

Ascent Solar Technologies, Inc.  
Form 10-Q  
November 02, 2010  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-Q**

(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2010

or

**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)

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<b>Delaware</b> (State or other jurisdiction of incorporation or organization)	<b>20-3672603</b> (I.R.S. Employer Identification No.)
<b>12300 Grant Street, Thornton, CO</b> (Address of principal executive offices)	<b>80241</b> (Zip Code)
<b>Registrant's telephone number including area code: 720-872-5000</b>	

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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:

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input checked="" type="checkbox"/>
Non-accelerated filer <input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company <input checked="" type="checkbox"/>

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

As of October 25, 2010, there were 26,947,868 shares of our common stock issued and outstanding.

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**Quarterly Report on Form 10-Q**

**Quarterly Period Ended September 30, 2010**

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**Table of Contents****PART I. FINANCIAL INFORMATION****Item 1. Condensed Financial Statements****ASCENT SOLAR TECHNOLOGIES, INC.****(A Development Stage Company)****CONDENSED BALANCE SHEETS****(Unaudited)**

	<b>September 30, 2010</b>	<b>December 31, 2009</b>
<b>ASSETS</b>		
<b>Current Assets:</b>		
Cash and cash equivalents	\$ 11,451,471	\$ 21,717,215
Investments	24,049,668	38,788,671
Accounts receivable	655,530	133,846
Related party receivable	18,240	21,570
Inventories	1,011,264	238,809
Other current assets	374,115	578,820
Total current assets	37,560,288	61,478,931
<b>Property, Plant and Equipment:</b>	108,700,871	106,726,525
Less accumulated depreciation and amortization	(8,608,892)	(4,095,762)
	100,091,979	102,630,763
<b>Other Assets</b>		
Deposits on manufacturing equipment	10,081,693	8,316,193
Patents, net of amortization of \$15,348 and \$11,511, respectively	221,313	167,030
Other non-current assets	65,000	67,812
	10,368,006	8,551,035
<b>Total Assets</b>	<b>\$ 148,020,273</b>	<b>\$ 172,660,729</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current Liabilities:</b>		
Accounts payable	\$ 541,425	\$ 692,557
Related party payables	52,461	195,954
Accrued expenses	2,060,033	2,151,875
Accrued property, plant and equipment	2,120,538	7,992,479
Deferred contract revenue	293,905	
Current portion of long-term debt	228,467	217,463
Current portion of long-term debt related party	350,000	
Total current liabilities	5,646,829	11,250,328
<b>Long-Term Debt</b>	<b>6,922,634</b>	<b>7,095,386</b>

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<b>Long-Term Debt - Related Party</b>	400,000	
<b>Commitments and Contingencies (Notes 11 &amp; 17)</b>		
<b>Stockholders Equity:</b>		
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; 26,832,301 and 26,583,845 shares issued and outstanding at September 30, 2010 and December 31, 2009, respectively	2,683	2,658
Additional paid in capital	202,552,631	200,344,727
Deficit accumulated during the development stage	(67,506,509)	(46,029,358)
Accumulated other comprehensive income (loss)	2,005	(3,012)
Total stockholders equity	135,050,810	154,315,015
<b>Total Liabilities and Stockholders Equity</b>	<b>\$ 148,020,273</b>	<b>\$ 172,660,729</b>

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

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## ASCENT SOLAR TECHNOLOGIES, INC.

(A Development Stage Company)

## CONDENSED STATEMENTS OF OPERATIONS

(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,		For the Period from Inception (October 18, 2005) Through September 30, 2010
	2010	2009	2010	2009	
Revenues	\$ 623,340	\$ 417,006	\$ 1,285,550	\$ 1,195,812	\$ 5,252,299
<b>Costs and Expenses</b>					
Research and development	6,418,402	3,859,257	16,904,741	10,418,641	48,114,434
Selling, general and administrative	1,753,910	2,519,095	5,804,091	5,723,041	27,041,761
Total Costs and Expenses	8,172,312	6,378,352	22,708,832	16,141,682	75,156,195
<b>Loss from Operations</b>	(7,548,972)	(5,961,346)	(21,423,282)	(14,945,870)	(69,903,896)
<b>Other Income/(Expense)</b>					
Interest expense		(123,026)		(334,359)	(1,087,293)
Interest income	17,422	74,980	33,987	554,987	4,409,457
Realized gain on investments			193	59,383	27,473
Realized gain (loss) on forward contracts	350,578	667,585	(88,049)	(313,118)	(952,250)
Unrealized gain on forward contracts		71,950		766,403	
	368,000	691,489	(53,869)	733,296	2,397,387
<b>Net Loss</b>	\$ (7,180,972)	\$ (5,269,857)	\$ (21,477,151)	\$ (14,212,574)	\$ (67,506,509)
<b>Net Loss Per Share</b> (Basic and diluted)	\$ (0.27)	\$ (0.25)	\$ (0.80)	\$ (0.68)	
<b>Weighted Average Common Shares Outstanding</b> (Basic and diluted)	26,794,143	21,136,030	26,715,528	21,041,318	

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

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## ASCENT SOLAR TECHNOLOGIES, INC.

(A Development Stage Company)

## CONDENSED STATEMENTS OF STOCKHOLDERS EQUITY AND COMPREHENSIVE INCOME (LOSS)

(Unaudited)

For the Period from inception (October 18, 2005) through December 31, 2009 and for the Nine Months Ended September 30, 2010

	Common Stock		Preferred Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders Equity
	Shares	Amount	Shares	Amount				
<b>Balance at inception, October 18, 2005</b>		\$		\$	\$	\$	\$	\$
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)
<b>Balance, December 31, 2005</b>	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)
<b>Balance, December 31, 2006</b>	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)

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<b>Balance, December 31, 2007</b>	11,435,901	\$ 1,144	\$	\$ 60,512,476	\$ (11,891,565)	\$	\$ 48,622,055
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The accompanying notes are an integral part of these condensed financial statements.



**Table of Contents****ASCENT SOLAR TECHNOLOGIES, INC.**

(A Development Stage Company)

**CONDENSED STATEMENTS OF STOCKHOLDERS EQUITY AND COMPREHENSIVE INCOME (LOSS)**

(Continued)

(Unaudited)

For the Period from inception (October 18, 2005) through December 31, 2009 and for the Nine Months Ended September 30, 2010

	Common Stock		Preferred Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders Equity
	Shares	Amount	Shares	Amount				
<b>Balance, December 31, 2007</b>	11,435,901	\$ 1,144		\$	\$ 60,512,476	\$ (11,891,565)	\$	\$ 48,622,055
<b>Components of comprehensive loss</b>								
Unrealized gain on investments							331,068	331,068
Net loss						(13,215,076)		(13,215,076)
<b>Total comprehensive loss</b>								(12,884,008)
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 & 10/08 @ \$6.176)	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)
<b>Balance, December 31, 2008</b>	20,946,382	\$ 2,095		\$	\$ 164,391,585	\$ (25,106,641)	\$ 331,068	\$ 139,618,107
<b>Components of comprehensive loss</b>								
Unrealized loss on investments							(334,080)	(334,080)
Net loss						(20,922,717)		(20,922,717)
<b>Total comprehensive loss</b>								(21,256,797)
Exercise of stock options (1/09 - 12/09 @ \$0.10, \$2.76 & \$4.25)	105,169	10			339,606			339,616
Issuance of Restricted Stock	147,679	15			(15)			
Stock based compensation					2,676,957			2,676,957
Proceeds from private placement:								

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Common stock (10/09 @ \$6.50)	769,230	77		4,999,918		4,999,995
Proceeds from public offering (10/09 @ \$6.50)	4,615,385	461		29,999,542		30,000,003
Costs of public offering				(2,062,866)		(2,062,866)
<b>Balance, December 31, 2009</b>	<b>26,583,845</b>	<b>\$ 2,658</b>	<b>\$</b>	<b>\$ 200,344,727</b>	<b>\$ (46,029,358)</b>	<b>\$ (3,012) \$ 154,315,015</b>
<b>Components of comprehensive loss</b>						
Unrealized loss on investments					5,017	5,017
Net loss				(21,477,151)		(21,477,151)
<b>Total comprehensive loss</b>						<b>(21,472,134)</b>
Exercise of stock options (1/10 9/10 @ \$0.10, \$2.90 & \$3.17)	45,763	5		55,007		55,012
Issuance of Restricted Stock	202,693	20		(20)		
Stock based compensation				2,152,917		2,152,917
<b>Balance, September 30, 2010</b>	<b>26,832,301</b>	<b>\$ 2,683</b>	<b>\$</b>	<b>\$ 202,552,631</b>	<b>\$ (67,506,509)</b>	<b>\$ 2,005 \$ 135,050,810</b>

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

**Table of Contents****ASCENT SOLAR TECHNOLOGIES, INC.****(A Development Stage Company)****CONDENSED STATEMENTS OF CASH FLOWS****(Unaudited)**

	<b>For the Nine Months Ended September 30,</b>		<b>For the Period from inception (October 18, 2005) through September 30, 2010</b>
	<b>2010</b>	<b>2009</b>	
<b>Operating Activities:</b>			
Net loss	\$ (21,477,151)	\$ (14,212,574)	\$ (67,506,509)
Adjustments to reconcile net loss to cash used in operating activities:			
Depreciation and amortization	4,519,779	1,645,986	8,634,239
Stock based compensation	2,152,917	1,977,036	9,754,220
Realized loss on forward contracts	88,049	313,118	952,250
Unrealized gain on forward contracts		(766,403)	
Charge off of deferred financing costs to interest expense			198,565
Charge off of bridge loan discount to interest expense			800,000
Changes in operating assets and liabilities:			
Accounts receivable	(521,684)	59,560	(655,530)
Related party receivables	3,330	(24,780)	(18,240)
Inventories	(772,455)		(772,455)
Prepaid expenses and other current assets	204,705	237,914	(612,924)
Accounts payable	(151,132)	45,077	541,425
Related party payable	(143,493)	(41,596)	52,461
Accrued expenses	(91,841)	(6,006)	2,060,034
Deferred contract revenue	293,905	812,560	293,905
Net cash used in operating activities	(15,895,071)	(9,960,108)	(46,278,559)
<b>Investing Activities:</b>			
Purchases of available-for-sale-securities	(40,008,641)	(99,676,225)	(879,671,904)
Maturities and sales of available-for-sale securities	54,752,661	138,110,892	855,624,242
Purchase of property, plant and equipment	(1,974,346)	(6,253,444)	(35,287,299)
Deposits on manufacturing equipment	(6,625,491)	(34,411,602)	(81,120,735)
Patent activity costs	(58,120)	(16,308)	(211,704)
Release of restricted cash on manufacturing equipment		2,200,000	
Deposit on building			(100,000)
Net cash provided by (used in) investing activities	6,086,063	(46,687)	(140,767,400)
<b>Financing Activities:</b>			
Proceeds from bridge loan financing			1,600,000
Repayment of bridge loan financing			(1,600,000)
Payment of debt financing costs			(273,565)
Payment of equity offering costs		(159,270)	(8,892,103)
Proceeds from debt		262,948	7,700,000
Repayment of debt	(161,748)	(134,986)	(548,899)
Repayment of debt-related party	(350,000)		(350,000)
Proceeds from shareholder under Section 16(b)			148,109
Proceeds from issuance of stock and warrants	55,012	339,492	200,762,016
Redemption of Class A warrants			(48,128)
Net cash provided by (used in) financing activities	(456,736)	308,184	198,497,430

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<b>Net change in cash and cash equivalents</b>	(10,265,744)	(9,698,611)	11,451,471
<b>Cash and cash equivalents at beginning of period</b>	21,717,215	32,913,304	
<b>Cash and cash equivalents at end of period</b>	\$ 11,451,471	\$ 23,214,693	\$ 11,451,471
<b>Supplemental Cash Flow Information:</b>			
Cash paid for interest	\$	\$ 327,422	\$ 424
Cash paid for income taxes	\$	\$	\$
<b>Non-Cash Transactions:</b>			
ITN initial contribution of assets for equity	\$	\$	\$ 31,200
Note with ITN and related capital expenditures	\$ 1,100,000	\$	\$ 1,100,000

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

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**(A Development Stage Company)**

**NOTES TO CONDENSED FINANCIAL STATEMENTS**

**(Unaudited)**

**NOTE 1. ORGANIZATION**

Ascent Solar Technologies, Inc. (Ascent or the Company) was incorporated on October 18, 2005 from the separation by ITN Energy Systems, 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 certain CIGS PV technologies and trade secrets and granted to Ascent a perpetual, exclusive, royalty-free worldwide license to use, in connection with the manufacture, development, marketing and commercialization of CIGS PV to produce solar power, certain of ITN's existing and future proprietary and control technologies that, although non-specific to CIGS PV, Ascent believes will be useful in its production of PV modules for its target markets. Upon receipt of the necessary government approvals and pursuant to novation in early 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 limited amount of administrative and technical services.

**NOTE 2. BASIS OF PRESENTATION**

The Company's activities to date have substantially consisted of raising capital, research and development, establishment of its FAB1 production plant and the development of its FAB2 expansion plant. Revenue to date has been primarily generated from the Company's governmental research and development (R&D) contracts and has not been significant. The Company has recently begun to increase production at its FAB2 plant and a limited number of modules have been produced; however revenue from product sales has been immaterial. The Company's planned principal operations to commercialize flexible PV modules have commenced; however, product revenues have not reached commercial levels. Accordingly, the Company is considered to be in the development stage and has presented its financial statements in accordance with the accounting guidance for development stage companies that consists of additional disclosure of inception to date activity in our Condensed Statements of Operations, Condensed Statements of Stockholders' Equity and Comprehensive Income (Loss) and Condensed Statements of Cash Flows.

The accompanying unaudited condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) for interim financial information and in accordance with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, these interim financial statements do not include all of the information and footnotes typically found in U.S. GAAP audited annual financial statements. In the opinion of management, all adjustments (consisting only of results of normal recurring accruals) considered necessary for a fair statement have been included. The Condensed Balance Sheet at December 31, 2009 has been derived from the audited financial statements as of that date but does not include all of the information and footnotes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2009. These condensed financial statements and notes should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2009.

The preparation of financial statements in conformity with U.S. GAAP 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. Operating results for the nine months ended September 30, 2010 are not necessarily indicative of the results that may be expected for the year ending December 31, 2010.

**NOTE 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The Company's significant accounting policies were described in Note 2 to the audited financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2009. With the exception of those discussed below, there have been no significant changes to these policies and no recent accounting pronouncements or changes in accounting pronouncements during the nine months ended

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September 30, 2010, that are of significance or potential significance to the Company.

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**(A Development Stage Company)**

**NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)**

**(Unaudited)**

**Revenue Recognition:** Revenue from governmental research and development contracts is generated 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 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. Revenue from commercial sales of flexible photovoltaic (PV) modules is recognized as modules are delivered and title has transferred to the customer.

**Inventories:** Inventories include material costs only and are stated at the lower of cost or market, with cost determined using the weighted average method.

**NOTE 4. RECENT ACCOUNTING PRONOUNCEMENTS**

In January 2010, the FASB issued ASU 2010-06, *Fair Value Measurements and Disclosures (Topic 820) Improving Disclosures about Fair Value Measurements*. This ASU requires new disclosures and clarifies certain existing disclosure requirements about fair value measurements. ASU 2010-06 requires a reporting entity to disclose significant transfers in and out of Level 1 and Level 2 fair value measurements, to describe the reasons for the transfers and to present separately information about purchases, sales, issuances and settlements for fair value measurements using significant unobservable inputs. ASU 2010-06 is effective for interim and annual reporting periods beginning after December 15, 2009, except for the disclosures about purchases, sales, issuances and settlements in the roll forward of activity in Level 3 fair value measurements, which are effective for interim and annual reporting periods beginning after December 15, 2010; early adoption is permitted. The adoption of ASU 2010-06 did not have a material impact on our financial position, results of operations or cash flows.

In April 2010, the FASB issued ASU 2010-17, *Revenue Recognition Milestone Method (Topic 605)*. This ASU requires new disclosures and provides a consistent framework for applying the milestone method of revenue recognition. ASU 2010-17 states that a vendor may recognize consideration that is contingent upon achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone meets all criteria to be considered substantive. Determining whether a milestone is substantive is a matter of judgment made at the inception of the arrangement. ASU 2010-17 is effective on a prospective basis for milestones achieved in fiscal years, and interim periods within those years, beginning on or after June 15, 2010; early adoption is permitted. The Company does not expect the adoption of ASU 2010-17 will have a material impact on the Company's financial position, results of operations or cash flows.

**NOTE 5. 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 September 30, 2010, the Company had \$35.5 million in cash and investments. The Company has made cash payments of approximately \$7.7 million of the approximately \$13.9 million expected to be paid in 2010 on final payments to equipment suppliers and shipping and installation costs for the FAB2 production line. Subsequent to December 31, 2010 the Company expects to pay approximately \$21.5 million on final payments to equipment suppliers and shipping and installation costs for the FAB2 production line.

The Company commenced limited production on its FAB1 production line in the first quarter of 2009. The Company does not expect that sales revenue from the FAB1 production line will be sufficient to support operations and cash requirements, and it is unlikely that sales revenue will support operating cash requirements until actual full production capacity on the FAB2 production line is achieved.

The Company expects current cash and investments will be sufficient to fund operations and capital expenditures for the next twelve months. Changes in the level of expected operating losses, the timing of planned capital expenditures or other factors may negatively impact cash flows and reduce current cash and investments faster than anticipated. The Company expects to raise additional capital in the near future.





**Table of Contents****ASCENT SOLAR TECHNOLOGIES, INC.****(A Development Stage Company)****NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)****(Unaudited)****NOTE 6. FAIR VALUE MEASUREMENTS**

Fair value is defined 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 must maximize the use of observable inputs and minimize the use of unobservable inputs. The Company uses fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, to measure fair value:

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.

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 Condensed Balance Sheet as of September 30, 2010:

	Level 1	Level 2	Level 3	Total	Cash Equivalents	Investments
<b>Financial Assets:</b>						
U.S. government securities	\$ 2,003,493	\$ 16,453,494	\$	\$ 18,456,987	\$	\$ 18,456,987
Money market funds	876,747			876,747	876,747	
Corporate securities		12,358,202		12,358,202	6,765,521	5,592,681
	\$ 2,880,240	\$ 28,811,696	\$	\$ 31,691,936	\$ 7,642,268	\$ 24,049,668

As of September 30, 2010, the Company held securities issued by U.S. government agencies (AAA/Aaa ratings) and A-1/A-1+ rated corporate notes. Approximately \$28.8 million of these securities are classified as Level 2 because the Company does not believe that it is possible to obtain a firm, up-to-date price of such securities from, for example, a major exchange; and as a result, the Company relies on its brokerage firm and investment manager to report its fair value of such securities at the end of each month. Investments have not been transferred between levels.

**NOTE 7. INVESTMENTS**

Securities held by the Company as of September 30, 2010 are classified as available-for-sale and consisted of U.S. government securities and corporate securities. Such investments are carried at fair value, based on quoted market prices with the unrealized holding gains and losses

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reported as Accumulated other comprehensive income (loss) in the stockholders' equity section of the Condensed Balance Sheets. 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 September 30, 2010 is as follows:

	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Estimated Fair Value</b>
U.S. government securities	\$ 18,455,316	\$ 2,437	\$ (766)	\$ 18,456,987
Corporate securities	5,592,351	356	(26)	5,592,681
<b>Total</b>	<b>\$ 24,047,667</b>	<b>\$ 2,793</b>	<b>\$ (792)</b>	<b>\$ 24,049,668</b>

Contractual maturities of our available-for-sale investments as of September 30, 2010 were all one year or less as follows:

	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Estimated Fair Value</b>
One year or less	\$ 24,047,667	\$ 2,793	\$ (792)	\$ 24,049,668

**Table of Contents****ASCENT SOLAR TECHNOLOGIES, INC.****(A Development Stage Company)****NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)****(Unaudited)**

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 guidelines.

All securities having an unrealized loss as of September 30, 2010 have been in a loss position for less than twelve months.

**NOTE 8. ACCOUNTS RECEIVABLE**

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. 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. From 2007 through September 30, 2010, additional R&D contracts of approximately \$7.9 million were awarded to the Company.

Accounts receivable consist of amounts generated from government contracts and sales of flexible photovoltaic (PV) modules. 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 and billings in excess of costs incurred on firm fixed price contracts billed based on deliverables or a pre-determined schedule. Management deems all accounts receivable to be collectible.

The following table summarizes components of accounts receivable:

	As of September 30, 2010	As of December 31, 2009
Billed receivables	\$ 655,530	\$ 115,474
Unbilled receivables		18,372
<b>Total</b>	<b>\$ 655,530</b>	<b>\$ 133,846</b>

*Provisional Indirect Cost Rates* During 2008 and 2009, 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 years ended December 31, 2007, 2008 or 2009. The final rates, if different from the provisional rates, 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 September 30, 2010	As of December 31, 2009
Total contract price of initial contract awards, including exercised options and approved change orders (modifications)	\$ 11,426,858	\$ 7,262,134

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Completed to date(1)	(6,580,383)	(5,688,064)
Authorized backlog	\$ 4,846,475	\$ 1,574,070

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

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The following table summarizes property, plant and equipment:

	As of September 30, 2010	As of December 31, 2009
Building	\$ 19,437,199	\$ 19,336,263
Furniture, fixtures, computer hardware and computer software	1,151,745	1,057,240
Manufacturing machinery and equipment	62,866,827	27,824,678
Leasehold improvements	884,709	840,729
Net depreciable property, plant and equipment	84,340,480	49,058,910
Manufacturing machinery and equipment in progress	24,360,391	57,667,615
Property, plant and equipment	108,700,871	106,726,525
Less: Accumulated depreciation and amortization	(8,608,892)	(4,095,762)
Net property, plant and equipment	\$ 100,091,979	\$ 102,630,763

Approximately \$24.4 million of equipment for the FAB2 production line as of September 30, 2010 is reflected above as Manufacturing machinery and equipment in progress until we complete qualification of the tools. Depreciation and amortization expense for the three months ended September 30, 2010 and 2009 was \$1,950,727 and \$626,455, respectively, and for the nine months ended September 30, 2010 and 2009 was \$4,513,130 and \$1,639,336, respectively.

The Company incurred and capitalized interest costs related to our construction loan as follows during the nine months ended September 30, 2010 and the year ended December 31, 2009.

	As of September 30, 2010	As of December 31, 2009
Interest cost incurred	\$ 361,273	\$ 456,534
Interest cost capitalized	(361,273)	(456,534)
Interest expense, net	\$	\$

**NOTE 10. INVENTORIES**

Inventories consisted of the following at September 30, 2010 and December 31, 2010:

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	As of September 30, 2010	As of December 31, 2009
Raw materials	\$ 726,580	\$ 238,809
Work in process	136,666	
Finished goods	148,018	
Total	\$ 1,011,264	\$ 238,809

**NOTE 11. DEPOSITS ON MANUFACTURING EQUIPMENT**

As of September 30, 2010, deposits on manufacturing equipment related to purchase of equipment not yet delivered for our FAB2 production line were approximately \$10.1 million. Approximately \$4.2 million of the deposits on equipment is related to equipment expected to be received by the Company in 2010. The remaining \$5.9 million relates to deposits on manufacturing equipment to be delivered after December 31, 2010. The equipment purchase agreements are conditional purchase obligations that have milestone-based deliverables, such as the Company's acceptance of design requirements and successful installation and commissioning of the equipment.

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**(A Development Stage Company)**

**NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)**

**(Unaudited)**

**NOTE 12. 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 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 Securities and Exchange Commission (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 Bridge 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 Condensed 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 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 one 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 is reflected on the Condensed Balance Sheets in non-current assets. This fee is being amortized into interest expense over the 20 year life of the Construction Loan and Permanent Loan. The Company 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 principal 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 are performed in full, the Company 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 the Company's officers, shareholders, directors or employees.





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The outstanding balance of the Permanent Loan was \$7,151,101 as of September 30, 2010. Future principal payments are due as follows:

2010	\$ 55,715
2011	232,257
2012	248,059
2013	264,935
2014	282,960
Thereafter	6,067,175
	<b>\$ 7,151,101</b>

**NOTE 13. DERIVATIVE FINANCIAL INSTRUMENTS**

The Company is actively engaged in purchasing manufacturing equipment internationally and is exposed to foreign currency risk. In July 2008 and March 2009, the Company entered into fair value hedges utilizing forward contracts designed to match scheduled contractual payments to equipment suppliers which are denominated in Euros and Yen. The total notional value of the Euro forward contracts was 6.4 million with various contract settlement dates beginning September 15, 2008 through July 31, 2009. The total notional value of the Yen forward contracts was ¥521.4 million with contract settlement dates of March and April 2009. The Company elected not to use hedge accounting and accordingly, the unrealized gain and loss on each forward contract was determined at each balance sheet date based upon current market rates and is reported as an Unrealized gain or loss on forward contracts in the Condensed Statements of Operations. Upon settlement of the forward contracts, a realized gain or loss is reported in the Condensed Statements of Operations as a Realized gain or (loss) on forward contracts. For the nine months ended September 30, 2010 and 2009 the realized loss was \$88,049 and \$313,118, respectively, and the unrealized gain was \$0 and \$766,403, respectively.

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 contracts. During 2009, forward contracts for delivery of 4,800,000 and ¥521,410,000 were settled. Included in cash and cash equivalents is \$3,417,035 related to 2,505,157 held as of September 30, 2010 in the Company's bank account for future payments to equipment suppliers. Period end foreign currency translation adjustments related to the Euros on deposit in the Company's bank account are reflected as a Realized gain or (loss) on forward contracts in the Condensed Statements of Operations. In connection with the forward contracts, the Company established a \$2.3 million deposit account with the bank holding the forward contracts. During the fourth quarter 2009, the forward contracts settled and the restricted cash was released and transferred into the Company's operational cash account. Derivative financial instruments are not used for speculative or trading purposes.

**NOTE 14. 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. Each share of common stock has the right to one vote. 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 Condensed 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.

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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.

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**(A Development Stage Company)**

**NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)**

**(Unaudited)**

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 IPO, 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 warrant transfer agent to redeem the outstanding warrants for \$0.25 per warrant, or a total cost of \$48,128. As of September 30, 2010, 9,090 Class A warrants remained 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 September 30, 2010, 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 IPO 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 were 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 September 30, 2010, 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 then 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 Condensed 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 then 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

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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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**NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)**

**(Unaudited)**

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% of the then outstanding common stock.

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 then outstanding 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 September 29, 2009, the Company entered into a securities purchase agreement with Hydro under which the Company agreed to sell, and Hydro agreed to purchase, 769,230 restricted shares of the Company's common stock for approximately \$5.0 million in a private placement exempt from registration under the Securities Act. The restricted shares were sold to Hydro at a per share price equal to \$6.50. The private placement closed on October 6, 2009, at which time the Company and Hydro executed a Registration Rights Agreement, pursuant to which Hydro was granted demand and piggy-back registration rights.

**Secondary Public Offerings:** 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 a 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.

On October 1, 2009, the Company entered into an underwriting agreement with Barclays Capital Inc. providing for the sale in a firm commitment offering of 4,615,385 shares of the Company's common stock at a price to the public of \$6.50 per share. The offer and sale of the shares were registered under the Securities Act of 1933, as amended, pursuant to the Company's Registration Statement on Form S-3 (File No. 333-156665), which became effective with the SEC on January 16, 2009. The offering closed on October 6, 2009 with net proceeds of approximately \$27.9 million.

**Other Proceeds:** During the three months ended March 31, 2008, the Company received proceeds from a greater than 10% stockholder equal to the profits realized by such stockholder on the sale of the Company's stock that was purchased and sold by such stockholder within a six month or less time frame. Under Section 16(b) of the Securities Exchange Act of 1934, as amended, the profit realized from this transaction by the greater than 10% stockholder was required to be disgorged to the Company. The Company recorded the proceeds received on this transaction of \$148,109 as Additional paid in capital and is reflected on the Condensed Statements of Stockholders' Equity.

As of September 30, 2010, the Company had 26,832,301 shares of common stock and no shares of preferred stock outstanding. The Company has not declared or paid any dividends through September 30, 2010.

**NOTE 15. 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. Upon recommendation of the Board of directors, 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

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1,500,000 on July 1, 2008, from 1,500,000 to 2,500,000 on June 30, 2009 and from 2,500,000 to 3,700,000 on June 16, 2010.

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**Restricted Stock Plan:** The Board of Directors adopted the Company's 2008 Restricted Stock Plan, and it was approved by the stockholders on July 1, 2008. The initial Restricted Stock Plan reserved up to 750,000 shares of The Company's common stock for restricted stock awards and restricted stock units to eligible employees, directors and consultants of the Company. Upon recommendation of the Board of Directors, the stockholders approved an increase in the total shares of common stock reserved for issuance under the Restricted Stock Plan from 750,000 to 1,550,000 on June 16, 2010.

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 option and share awards, including the exercise price, expiration date, vesting schedule and number of shares. Equity compensation awards to executive officers and directors are also subject to approval by the Board of Directors. 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.

**Grants outside Existing Equity Plans:** Prior to the adoption of the Restricted Stock Plan, the Board of Directors granted 40,000 restricted stock awards in connection with an executive employment agreement. In July 2009, the Board of Directors granted an inducement award (as defined in NASDAQ Rule 5635(c) (4)) made outside of our existing Stock Option Plan for 200,000 stock options.

**Share Based Compensation:** We measure share-based compensation cost at the grant date based on the fair value of the award and recognize this cost as an expense over the grant recipients' requisite service periods for all awards made to employees, officers, directors and consultants.

The share-based compensation expense recognized in the Condensed Statements of Operations for the three and nine months ended September 30, 2010 and 2009 was as follows:

	For the three months ended September 30, 2010		For the nine months ended September 30, 2009	
<b>Share-based compensation cost included in:</b>				
Research and development	\$ 202,844	\$ 244,272	\$ 428,285	\$ 634,595
Selling, general and administrative	407,099	845,111	1,724,632	1,342,441
Total share-based compensation cost	\$ 609,943	\$ 1,089,383	\$ 2,152,917	\$ 1,977,036

The following table presents our share-based compensation expense by type of award for the three and nine months ended September 30, 2010 and 2009:

	For the three months ended September 30, 2010		For the nine months ended September 30, 2009	
<b>Type of Award:</b>				

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Stock Options	\$ 336,156	\$ 291,787	\$ 929,491	\$ 932,080
Restricted Stock Units and Awards	273,787	797,596	1,223,426	1,044,956
Total share-based compensation cost	\$ 609,943	\$ 1,089,383	\$ 2,152,917	\$ 1,977,036



**Table of Contents****ASCENT SOLAR TECHNOLOGIES, INC.****(A Development Stage Company)****NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)****(Unaudited)**

**Stock Options:** The Company recognized share-based compensation expense for stock options of \$929,491 (\$878,756 to officers, directors and employees and \$50,735 to outside providers) for the nine months ended September 30, 2010 related to stock option awards ultimately expected to vest and reduced for estimated forfeitures. The weighted average estimated fair value of employee stock options granted for the three months ended September 30, 2010 and 2009 was \$2.03 and \$5.01 per share, respectively. Fair value was calculated using the Black-Scholes Model with the following assumptions:

	<b>For the three months ended September 30,</b>	
	<b>2010</b>	<b>2009</b>
Expected volatility	99.3%	108.5%
Risk free interest rate	1.8%	2.7%
Expected dividends		
Expected life (in years)	5.75	5.68

Expected volatility is based on the historical volatility of the Company's stock. The risk-free rate of return is based on the yield of U.S. Treasury bonds with a maturity equal to the expected term of the award. Historical data is used to estimate forfeitures within the Company's valuation model. The Company's expected life of stock option awards is derived from historical experience and represents the period of time that awards are expected to be outstanding.

As of September 30, 2010, total compensation cost related to non-vested stock options not yet recognized was approximately \$2,870,000 (\$2,815,000 to officers, directors and employees, and \$55,000 to outside providers), which is expected to be recognized over a weighted average period of approximately 2.1 years. As of September 30, 2010, approximately 1,558,000 shares were vested, or expected to vest in the future at a weighted average exercise price of \$5.04. As of September 30, 2010, approximately 1,778,000 shares remained available for future grants under the Stock Option Plan.

**Restricted Stock:** In addition to the stock options discussed above, the Company recognized share-based compensation expense related to restricted stock grants of \$1,223,426 and \$1,044,956 for the nine months ended September 30, 2010 and 2009, respectively, and \$273,787 and \$797,596 for the three months ended September 30, 2010 and 2009, respectively. The Company estimates the fair value of restricted stock awards based on the Company's stock price on the grant date.

Total unrecognized share-based compensation expense from unvested restricted stock as of September 30, 2010 was approximately \$1,020,000, which is expected to be recognized over a weighted average period of approximately 1.6 years. As of September 30, 2010, approximately 890,000 shares remained available for future grants under the Restricted Stock Plan.

**NOTE 16. RELATED PARTY TRANSACTIONS**

Included in Selling, general and administrative expenses for the three months ended September 30, 2010 and 2009 are \$34,416 and \$207,401, respectively, and during the nine months ended September 30, 2010 and 2009 are \$380,605 and \$615,429, respectively, of expenditures to ITN for facility sublease costs and administrative support expenses. Included in Research and development expenses for the three months ended September 30, 2010 and 2009 are \$143,861 and \$380,916, respectively, and during the nine months ended September 30, 2010 and 2009 are \$460,556 and \$1,349,983, respectively, of expenditures to ITN for supporting research and development and manufacturing activity, including charges for the use of research and development equipment. Related party payables of \$52,461 as of September 30, 2010 and \$195,954 as of December 31, 2009 represent costs remaining to be paid to ITN for these expenditures. Related party receivables of \$18,240 as of September 30,

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2010 and \$21,570 as of December 31, 2009 represent pass-through costs for employee benefit insurance.

Included in Property, plant and equipment as of September 30, 2010 and December 31, 2009 are \$2,296,118 and \$2,296,118, respectively, of costs to ITN for the construction of manufacturing and research and development equipment and installation labor costs for the Company's FAB1 and FAB2 production lines.

On January 7, 2010, the Company and ITN entered into an equipment purchase agreement whereby the Company purchased seven research and development vacuum and deposition chambers for \$1,100,000 from ITN. An initial payment in the amount of \$350,000 was paid in January 2010 and additional payments of \$350,000 and \$400,000 are due on January 15, 2011 and January 15, 2012, respectively.

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**(A Development Stage Company)**

**NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)**

**(Unaudited)**

**NOTE 17. COMMITMENTS**

**Lease Agreement:** On June 25, 2010, the Company entered into a lease agreement for office space in Littleton, Colorado. As of September 30, 2010, future minimum payments are \$218,025, due through June 2011.

The Company is also responsible for payment of pass-through expenses such as property taxes, insurance, water and utilities. Rent expense for the three months ended September 30, 2010 and 2009 was \$72,605 and \$57,028, respectively, and for the nine months ended September 30, 2010 and 2009 was \$223,123 and \$175,053, 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. As of September 30, 2010, the Company has cancelled one of the non-exclusive patent license agreements.

**NOTE 18. 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 for all employees hired before January 1, 2010. For employees hired after January 1, 2010, matching contributions vest over a three-year period, one-third per year.

**NOTE 19. SUBSEQUENT EVENT**

In October 2010, the Company entered into a \$3,259,350 irrevocable letter of credit with its bank in favor of an equipment vendor. The letter of credit is collateralized by an interest bearing bank account and will be reflected as Restricted cash on the Condensed Balance Sheets.

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### **Item 2. 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 unaudited financial statements and the notes to those financial statements appearing elsewhere in this Form 10-Q. 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 photovoltaic (PV) modules using our proprietary technology. For the nine months ended September 30, 2010, we generated approximately \$1,286,000 of revenue. Substantially all of our revenue is from government research and development contracts. Our planned principal operations are to commercialize flexible Copper-Indium-Gallium-diSelenide (CIGS) PV modules. Our FAB2 production line is currently being commissioned and we have recently begun to accumulate inventory and escalate production. A limited number of modules have been produced and product revenues were approximately \$176,000 for the three months ended September 30, 2010. As of September 30, 2010, we had an accumulated deficit of approximately \$67.5 million. Under our current business plan, we expect losses to continue until production reaches an annual rated capacity of approximately 30 MW or more. To date, we have financed our operations primarily through public and private equity financings. On October 6, 2009, the Company completed a public offering of 4,615,385 shares of common stock and a private placement to our largest shareholder, Norsk Hydro Produksjon AS (Hydro), of 769,230 shares. The offering price was \$6.50 per share resulting in total net proceeds of approximately \$32.9 million.

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 fifteen years of concerted research and development activity by our scientists. Our progression also is impacted by market conditions, as well as financing options. In keeping with our philosophy, we completed construction of our FAB1 production line in December 2007. In March 2008, we demonstrated initial operating capability (IOC) of the FAB1 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 7.0%. During 2008, optimization trials 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. The test modules measured six inches wide by one foot long and currently serve as our building blocks for both building-integrated photovoltaics (BIPV) and portable power products.

During 2008 we focused on testing and qualifying our FAB1 production line in anticipation of commencing production. During the first quarter of 2009, we began limited production of monolithically integrated flexible CIGS modules on our FAB1 production line and continued to provide sample modules to potential customers and development partners to explore integration of our products into new applications. In June 2009, we announced the fabrication of a five meter long CIGS module, which we believe is the largest monolithically interconnected CIGS module ever produced on polyimide and possibly the largest CIGS module ever produced regardless of construction. The CIGS based thin-film material used in the module was manufactured using our unique FAB1 production line. The module was encapsulated during the testing and qualification of equipment to be used in FAB2. Based on internal testing and evaluation, this five meter long module weighed approximately two kilograms and produced 123 watts (under standard test conditions) with an aperture area efficiency of 9.1%. This length is expected to serve as a baseline for the development of large area flexible BIPV products with our strategic BIPV partners.

In July 2009, we obtained independent verification by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) that modules produced from FAB1 measured 10.4% in conversion efficiency. The modules tested at NREL were 429 square centimeter modules produced on our FAB1 production line. In October 2009, NREL verified our achievement of a manufacturing milestone of 14.0% cell efficiency from FAB1. We also announced a peak efficiency of 11.7% for CIGS modules manufactured at FAB1.

In August 2009, we completed internal qualification testing of a flexible packaging solution which successfully passed the rigorous standard of one thousand (1,000) hours of damp heat testing (85% relative humidity and 85° C temperature) guideline set forth by IEC 61646 standards for performance and long term reliability of thin-film solar modules. In February 2010, our premier (15 centimeters by 30 centimeters) and two meter modules were certified by an independent laboratory on a variety of United States Department of Defense (DOD) rugged standards known as MIL-STD-810G.



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In June 2010, we announced that the Defense Advanced Research Projects Agency (DARPA) selected Ascent Solar for an award under the Low-Cost Lightweight Portable Photovoltaics (PoP) solicitation. The Ascent Solar led program, entitled Flexible High-performance Tandem-junction PV Array, consists of three gated phases, the first of which is expected to be 18 months in duration. The total contract value is approximately \$3.8 million. The entire program is anticipated to continue over the next 54 months. The goal of PoP is to demonstrate low-cost, lightweight photovoltaics (PV) that can stand up to battle conditions and environmental extremes while delivering a power conversion efficiency of 20% or greater by the end of the program. Ascent Solar leads a highly-talented team of small businesses (ITN Energy Systems, Littleton, CO, Cambrios Technologies Company, Sunnyvale, CA, Brewer Science, Rolla, MO), large business (QinetiQ North America-TSG, Boston, MA) and academia (Institute of Energy Conversion (IEC), Newark, DE) partners to leverage their collective expertise with dedicated funding from DARPA to meet the highly aggressive goals of the PoP program.

In October 2010, Intertek Testing Services, an independent laboratory, completed environmental testing and certification of our two meter BIPV product under the requirements of International Electrotechnical Commission (IEC) 61646 standards. This international standard defines the requirements for the design qualification and type approval of terrestrial thin-film photovoltaic modules suitable for long-term operation in moderate open-air climates. The object of this certification test is to determine the electrical and thermal characteristics of the module and to show, as far as possible within reasonable constraints of cost and time, that the module is capable of withstanding long term exposure in climates described in the scope while still producing power within a defined range and maintaining a safe operating condition. We believe we are the first manufacturer of flexible CIGS PV modules to obtain this certification. We have submitted modules to Underwriters Laboratory (UL) for testing under UL 1703. UL 1703 is the safety standard for flat-plate PV modules intended for installation on or integrated with buildings, or to be freestanding (that is, not attached to buildings), in accordance with applicable electrical and building codes.

### ***Commercialization and Manufacturing Expansion Plan***

We intend to be the first company to manufacture in commercial quantities large, roll-format, PV modules 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. In March 2009, Colorado Governor, Bill Ritter, Jr. and other dignitaries joined us in the dedication of our world headquarters and FAB2 building in Thornton, Colorado. The FAB2 building encompasses approximately 138,000 square-feet of office and manufacturing space.

Approximately 75% of the total equipment planned for delivery into FAB2 had been delivered as of September 30, 2010. Our current plan is to reach an annual run rate of approximately 6MW to 8MW of capacity in FAB2 by the end of 2010. During the third quarter of 2010, we continued to make progress in qualification of the tools in FAB2 and in transitioning our tools from low volume to high volume run rates. Although we achieved IEC 61646 certification in October 2010, delays in achieving certification have negatively impacted our sales pipeline. We expect that non-BIPV markets will constitute the majority of our product shipments in 2010.

In the third quarter of 2010 we worked extensively on new product design and placement of prototypes with potential customers and partners as well as significant market seeding through delivery of samples. We also established distribution agreements with customers in Europe and Asia. We continue to improve our market opportunities for the higher volume BIPV/BAPV markets through installation of our modules in customer test sites.

We are evaluating the timing of further expansion based on many factors that include demand, market conditions, product certification, availability of financing, technical advances, strategic partnerships and other factors.

### ***Capital Equipment Expenditures and Manufacturing Costs***

Since our formation in October 2005, the majority 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 incrementally expand our rated capacity. We recently applied for funding under the U.S. Department of Energy (DOE) Loan Guarantee Program for our planned FAB3 production line with a name plate capacity of 150 MW per year. The DOE has reviewed our Part I submission under the Loan Guarantee Application - Innovative Energy Efficiency, Renewable Energy and Advanced Transmission and Distribution Technologies Solicitation No. DE-FOA-0000140, and has deemed it responsive to the initial threshold requirements, and has expressed an intention to proceed with further evaluation of our application. We expect to complete our Part II submission under the program by the end of 2010.



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We currently expect the capital expenditures for FAB2 to total approximately \$102 million to \$107 million for manufacturing and development equipment and approximately \$19 million for the acquisition and renovation of our new manufacturing facility in Thornton, Colorado. We also expect capital expenditures of approximately \$6.8 million for installation, qualification and other associated costs related to the first FAB2 expansion. As of September 30, 2010, we have made actual cash payments of approximately \$81.4 million for the FAB2 equipment including installation costs and approximately \$19 million for the building and renovations which are now substantially complete. A balance of approximately \$6.2 million for FAB2 manufacturing equipment already delivered to our FAB2 location is expected to be paid in 2010. Subsequent to December 31, 2010 the Company expects to pay approximately \$21.5 million on final payments to equipment suppliers and shipping and installation costs for the FAB2 production line.

During the first quarter of 2009, we began limited production of monolithically integrated flexible CIGS modules from our FAB1 production line. In the second quarter of 2010 we completed equipment qualification on a number of tools already delivered, and we began producing a limited number of modules from our FAB2 production line. Some tools are still being qualified and production thus far has been limited. We recently began accumulating inventory in anticipation of ramping up production.

The timing and amount of our production capacity and actual output will depend on a number of technical factors such as module efficiency, production yield, and throughput. Our projections of annual rated production capacity have been and continue to be based on assumptions about these and other factors and we periodically revisit and revise these assumptions to account for realized rates and measurements on our production lines. To date, our realized module efficiencies have exceeded expectations. Anticipated production yield and throughput in FAB2 will depend on successfully ramping up the production equipment.

We have additional tools on order that have not been delivered into FAB2. The output of FAB2 in 2010 will depend on product demand, additional capital, market conditions, technical factors, and the timing of the final qualification and delivery of tools into FAB2, although we currently expect to bring approximately 6MW to 8MW of rated capacity online by the end of 2010. We are in discussions with our equipment suppliers regarding delaying delivery of certain equipment and may incur additional charges as a result. 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 for future expansion, domestically and abroad, that we believe will best serve our target markets and customers for future expansion.

### *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 include:

Our ability to qualify production tools to achieve desired production yields, throughput, module efficiencies and other performance targets, and to obtain necessary or desired certifications for our PV modules, in a timely manner;

Our ability to expand production in accordance with our plans set forth above under *Commercialization and Manufacturing Expansion Plan* ;

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, value added resellers and distributors who deal directly with manufacturers and end-users in the BIPV, portable power, EIPV and government/defense solar panel markets;

Consumer acceptance of our products;



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

Changes in the supply and demand for PV modules as well as fluctuations in selling prices for PV modules worldwide;

Our ability to raise additional capital on terms favorable to us;

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

Our ability and the ability of our distributors, suppliers and customers to manage operations and orders and timely delivery of production tools; and

Availability of raw materials.

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**Table of Contents*****Critical Accounting Policies and Estimates***

Critical accounting policies used in reporting our financial results are reviewed by management on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. Processes used to develop these estimates are evaluated on an ongoing basis. Estimates are based on historical experience and various other assumptions that are believed to be reasonable for making judgments about the carrying value of assets and liabilities. Actual results may differ as outcomes from assumptions may change.

Our significant accounting policies were described in Note 2 to our audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009. With the exception of those discussed in Note 3 of our condensed financial statements, there have been no significant changes to these policies that are of potential significance to us during the nine months ended September 30, 2010.

***Recent Accounting Pronouncements***

See Note 4, *Recent Accounting Pronouncements*, in the *Notes to Condensed Financial Statements*.

***Results of Operations******Comparison of the Three and Nine Months Ended September 30, 2010 and 2009***

Our activities to date have substantially consisted of raising capital, business and product development, research and development and the development of our FAB1 and FAB2 production lines.

**Revenues.** Our revenues were \$623,340 for the three months ended September 30, 2010 compared to \$417,006 for the three months ended September 30, 2009, an increase of \$206,334. Revenues for the three months ended September 30, 2010 included \$176,000 of product sales, which constitutes the majority of the increase. Our revenues were \$1,285,550 for the nine months ended September 30, 2010 compared to \$1,195,812 for the nine months ended September 30, 2009, an increase of \$89,738. The majority of our revenues during the three and nine months ended September 30, 2010 and 2009 were revenues earned on our government R&D contracts. Two new government contracts were also entered into and began generating revenues in June 2010. The net revenue increase for the nine months ended September 30, 2010 is due to product sales, which began in 2010, offset by a government contract completion early in 2010.

**Research and Development.** R&D costs include the costs incurred for pre-production activities for our FAB1 and FAB2 production lines and facility and equipment infrastructure costs on our FAB2 production line. R&D costs also include costs related to our governmental contracts. R&D costs were \$6,418,402 for the three months ended September 30, 2010 compared to \$3,859,257 for the three months ended September 30, 2009, an increase of \$2,559,145. Costs related to pre-production activities increased approximately \$2,419,000. The pre-production cost increases were comprised of materials and equipment related costs of approximately \$358,000, depreciation and amortization of approximately \$1,400,000, personnel related costs of approximately \$460,000 and contract services of approximately \$390,000, partially offset by a decrease in consulting services of approximately \$115,000 and stock compensation expense of approximately \$41,000. Governmental R&D expenditures increased by approximately \$141,000. R&D costs were \$16,904,741 for the nine months ended September 30, 2010 compared to \$10,418,641 for the nine months ended September 30, 2009, an increase of \$6,486,100. Costs related to pre-production activities increased approximately \$6,236,000. The pre-production cost increases were comprised of materials and equipment related costs of approximately \$1,187,000, depreciation and amortization of approximately \$2,675,000, personnel related costs of approximately \$2,000,000, and facility related costs of approximately \$795,000, partially offset by a decrease in consulting of approximately \$238,000 and stock compensation expense of approximately \$206,000. Governmental R&D expenditures increased by approximately \$250,000.

**Selling, General and Administrative.** S,G&A expenses were \$1,753,910 for the three months ended September 30, 2010 compared to \$2,519,095 for the three months ended September 30, 2009, a decrease of \$765,185. This decrease is the result of a decrease in legal and public company expenses of approximately \$113,000, stock compensation expense of approximately \$438,000 and contract services of approximately \$178,000. S,G&A expenses were \$5,804,091 for the nine months ended September 30, 2010 compared to \$5,723,041 for the nine months ended September 30, 2009, an increase of \$81,050. This increase is comprised of costs associated with increased headcount of approximately \$628,000, partially offset by decreases in legal expense of approximately \$108,000 and contract services and consulting of approximately \$436,000.



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*Interest Expense.* Interest expense was \$0 for the three months ended September 30, 2010 compared to \$123,026 for the three months ended September 30, 2009, a decrease of \$123,026. Interest expense of \$119,535 for the three months ended September 30, 2010 was capitalized as property and equipment. Interest incurred relates to our CHFA loan utilized for our FAB2 production facility expansion in Thornton, Colorado. The CHFA loan has a fixed interest rate of 6.6%. Interest expense was \$0 for the nine months ended September 30, 2010 compared to \$334,359 for the nine months ended September 30, 2009, a decrease of \$334,359. Interest expense of \$361,273 for the nine months ended September 30, 2010 was capitalized as property and equipment. Interest expense reported in interim periods of 2009 was subsequently capitalized at year end.

*Interest Income.* Interest income was \$17,422 for the three months ended September 30, 2010 compared to \$74,980 for the three months ended September 30, 2009, a decrease of \$57,558. Interest income represents interest on cash and short-term investments. The decrease in interest income is due to significantly lower interest rates in 2010 as compared to 2009 as well as a lower average cash balance. Interest income was \$33,987 for the nine months ended September 30, 2010 compared to \$554,987 for the nine months ended September 30, 2009, a decrease of \$521,000.

*Realized and Unrealized Gain / Loss on Forward Contracts.* For the three months ended September 30, 2010 the realized gain on forward contracts was \$350,578 compared to a realized gain of \$667,585 for the three months ended September 30, 2009, a decrease of \$317,007. For the nine months ended September 30, 2010 the realized loss on forward contracts was \$88,049 compared to a realized loss of \$313,118 for the nine months ended September 30, 2009, a decrease of \$225,069. For the three months ended September 30, 2010, the unrealized gain on forward contracts was \$0 compared to the unrealized gain of \$71,950 for the three months ended September 30, 2009, a decrease of \$71,950. For the nine months ended September 30, 2010, the unrealized gain on forward contracts was \$0 compared to the unrealized gain of \$766,403 for the nine months ended September 30, 2009, a decrease of \$766,403. As of December 31, 2009, all forward contracts had been settled, resulting in the reversal of all unrealized gains and losses. 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 differences between the spot rates and the forward rates have been reported as losses on forward contracts.

*Net Loss.* Our net loss was \$7,180,972 for the three months ended September 30, 2010 compared to a net loss of \$5,269,857 for the three months ended September 30, 2009, an increase in net loss of \$1,911,115. Our net loss was \$21,477,151 for the nine months ended September 30, 2010 compared to a net loss of \$14,212,574 for the nine months ended September 30, 2009, an increase in net loss of \$7,264,577. The increase in net loss can be summarized in changes in significant account activity as follows:

	(Increase) decrease to Net Loss For the Three Months Ended September 30, 2010	(Increase) decrease to Net Loss For the Nine Months Ended September 30, 2010
Revenues	\$ 206,334	\$ 89,738
Research and development costs		
Manufacturing R&D	(2,418,555)	(6,236,221)
Government R&D	(140,590)	(249,879)
Selling, general and administrative expenses		
Corporate S,G&A	765,185	(81,050)
Interest expense	123,026	334,359
Interest income	(57,558)	(521,000)
Realized Loss on investments		(59,190)
Realized Loss on forward contract	(317,007)	225,069
Unrealized Gain on forward contracts	(71,950)	(766,403)
Increase to Net Loss	\$ (1,911,115)	\$ (7,264,577)

**Liquidity and Capital Resources**

For the nine months ended September 30, 2010, our cash used in operations was approximately \$15.9 million compared to approximately \$10.0 million for the nine months ended September 30, 2009. For the nine months ended September 30, 2010 approximately \$7.7 million was

expended for payments on FAB2 tools.

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On October 6, 2009, we completed a public offering with Barclays Capital Inc., acting as managing underwriter, and a concurrent private placement with our largest shareholder, Hydro, yielding total net proceeds of approximately \$32.9 million. As of September 30, 2010, we had approximately \$35.5 million in cash and investments. We currently expect the cost of FAB2 will total approximately \$102 million to \$107 million for manufacturing and development equipment and approximately \$19 million for the acquisition of the building and renovation of the FAB2 facility. We also expect capital expenditures of approximately \$6.8 million for installation, qualification and other associated pre-operating expenses related to the expansion. As of September 30, 2010, we made actual cash payments of approximately \$81.4 million for the FAB2 manufacturing and development equipment, including installation costs and approximately \$19 million for the building and renovations that are now substantially complete. A balance of approximately \$6.2 million for FAB2 manufacturing equipment already delivered to our FAB2 location is expected to be paid in 2010.

We expect current cash and investments will be sufficient to fund operations and capital expenditures through the next twelve months. Changes in the level of expected operating losses, the timing of planned capital expenditures or other factors may negatively impact our cash flows and reduce current cash and investments faster than anticipated. We expect to raise additional capital in the near future.

During the nine months ended September 30, 2010, the use of cash for operational expenses averaged approximately \$1.8 million per month and was related to pre-manufacturing activities, research and development, business development and general corporate expenses. Our average monthly operational expense for the nine months ended September 30, 2010 of approximately \$1.8 million is net of average monthly revenues of approximately \$0.1 million. A significant component of our costs for the nine months ended September 30, 2010 related to the qualification and hiring of additional personnel for operations and installation and qualification of our new FAB2 production line along with infrastructure costs to support our expansion. We anticipate that our operational expenditures will continue to increase throughout 2010 as we increase the size of our workforce and scale up FAB2. As of September 30, 2010, we had 118 full-time employees. We do not expect that our sales revenue in 2010 from the FAB1 and FAB2 production lines will support our operating cash requirements. We expect that we will need to raise additional capital to cover our operating losses and future manufacturing capacity expansion, however there is no assurance we will be able to raise capital on acceptable terms or at all. We currently are pursuing various avenues to obtain additional capital for operating expenses and future expansion. We have submitted materials in connection with a loan guarantee program sponsored by the U.S. Department of Energy for our planned FAB3 production line with name plate capacity of 150 MW per year, and may explore raising money in the equity markets. The DOE has reviewed our Part I submission under the Loan Guarantee Application - Innovative Energy Efficiency, Renewable Energy and Advanced Transmission and Distribution Technologies Solicitation No. DE-FOA-0000140, and has deemed it responsive to the initial threshold requirements, and it intends to proceed with further evaluation of our application. We expect to complete our Part II submission under the program by the end of 2010.

On January 9, 2009, we filed a shelf Registration Statement on Form S-3 with the SEC. The SEC declared the registration statement effective on January 16, 2009. The shelf registration was utilized in connection with our public offering of approximately 4.6 million shares that closed on October 6, 2009 with gross proceeds of approximately \$30 million. With the shelf registration, we may from time to time sell common stock, preferred stock, warrants or some combination in one or more offerings for up to \$120 million, the remaining amount available.

### ***Contractual Obligations***

As of September 30, 2010, we had open purchase orders related to our equipment and tooling orders in the approximate amount of \$17.9 million and purchase orders for inventory and services in the approximate amount of \$3.8 million. On January 7, 2010, we purchased research and development equipment from a related party for which there is a note payable of \$750,000 as of September 30, 2010. We have an outstanding note payable in the amount of \$7.1 million under our CHFA loan.

### ***Off Balance Sheet Transactions***

As of September 30, 2010, we did not have any off balance sheet arrangements as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

### **Item 3. Quantitative and Qualitative Disclosures About Market Risk** ***Foreign Currency Exchange Risk***

The Company is actively engaged in purchasing manufacturing equipment internationally and is exposed to foreign currency risk. Our objective is to fix the dollar amount of our foreign currency denominated manufacturing equipment purchases at time of order. 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 differences between the spot rates and the forward rates have been reported as losses on forward contracts.

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In July 2008 and March 2009, the Company entered into fair value hedges utilizing forward contracts designed to match scheduled contractual payments to equipment suppliers which are denominated in Euros and Yen. The total notional value of the Euro forward contracts was 6.4 million with various contract settlement dates beginning September 15, 2008 through July 31, 2009. The total notional value of the Yen forward contracts was ¥521.4 million with contract settlement dates of March and April 2009. All forward contracts have been settled as of December 31, 2009; however, not all payments have been made to our equipment suppliers. Included in cash and cash equivalents is \$3,417,035 related to 2,505,157 held as of September 30, 2010 in our bank account for future payments to our equipment suppliers. Based on our overall currency rate exposure as of September 30, 2010, a near-term 10% appreciation or depreciation in the U.S. dollar, relative to our foreign currencies, would have a positive or negative impact of approximately \$0.3 million on our results of operations.

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 may operate, make sales and buy materials. As a result, we are subject to currency translation risk. Further, changes in exchange rates between foreign currencies and the U.S. dollar could affect our future net sales and cost of sales and could result in exchange losses.

We currently have unhedged open purchase orders to an equipment supplier denominated in Yen for approximately ¥657.1 million. A 10% appreciation or depreciation in the U.S. dollar, relative to this purchase obligation, would have a positive or negative impact of approximately \$0.8 million on our future cash flows. 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.

***Interest Rate Risk***

Our exposure to market risks for changes in interest rates relates primarily to our cash equivalents and investment portfolio. As of September 30, 2010, our cash equivalents consisted of money market funds and high quality corporate securities. The primary objective of our investment activities is to preserve principal and provide liquidity on demand, while at the same time maximizing the income we receive from our investments without significantly increasing risk. The direct risk to us associated with fluctuating interest rates is limited to our investment portfolio and we do not believe that a change in interest rates will have a significant impact on our financial position, results of operations or cash flows.

***Commodity and Component Risk***

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 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. We are exposed to price risks for the raw materials used in the manufacture of our PV modules. 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 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.

If delivery of production tools or raw materials are 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 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.

***Credit Risk***

We have certain financial instruments that potentially subject us to credit risk. These consist primarily of cash, cash equivalents, restricted cash, and investments. We are exposed to credit losses in the event of nonperformance by the counter parties to our financial instruments. We place cash, cash equivalents, and investments with various high-quality financial institutions, and exposure is limited at any one institution. We continuously evaluate the credit standing of our counter party financial institutions.





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**Item 4. 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 management, including our Chief Executive Officer and Chief Financial Officer, 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 September 30, 2010. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as of September 30, 2010, our disclosure controls and procedures were effective.

***Changes in Internal Control over Disclosure and Reporting***

There was no change in our internal control over financial reporting that occurred during the quarterly period ended September 30, 2010 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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**PART II. OTHER INFORMATION**

**Item 1A. Risk Factors**

In addition to the other information set forth in this report, you should carefully consider the factors discussed in the updated risk factors in our Annual Report on Form 10-K filed on March 16, 2010, which could materially affect our business, financial condition or future results. The risks described in our Annual Report on Form 10-K filed on March 16, 2010 are not the only risks facing our company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results.

**Item 6. Exhibits**

a. A list of exhibits is found on page 30 of this report.

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**SIGNATURES**

Pursuant to the requirements 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 2nd day of November, 2010.

ASCENT SOLAR TECHNOLOGIES, INC.

By: /S/ GARY GATCHELL  
**Gary Gatchell**

**Chief Financial Officer**

**(Principal Financial Officer and Authorized Signatory)**

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**ASCENT SOLAR TECHNOLOGIES, INC.**

**EXHIBIT INDEX**

**Exhibit**

<b>No.</b>	<b>Description</b>
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