Neely Rick Form 4 February 25, 2010

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

Check this box if no longer STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF subject to **SECURITIES** Section 16.

Form 4 or Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person *

2. Issuer Name and Ticker or Trading Neely Rick Issuer Symbol MONOLITHIC POWER SYSTEMS (Check all applicable) INC [MPWR]

(Last) (First) (Middle) 3. Date of Earliest Transaction Director 10% Owner X_ Officer (give title Other (specify

(Month/Day/Year) below) 6409 GUADALUPE MINES ROAD 02/25/2010 Sr. VP and CFO

(Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check

Filed(Month/Day/Year) Applicable Line)

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

SAN JOSE, CA 95120 Person

(City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of 2. Transaction Date 2A. Deemed 3. 4. Securities Acquired 5. Amount of 6. Ownership 7. Nature of Security (Month/Day/Year) Execution Date, if Transaction(A) or Disposed of Securities Form: Direct Indirect (Instr. 3) any Code (D) Beneficially (D) or Beneficial Indirect (I) Ownership (Month/Day/Year) (Instr. 8) (Instr. 3, 4 and 5) Owned Following (Instr. 4) (Instr. 4)

Reported (A) Transaction(s) (Instr. 3 and 4) Code V Amount (D) Price

Common 30,000 02/25/2010 A A \$0 34,555 D (1) Stock

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

Persons who respond to the collection of SEC 1474 information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

OMB APPROVAL

3235-0287

January 31,

2005

0.5

OMB

Number:

Expires:

response...

5. Relationship of Reporting Person(s) to

Estimated average

burden hours per

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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)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. onNumber of Derivative Securities Acquired (A) or Disposed of (D)		ate	Amount Underly Securiti	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene Owne Follo Repo Trans (Instr
				Code V	(Instr. 3, 4, and 5) (A) (D)	Date Exercisable	Expiration Date	Title N	Amount or Number of Shares		

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Neely Rick

6409 GUADALUPE MINES ROAD Sr. VP and CFO

SAN JOSE, CA 95120

Signatures

By: Saria Tseng For: Rick Neely 02/25/2010

**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).

Subject to accelerated vesting in certain circumstances, 25% of the Performance Units are subject to vest on the 12-month anniversary of the Vesting Commencement Date and 25% of the Performance Units are subject to vest on each of the next 3 yearly anniversaries of the Vesting Commencement Date, provided that the Grantee continues to be a Service Provider from the Grant Date through each applicable vesting date.

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.

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