Russell TW Fraser Form 4 June 17, 2010

FORM 4

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

OMB APPROVAL

OMB 3235-0287 Number:

January 31, Expires: 2005 Estimated average

> 10% Owner Other (specify

0.5

burden hours per response...

if no longer subject to Section 16. Form 4 or Form 5

obligations

may continue.

See Instruction

Check this box

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person *

(First)

(Street)

Russell TW Fraser

(Last)

2. Issuer Name and Ticker or Trading

Symbol

Ascent Solar Technologies, Inc.

3. Date of Earliest Transaction

[ASTI]

(Middle)

(Zip)

5. Relationship of Reporting Person(s) to

Issuer

(Check all applicable)

C/O ASCENT SOLAR

TECHNOLOGIES, INC., 8120

SHAFFER PARKWAY

4. If Amendment, Date Original

(Month/Day/Year)

06/16/2010

Filed(Month/Day/Year)

3.

6. Individual or Joint/Group Filing(Check

Applicable Line)

X_ Director

Officer (give title

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

LITTLETON, CO 80127

(City) (State)

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

1.Title of Security (Instr. 3)

2. Transaction Date 2A. Deemed (Month/Day/Year) Execution Date, if

(Month/Day/Year)

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

Securities Beneficially Owned Following Reported

5. Amount of

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

Indirect Beneficial Ownership (Instr. 4)

(A)

4. Securities

Transaction(s) (Instr. 3 and 4)

35,950

Code V Amount Price (D)

Common Stock

06/16/2010

M 5,376 (1)

D

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

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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)	4. Transacti Code (Instr. 8)	5. Number for 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)		8. Property Security (Instruction)
			Code V	ŕ	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	
Restricted Stock Units	(1)	06/16/2010	M	5,376	(2)	(2)	Common Stock	5,376	

Reporting Owners

Reporting Owner Name / Address

Director 10% Owner Officer Other

Russell TW Fraser

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

LITTLETON, CO 80127

Signatures

David C. Wang, as attorney-in-fact for TW Fraser Russell 06/17/2010

**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 have fully vested pursuant to the Issuer's acceleration of all unvested restricted stock units held by the reporting person.
- (3) Dr. Russell holds vested options to purchase 8,000 shares of common stock that expire November 18, 2015.

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.

Reporting Owners 2