FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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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

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 [®] SMITH- PILKINGTON KAREN A					MON	2. Issuer Name and Ticker or Trading Symbol <u>MONOLITHIC POWER SYSTEMS INC</u> [MPWR]									heck all a	ship of Reporti pplicable) ector	ng Pe	10% C	Dwner
(Last) (First) (Middle) 6409 GUADALUPE MINES ROAD					3. Date of Earliest Transaction (Month/Day/Year) 02/08/2011											ficer (give title low)		Other below)	(specify)
(Street) SAN JOSE CA 95120					4. If Ar	4. If Amendment, Date of Original Filed (Month/Day/Year)									Individual or Joint/Group Filing (Check Applicable ne) X Form filed by One Reporting Person				
(City)			(Zip)													rm filed by Mo rson	re thai	n One Rep	orting
Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned																			
1. Title of Security (Instr. 3) 2. Transact Date (Month/Day					ay/Year)	on 2A. Deemed Execution Date, if any (Month/Day/Year)						ities Acquired (d Of (D) (Instr. :			l Sec Ber Owr	mount of urities eficially ned owing	Forn (D) o Indir	wnership m: Direct or rect (I) tr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
								Code	v	Amount		A) or D)	Price	e Rep Tra	orted nsaction(s) tr. 3 and 4)	(inst		(1150. 4)	
Common Stock 02/08/2					2011	011			Α		5,700	(1)	Α	\$	0	5,700		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)	vative Conversion Date Execution Date, rity or Exercise (Month/Day/Year) if any			tion Date,	Code (Instr.				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 Derivativ Security (Instr. 5)	Beneficially	y D (1 (1	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
					Code	v	(A)	(D)	Date Exercisat		Expiration Date	Title	or	ount nber res					

Explanation of Responses:

1. According to the Company's 2004 Equity Incentive Plan and the Board Compensation Schedule as adopted by the Board on February 1, 2011, each year, on the date of the first meeting of the Board, the Company grants each non-employee director who has been on the Board for at least six months, Restricted Stock Units for Board and Committee meeting services. 100% of the restricted stock units shall vest on the first anniversary of the Vesting Commencement Date, provided the non-employee director remains a director on such date.

By: Saria Tseng For: Karen Smith Bogart

02/10/2011

** 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.

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