Neely Rick Form 4/A February 17, 2010

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB Number:

3235-0287

Expires:

5. Relationship of Reporting Person(s) to

Sr. VP and CFO

January 31, 2005

0.5

Estimated average burden hours per

OMB APPROVAL

response...

subject to Section 16. Form 4 or Form 5 obligations

may continue.

See Instruction

if no longer

Check this box

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section

30(h) of the Investment Company Act of 1940

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 02/09/2010

> (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 02/10/2010 Form filed by More than One Reporting

Person

SAN JOSE, CA 95120

Stock

(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 (A) 5. Amount of 7. Nature of Security (Month/Day/Year) Execution Date, if Transaction Disposed of (D) Securities Ownership Indirect (Instr. 3) Code (Instr. 3, 4 and 5) Beneficially Form: Beneficial (Month/Day/Year) Owned Direct (D) Ownership (Instr. 8) Following or Indirect (Instr. 4) Reported (A) Transaction(s) (Instr. 4) (Instr. 3 and 4) Code V Amount (D) Price Common $S^{(1)}$ 02/09/2010 $445 \frac{(2)}{}$ D 4,555 D 20.8921

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)

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	2.	3. Transaction Date		4.	5.	6. Date Exerc		7. Titl		8. Price of	9. Nu
Derivative Security (Instr. 3)	Conversion or Exercise Price of Derivative Security	(Month/Day/Year)	Execution Date, if any (Month/Day/Year)	Transact Code (Instr. 8)	orNumber of Derivativ Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	:		Amou Under Securi (Instr.	lying	Derivative Security (Instr. 5)	Deriv Secur Bene Own Follo Repo Trans (Instr
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	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 02/17/2010

**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).
- (1) In accordance with the reporting person's 10b5-1 trading plan.
- (2) Shares sold to pay tax obligations resulting from the vesting of performance units (restricted stock units) originally granted on February 8, 2008.

Remarks:

This form is amended to correct the Form 4 filed on 2/10/10. Due to technical difficulties, the sales price and number of share 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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