

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL

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|  |   |   |
|--|---|---|
| 1. Name and Address of Reporting Person*<br><u>NEESE MARTY T</u><br><br>(Last) (First) (Middle)<br><u>C/O SUNPOWER CORPORATION</u><br><u>77 RIO ROBLES</u><br><br>(Street)<br><u>SAN JOSE</u> <u>CA</u> <u>95134</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>SUNPOWER CORP [ SPWR ]</u><br><br>3. Date of Earliest Transaction (Month/Day/Year)<br><u>02/11/2012</u><br><br>4. If Amendment, Date of Original Filed (Month/Day/Year) | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><u>Chief Operating Officer</u><br><br>6. Individual or Joint/Group Filing (Check Applicable Line)<br><br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>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 Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|--------|---|--|---|
|                                 |                                      |  | Code                           | V | Amount  | (A) or (D) | Price  |   |  |   |
| Common Stock                    | 02/11/2012                           |  | M                              |   | 2,501   | A          | \$0    | 4,383   | D  |   |
| Common Stock                    | 02/13/2012                           |  | F <sup>(1)</sup>               |   | 1,048   | D          | \$7.83 | 3,335   | D  |   |

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 Securities Underlying Derivative Security (Instr. 3 and 4) |                            | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-------|--|-----------------|---|----------------------------|--|--|---|--|
|  |  |                                      |  | Code                           | V | (A)  | (D)   | Date Exercisable   | Expiration Date | Title   | Amount or Number of Shares |  |  |   |  |
| Restricted Stock Units (RSUs)              | (2)  | 02/11/2012                           |  | M                              |   |  | 2,501 | (3)  | (3)             | Common Stock  | 2,501                      | \$0  | 0  | D   |  |

Explanation of Responses:

1. Disposition of shares exempt under Rule 16b-3 as payment of tax liability to Company by delivery or withholding securities incident to vesting of restricted stock shares.
2. Each RSU represents a contingent right to receive one share of the Issuer's Common Stock upon vesting.
3. The RSUs shall vest in three equal installments on each of February 11, 2010, February 11, 2011 and February 11, 2012.

Remarks:

Karla Rogers, as attorney-in-fact for Marty T. Neese 02/14/2012

\*\* Signature of Reporting Person Date

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

\* 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).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.