of the shares of the Company's common stock on the date the option is granted. According to the terms of the Restricted Stock Plan, no individual may be granted, in any fiscal year, more than 200,000 shares. Vesting of shares of restricted stock granted under the Restricted Stock Plan may occur over a specified period of time or based upon performance metrics announced at the time of grant.

Stock Based Compensation: The Company accounts for share-based payments under the provisions of Statement of Financial Accounting Standards No. 123 (revised 2004), "*Share-Based Payment,*" (SFAS 123(R)) which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees, officers, directors and consultants, including employee stock options based on estimated fair values. Stock based compensation expense recognized in the Statements of Operations for the years ended December 31, 2008, 2007 and 2006 and for the period from inception (October 18, 2005) through December 31, 2008 is based on awards ultimately expected to vest and it has been reduced for estimated forfeitures.

The weighted average estimated fair value of employee stock options granted for the years ended December 31, 2008, 2007 and 2006 was $3.12, $9.90 and $2.07 per share respectively. Fair value was calculated using the Black-Scholes Model with the following weighted average assumptions:

	For the Years Ended December 31,		
	2008	**2007**	**2006**
Expected volatility	103.4 - 108.9%	83.7%	90.2%
Risk free interest rate	1.5 - 3.3%	3.3 - 3.6%	4.6%
Expected dividends			
Expected life (in years)	5.08 - 6.08	6.41	6.10

For the year ended December 31, 2008, the Company based its estimate of expected volatility, expected life and expected forfeiture rate on historical company experience. For the years ended December 31, 2007 and 2006, the Company based its estimate of expected volatility on disclosures made by peers, the expected life was calculated using the "simplified" method permitted by Staff Accounting Bulletin (SAB) 107 and forfeitures were estimated based on historical employee retention

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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 12. STOCK BASED COMPENSATION (Continued)

experience among staff of similar position to those granted options in the plan. Stock-based compensation expense recognized for the years ended December 31, 2008, 2007 and 2006 were as follows:

	For the Years Ended December 31,		
	2008	**2007**	**2006**
Officers, directors & employees	$1,578,804	$ 461,432	$159,098
Outside providers	(88,965)	1,273,447	189,845
	$1,489,839	$1,734,879	$348,943

Stock-based compensation expense is calculated on a straight-line basis over the vesting periods of the related options. In future periods, the compensation expense that the Company records under SFAS 123(R) may differ significantly from what the Company recorded in the current period, as the Company builds company-specific performance history.

As of December 31, 2008, the Company had approximately $1,953,000 of total compensation cost ($1,866,000 to officers, directors and employees, and $87,000 to outside providers) related to non-vested awards not yet recognized and expects to recognize these costs over a weighted average period of approximately 2.3 years. As of December 31, 2008, approximately 1,031,067 shares were expected to vest in the future at a weighted average exercise price of $4.94.

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 12. STOCK BASED COMPENSATION (Continued)

The following schedule summarizes activity in our stock-option plan (shares in thousands):

	Stock Option Shares	Stock Options Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
OUTSTANDING AT OCTOBER 18, 2005		$		
Granted	408	0.10		
OUTSTANDING AT DECEMBER 31,2005	408	$ 0.10		
Granted	336	3.64		
Exercised	(31)	(.10)		
Canceled	(75)	(1.26)		
OUTSTANDING AT DECEMBER 31, 2006	638	$ 1.83		
Granted	232	11.52		
Exercised	(170)	(2.04)		
Canceled	(13)	(1.03)		
OUTSTANDING AT DECEMBER 31, 2007	687	$ 5.07	4.82	$13,595,562
Granted	577	3.91		
Exercised	(133)	(0.91)		
Canceled	(39)	(5.80)		
OUTSTANDING AT DECEMBER 31, 2008	1,092	$ 4.94	8.89	$ 894,198
EXERCISABLE AT DECEMBER 31, 2008	406	$ 5.16	7.77	$ 557,579

The total intrinsic value, or the difference between the exercise price and the market price on the date of exercise of all options exercised during the years ended December 31, 2008, 2007 and 2006 was $1,684,874, $1,882,882 and $56,180, respectively. As of December 31, 2008, approximately 73,500 shares remained available for future grants under the Option Plan.

In addition to the stock options discussed above, the Company recognized share-based compensation expense related to Restricted Stock grants of $391,560 for the year ended December 31, 2008. The following table summarizes Non-vested Restricted Stock and the related activity as of and for the year ended December 31, 2008:

	Shares	Weighted Average Grant-Date Fair-Value
Non-vested at January 1, 2008		
Granted	69,846	$ 12.70
Vested	(27,346)	9.88
Forfeited		

Non-vested at December 31, 2008	42,500	$	14.51

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ASCENT SOLAR TECHNOLOGIES, INC.
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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 12. STOCK BASED COMPENSATION (Continued)

Total unrecognized share-based compensation expense from unvested restricted stock as of December 31, 2008 was approximately $441,000 which is expected to be recognized over a weighted average period of approximately 2.9 years.

The stock-based compensation expense that we charged on our Statements of Operations was as follows:

	For the years ended December 31,		
	2008	2007	2006
Stock-based compensation cost included in:			
Research and development	$ 785,840	$ 664,001	$141,927
Selling, general and administrative	1,095,559	1,070,878	207,016
Total stock-based compensation cost	$1,881,399	$1,734,879	$348,943

NOTE 13: INCOME TAXES

The Company records income taxes using the liability method. Under this method, deferred tax assets and liabilities are computed for the expected future impact of temporary differences between the financial statement and income tax bases of assets and liabilities using current income tax rates and for the expected future tax benefit to be derived from tax loss and tax credit carry-forwards.

At December 31, 2008, the Company has approximately $16,400,000 in net operating loss carry-forwards that will expire beginning in 2025. Approximately $2,600,000 of the net operating loss carryover is not included in the calculation of the deferred tax asset since it is related to excess tax deductions from the exercise of stock options. Under the Internal Revenue Code, the future utilization of net operating losses may be limited in certain circumstances where there is a significant ownership change. As a result of the initial public offering in July 2006 and subsequent public offering in May 2008, significant ownership changes did occur. The annual limitation on net operating losses resulting from those changes was greater than the cumulative losses as of the date of the change. Consequently, the limitation will lapse as of May 2009 without having any effect on the use of net operating losses.

Deferred income taxes reflect an estimate of the cumulative temporary differences recognized for financial reporting purposes from that recognized for income tax reporting purposes. At December 31,

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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 13: INCOME TAXES (Continued)

2008 and 2007, the components of these temporary differences and the deferred tax asset were as follows:

	2008	2007
Deferred Tax Asset		
Current:		
Unrealized loss on forward contracts	$ 291,000	$
Accrued Expenses	59,000	
Total Current	350,000	
Non-current:		
Stock Based Compensation-Stock Options and Restricted Stock	629,000	550,000
Tax effect of NOL carryforward	5,234,000	1,000,000
Depreciation	209,000	25,000
Start-up costs	664,000	890,000
Capitalized manufacturing costs & Property taxes on PPE	1,332,000	1,285,000
Total Non-current	8,068,000	3,750,000
Net deferred tax asset	8,418,000	3,750,000
Less valuation allowance	(8,418,000)	(3,750,000)
Net deferred tax asset	$	$

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. Based upon the level of historical losses and projections of future taxable income over the periods in which the deferred tax assets are deductible, a full valuation allowance has been provided due to the uncertainty surrounding the timing and the amount of future revenues. The Company's deferred tax valuation allowance of $8,418,000 reflected above is an increase of $4,668,000 from the valuation allowance reflected as of December 31, 2007 of $3,750,000. The Company's effective tax rate differs from the statutory rate due to the following (expressed as a percentage of pre-tax income):

	2008	2007
Federal statutory rate	(35)%	(35)%
State statutory rate	(3)%	(3)%
Permanent tax differences	1%	2%
Other	1%	1%
Increase in valuation allowance	36%	35%
	0%	0%

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NOTES TO FINANCIAL STATEMENTS (Continued)

NOTE 14. RELATED PARTY TRANSACTIONS

Included in General and Administrative Expenses for the years ended December 31, 2008, 2007 and 2006 are $1,270,720, $937,212 and $1,170,226 respectively, of costs to ITN for facility sublease costs, administrative support expenses and reimbursement of shared expenses. Included in Research and Development Expenses for the years ended December 31, 2008, 2007 and 2006 are $1,585,519, $908,005 and $302,744 respectively, of costs to ITN for support in research and development and manufacturing activity. Related party payables of $263,280 and $264,797 as of December 31, 2008 and 2007 respectively represent costs remaining to be paid to ITN for these expenditures and amounts payable to officers and directors for Board of Directors fees and reimbursement of travel expenditures.

Included in Research and Development Revenues on the Statement of Operations for the year ended December 31, 2007 is $27,519 for labor charged by the Company to ITN for research and development activities on government contracts.

Included in Property and Equipment and Deposits on Equipment as of December 31, 2008 is $1,590,366 of costs to ITN for the construction of manufacturing and research and development equipment incurred during the period January 1, 2006 to December 31, 2008.

NOTE 15. COMMITMENTS

Sublease Agreement: On November 1, 2005, the Company entered into a sublease agreement with ITN, a greater than five percent stockholder of the Company, to lease office space in Littleton, Colorado. In 2005 and 2006, two Board members of Ascent were partial owners of the company that leased this office space to ITN. As of January 1, 2007, they no longer have an investment in the building the Company is subleasing from ITN. Future minimum payments due under the sublease as of December 31, 2008 are as follows:

Year ending December 31:	
2009	$227,896
2010	$113,948

The Company is also responsible for payment of pass-through expenses such as property taxes, insurance, water and utilities. Rent expense for the years ended December 31, 2008, 2007 and 2006 was $232,380, $217,214 and $131,970, respectively.

Patent License Agreements: In 2006, the Company entered into two non-exclusive patent license agreements. In consideration for the right to license certain inventions, the Company is required to pay annual royalty payments based on net sales of products manufactured using the licensed technology. If there are no net sales of products manufactured using the licensed technology, then a minimum royalty payment is required. The Company has made payments for the annual minimum royalties due associated with these patent license agreements.

NOTE 16. RETIREMENT PLAN

On July 1, 2006, the Company adopted a qualified 401(k) plan which provides retirement benefits for all of its eligible employees. Under the plan, employees become eligible to participate at the first entry date, provided that they are at least 21 years of age. The participants may elect through salary reduction to contribute up to ceilings established in the Internal Revenue Code. The Company will match 100% of the first six percent of employee contributions. In addition, the Company may make discretionary contributions to the Plan as determined by the Board of Directors. Employees are immediately vested in all salary reduction contributions. Rights to benefits provided by the Company's discretionary and matching contributions vest 100% after the first year of service.