

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

1. Name and Address of Reporting Person* <u>Wenger Howard</u> (Last) (First) (Middle) <u>C/O SUNPOWER CORPORATION</u> <u>3939 NORTH FIRST STREET</u> (Street) <u>SAN JOSE CA 95134</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>SUNPOWER CORP [SPWRA]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>President, Util. & Pwr Plants</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>02/28/2011</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> 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			
Class A Common Stock	03/01/2011		S ⁽¹⁾		2,000	D	\$17.3581 ⁽²⁾	42,365	D	
Class A Common Stock	03/01/2011		M		10,229	A	\$0	52,594	D	
Class A Common Stock	03/01/2011		F ⁽³⁾		3,752	D	\$17.23	48,842	D	
Class A Common Stock	03/01/2011		M		23,333	A	\$0	72,175	D	
Class A Common Stock	03/01/2011		F ⁽³⁾		8,559	D	\$17.23	63,616	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
Performance-Based Restricted Stock Units (PSUs)	(4)	02/28/2011		A		30,688		(5)	(5)	Class A Common Stock	30,688	\$0	30,688	D	
Performance-Based Restricted Stock Units (PSUs)	(4)	03/01/2011		M		10,229		(5)	(5)	Class A Common Stock	10,229	\$0	20,459	D	
Restricted Stock Units (RSUs)	(6)	03/01/2011		M		23,333		(7)	(7)	Class A Common Stock	23,333	\$0	46,667	D	

Explanation of Responses:

- The sale reported on this Form 4 was effected pursuant to a previously adopted rule 10b5-1 trading plan by the reporting person.
- Price reflects weighted average sales price; actual sales prices ranged from \$16.97 to \$17.80. The reporting person undertakes to provide, upon request by the Commission staff, the Issuer, or a security holder of the Issuer, full information regarding the number of shares purchased or sold at each separate price.
- 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.
- Each PSU represents a contingent right to receive one share of the Issuer's Class A Common Stock upon vesting.
- On August 5, 2010, Reporting Person was awarded a number of PSUs within a preset range, with the actual number contingent upon the achievement of certain performance criteria. The Compensation Committee of the Issuer's Board of Directors confirmed achievement of the performance criteria on February 28, 2011 and, based on that assessment, determined the number of PSUs. The PSUs vest in three equal installments on each of March 1, 2011, March 1, 2012 and March 1, 2013.
- Each RSU represents a contingent right to receive one share of the Issuer's Class A Common Stock upon vesting.
- The RSUs shall vest in three equal installments on each of March 1, 2011, March 1, 2012 and March 1, 2013.

Remarks:

Karla Rogers, as attorney-in-fact 03/02/2011
for Howard Wenger

** 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.