

Ascent Solar Technologies, Inc.  
Form SC 13G  
February 11, 2008

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No. )\*

Ascent Solar Technologies, Inc.

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(Name of Issuer)

Common Stock

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(Title of Class of Securities)

043635101

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(CUSIP Number)

Calendar Year 2007

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(Date of Event which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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SCHEDULE 13G

CUSIP No. 043635101

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| 1.  | Names of Reporting Persons.<br>Chester L.F. and Jacqueline M. Paulson as Joint Tenants<br>I.R.S. Identification Nos. of above persons (entities only). |
| 2.  | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> T          |
| 3.  | SEC USE ONLY   |
| 4.  | Citizenship or Place of Organization<br>United States of America   |
| 5.  | Sole Voting Power<br>0   |
| 6.  | Shared Voting Power<br>735,000   |
| 7.  | Sole Dispositive Power<br>0  |
| 8.  | Shared Dispositive Power<br>735,000  |
| 9.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br>735,000  |
| 10. | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>   |
| 11. | Percent of Class Represented by Amount in Row (9)<br>6.15  |
| 12. | Type of Reporting Person<br>IN   |

Number of  
Shares  
Beneficially  
Owned by  
Each Reporting  
Person With:

Chester L.F. and Jacqueline M. Paulson (together the "Paulsons") may be deemed to control Paulson Capital Corp. ("PLCC"), which wholly owns Paulson Investment Company, Inc. ("PICI"). The Paulsons control and are the managing partners of the Paulson Family LLC ("LLC") which is a controlling shareholder of PLCC, which is the parent company for PICI.

SCHEDULE 13G  
CUSIP No. 043635101

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|-----|---|
| 1.  | Names of Reporting Persons.<br>Paulson Capital Corp.<br>I.R.S. Identification Nos. of above persons (entities only).<br>93-0589534            |
| 2.  | Check the Appropriate Box if a Member of a Group (See Instructions)<br>(a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> T |
| 3.  | SEC USE ONLY  |
| 4.  | Citizenship or Place of Organization<br>United States of America  |
| 5.  | Sole Voting Power<br>0  |
| 6.  | Shared Voting Power<br>735,000  |
| 7.  | Sole Dispositive Power<br>0   |
| 8.  | Shared Dispositive Power<br>735,000   |
| 9.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br>735,000   |
| 10. | Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>                                  |
| 11. | Percent of Class Represented by Amount in Row (9)<br>6.15   |
| 12. | Type of Reporting Person<br>BD<br>CO  |

Number of Shares Beneficially Owned by Each Reporting Person With:

Paulson Capital Corp. ("PLCC") wholly owns Paulson Investment Company, Inc. ("PICI"). PLCC is a corporation and PICI is a broker-dealer.

Item 1.

(a) Name of Issuer

Ascent Solar Technologies, Inc.

(b) Address of Issuer's Principal Executive Offices

8120 Shaffer Parkway  
Littleton, CO 80127

Item 2.

(a) Name of Person Filing

This statement is being filed jointly by each of the following persons pursuant to Rule 13d-1(k) promulgated by the Securities and Exchange Commission under Section 13 of the Securities Exchange Act of 1934, as amended: (i) Chester L.F. Paulson and Jacqueline M. Paulson, as joint tenants and each individually (together, the "Paulsons") who control and are the managing partners of the Paulson Family LLC ("LLC"); and (ii) Paulson Capital Corporation ("PLCC"), an Oregon Corporation, which directly wholly owns Paulson Investment Company, Inc. ("PICI"), an Oregon corporation. The Paulsons and PLCC are collectively referred to as the "Reporting Persons". The Reporting Persons schedule 13G Joint Filing Agreement is attached as Exhibit 1.

Information with respect to the Reporting Persons is given solely by such Reporting Persons, and no Reporting Person assumes responsibility for the accuracy or completeness of the information by another Reporting Person, except as otherwise provided in Rule 13d-1(k). By their signature on this statement, each of the Reporting Persons agree that this statement is filed on behalf of such Reporting Persons.

(b) Address of Principal Business Office or, if none, Residence

The Paulsons, PLCC's, and PICI's principal business address is:

811 SW Naito Parkway, Suite 200  
Portland, OR 97204

(c) Citizenship

The Paulsons are citizens of the United States of America, and PLCC and PICI are organized under the laws of the United States of America.

(d) Title of Class of Securities

Common Stock for Ascent Solar Technologies, Inc.

(e) CUSIP Number

043635101

Item 3.

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If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a)  T  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b)  "  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c)  "  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d)  "  Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e)  "  An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f)  "  An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g)  "  A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h)  "  A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)  "  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j)  "  Group, in accordance with §240.13d-1(b)(1)(ii)(J).

Item 4.

Ownership.

(a)  Amount beneficially owned:

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The Paulsons may be deemed to be the beneficial owners of a total of 735,000 shares of Issuer Common Stock. The precise owners of these shares is described more specifically in this paragraph. The Paulsons may be deemed to control Paulson Capital Corp. ("PLCC"), which wholly owns Paulson Investment Company, Inc. ("PICI"). The Paulsons control and are the managing partners of the Paulson Family LLC ("LLC"). Chester Paulson directly owns 0 shares of Issuer Common Stock. Jacqueline M. Paulson directly owns 0 shares of Issuer Common Stock. The Paulsons may be deemed to indirectly own 67,500 shares of Issuer Common Stock, 67,500 Issuer Warrants, and Underwriter Warrants exercisable into 600,000 shares of Issuer Common Stock through PICI. Pursuant to SEC Rule 13d-4, the Paulsons expressly disclaim beneficial ownership of the 67,500 shares of Issuer Common Stock, 67,500 shares of Issuer Warrants, and Underwriter Warrants exercisable into 600,000 shares of Issuer Common Stock of which PICI is record owner.

(b) Percent of class:

As of November 1, 2007, the Issuer had 11,283,651 shares of Issuer Common Stock issued and outstanding, as reported in their 10-QSB filed November 13, 2007 (the "Issuer Outstanding Shares"). The Paulsons actual and deemed beneficial ownership of Issuer Common Stock represented approximately 6.15% of the Issuer Outstanding Shares. PLCC's indirect beneficial ownership of Issuer Common Stock represented approximately 6.15% of the Issuer Outstanding Shares.

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

The Paulsons have sole power to vote or direct the vote of 0 shares. PLCC has sole power to vote or direct the vote of 0 shares.

(ii) Shared power to vote or to direct the vote

The Paulsons have shared power to vote or direct the vote of 735,000 shares. PLCC has shared power to vote or direct the vote of 735,000 shares.

(iii) Sole power to dispose or to direct the disposition of

The Paulsons have sole power to dispose or direct the disposition of 0 shares. PLCC has sole power to dispose or direct the disposition of 0 shares.

(iv) Shared power to dispose or to direct the disposition of

The Paulsons have shared power to dispose or direct the disposition of 735,000 shares. PLCC has shared power to dispose or direct the disposition of 735,000 shares.

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following "

Instruction: Dissolution of a group requires a response to this item.

N/A

Item 6. Ownership of More than Five Percent on Behalf of Another Person

N/A

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person

See Item 4(a)

Item 8. Identification and Classification of Members of the Group

N/A

Item 9. Notice of Dissolution of Group

N/A

Item 10. Certifications

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: January 30, 2008

Chester L.F. Paulson

By: /s/ Chester L.F. Paulson

Title: Chester L.F. Paulson  
Individually

Jacqueline M. Paulson

By: /s/ Jacqueline M. Paulson

Title: Jacqueline M. Paulson  
Individually

Paulson Capital Corp.

By: /s/ Chester L.F. Paulson

Title: Chester L.F. Paulson  
Chairman of the Board