Rao Meera Form 4 April 13, 2010

FORM 4

OMB APPROVAL

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

OMB Number: 3235-0287

Check this box if no longer subject to Section 16.

Expires: January 31, 2005

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Estimated average burden hours per response... 0.5

Form 4 or Form 5 obligations may continue. See Instruction

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 * Rao Meera | | ing Person * | 2. Issuer Name and Ticker or Trading Symbol MONOLITHIC POWER SYSTEMS INC [MPWR] | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) | | |
|---|-------------------|-------------------|---|--|--|--|
| (Last) 6409 GUADA | (First) LUPE MIN | (Middle) TES ROAD | 3. Date of Earliest Transaction (Month/Day/Year) 04/13/2010 | Director 10% OwnerX_ Officer (give title Other (specify below) VP of Finance, Corp Controller | | |
| | (Street) | | 4. If Amendment, Date Original Filed(Month/Day/Year) | 6. Individual or Joint/Group Filing(Check Applicable Line) _X_Form filed by One Reporting Person | | |
| SAN JOSE, CA 95120 | | | | Form filed by More than One Reporting Person | | |

| (City) | (State) | (Zip) Tab | le I - Non- | Derivative | Secu | rities Acqui | red, Disposed of, | or Beneficiall | y Owned |
|--------------------------------------|---|---|--|--------------------------|------------------------------|----------------------|--|--|---|
| 1.Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transactio Code (Instr. 8) | onor Dispo (Instr. 3, | sed of 4 and (A) or | 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) |
| Common Stock | 04/13/2010 | | Code V $M_{\underline{(1)}}$ | 3,000 | (D) | Price \$ 13.53 | 33,000 | D | |
| Common Stock | 04/13/2010 | | S(1) | 3,000 | D | \$ 23.0449 (2) | 30,000 | D | |

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

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 control number.

SEC 1474

(9-02)

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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. Transactic Code (Instr. 8) | 5. Number omf 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 Amoul Underlying Securit (Instr. 3 and 4) | |
|---|---|--------------------------------------|--|--|--|--|--------------------|--|--------------------------------|
| | | | | Code V | (A) (D) | Date Exercisable | Expiration Date | Title | Amo or Nun of Shar |
| Non-Qualified Stock Option (right to buy) | \$ 13.53 | 04/13/2010 | | M(1) | 3,000 | 01/05/2010 | 01/05/2016 | Common Stock | 3,0 |

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Rao Meera

6409 GUADALUPE MINES ROAD VP of Finance, Corp Controller

SAN JOSE, CA 95120

Signatures

By: Rick Neely For: 04/13/2010

**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.

The price is the weighted average sale price for the transactions reported on this line. The prices for the transactions reported on this line (2) range from \$23.0125 to \$23.08. The reporting person undertakes to provide, upon request by the staff of the Securities and Exchange Commission, the issuer, or a security holder of the issuer, full information regarding the number of shares sold at each separate price.

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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