Ascent Solar Technologies, Inc.

Form 4

September 20, 2011

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

OMB Number:

3235-0287

0.5

Check this box if no longer

January 31, Expires: 2005

OMB APPROVAL

subject to Section 16. Form 4 or

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

Estimated average burden hours per response...

Form 5 obligations may continue. See Instruction

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person *

2. Issuer Name and Ticker or Trading

5. Relationship of Reporting Person(s) to Issuer

MARSH G THOMAS

Symbol Ascent Solar Technologies, Inc.

(Check all applicable)

[ASTI]

(Last) (First) 3. Date of Earliest Transaction

X_ Director 10% Owner Other (specify Officer (give title

(Month/Day/Year)

09/19/2011

(Middle)

(Zip)

C/O ASCENT SOLAR

TECHNOLOGIES, INC., 12300

GRANT STREET

4. If Amendment, Date Original

Applicable Line)

Filed(Month/Day/Year)

X Form filed by One Reporting Person Form filed by More than One Reporting

6. Individual or Joint/Group Filing(Check

THORNTON, CO 80241

(City) (State)

(Street)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of Security (Instr. 3)

(Month/Day/Year) Execution Date, if

2. Transaction Date 2A. Deemed

(Month/Day/Year)

3. 4. Securities TransactionAcquired (A) or Code Disposed of (D) (Instr. 8) (Instr. 3, 4 and 5)

Securities Beneficially Owned Following

5. Amount of

6. Ownership 7. Nature of Form: Direct Indirect (D) or Beneficial Indirect (I) Ownership (Instr. 4) (Instr. 4)

(A)

Reported Transaction(s)

22,958

(Instr. 3 and 4)

(1)

Common Stock

09/19/2011

Code V Amount (D) Price \$0 5,561

D

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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SEC 1474 (9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transactic Code (Instr. 8)			6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Underlying Securities (Instr. 3 and 4)		8. Pr Deriv Secu (Instr
				Code V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	
Restricted Stock Units	(1)	09/19/2011		M		4,092	(2)	(2)	Common Stock	4,092	\$
Restricted Stock Units	(1)	09/19/2011		M		1,469	(3)	(3)	Common Stock	1,469	\$

Reporting Owners

Reporting Owner Name / Address

Director 10% Owner Officer Other

MARSH G THOMAS C/O ASCENT SOLAR TECHNOLOGIES, INC. 12300 GRANT STREET THORNTON, CO 80241



Signatures

/s/ James H. Carroll,
Attorney-in-Fact
09/19/2011

**Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Each restricted stock unit represents a contingent right to receive one share of the issuer's common stock.
- (2) The restricted stock units vest in four equal installments on March 21, 2011, June 20, 2011, September 19, 2011 and December 19, 2011.
- (3) The restricted stock units vest as follows: 1,469 restricted stock units vest on each of June 20, 2011 and September 19, 2011, and 1,470 restricted stock units vest on December 19, 2011.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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