

Ascent Solar Technologies, Inc.  
 Form 4  
 August 21, 2007

**FORM 4**

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

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

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

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

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
 Casteel Janet

(Last) (First) (Middle)

C/O ASCENT SOLAR TECHNOLOGIES, INC., 8120 SHAFFER PARKWAY

(Street)

LITTLETON, CO 80127

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
 Ascent Solar Technologies, Inc. [ASTI]

3. Date of Earliest Transaction (Month/Day/Year)  
 08/20/2007

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)  
 Chief Accounting Officer

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

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

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)			
				(A) or (D)	Price					
				Code	V	Amount				
Common Stock	08/20/2007		M		1,000	A	\$ 4.25	18,000	D	
Common Stock	08/20/2007		S <sup>(1)</sup>		1,000	D	\$ 7.42	17,000	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)

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

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. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)
							Amount or Number of Shares
Common Stock Option (Right to Buy)	\$ 4.25	08/20/2007		M	1,000	03/31/2006 <sup>(2)</sup> 02/27/2016	Common Stock 1,000

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Casteel Janet C/O ASCENT SOLAR TECHNOLOGIES, INC. 8120 SHAFFER PARKWAY LITTLETON, CO 80127			Chief Accounting Officer	

## Signatures

David C. Wang, as attorney-in-fact for Janet Casteel	08/21/2007
**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) The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on June 26, 2007.
  - (2) Of the remaining unvested options in this grant, options to purchase 3,572 shares vest on September 30, 2007, March 31, 2008 and September 30, 2008, and options to purchase 3,568 shares vest on March 31, 2009.  
Following this transaction, Ms. Casteel holds the following securities: vested options (or options that will vest within 60 days) to purchase
  - (3) 13,287 that expire on February 27, 2016; unvested options to purchase 13,000 shares of common stock that expire on November 18, 2015, and unvested options to purchase 10,712 shares of common stock that expire on February 27, 2016.

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.