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

FORM 10-Q/A
(Amendment No. 1)

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 2012

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number: 000-51026

Monolithic Power Systems, Inc.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Delaware
(State or other jurisdiction of
incorporation or organization)

77-0466789
(I.R.S. Employer
Identification Number)

79 Great Oaks Boulevard, San Jose, CA 95119 (408) 826-0600
(ADDRESS OF PRINCIPAL EXECUTIVE OFFICES, INCLUDING ZIP CODE AND TELEPHONE NUMBER)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

There were 35,287,801 shares of the registrant's common stock issued and outstanding as of August 22, 2012.

EXPLANATORY NOTE

The sole purpose of this amendment to Monolithic Power System, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, filed with the Securities and Exchange Commission on July 30, 2012 (the "Form 10-Q"), is to furnish Exhibit 101, which contains the XBRL (eXtensible Business Reporting Language) Interactive Data File for the financial statements and notes included in Part I, Item 1 of Form 10-Q.

Under Rule 405(a)(2)(ii) of Regulation S-T, this Exhibit 101 is permitted to be furnished by amendment within 30 days of the original filing date of the Form 10-Q.

No other changes have been made to the Form 10-Q. This amendment speaks as of the original filing date of the Form 10-Q, does not reflect events that may have occurred subsequent to the original filing date and does not modify or update in any way disclosures made in the Form 10-Q.

Pursuant to rule 406T of Regulation S-T, Exhibit 101 is deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Act of 1934, as amended, and other wise is not subject to liability under those sections.

ITEM 6. EXHIBITS

101.INS** XBRL Instance
101.SCH** XBRL Taxonomy Extension Schema
101.CAL** XBRL Taxonomy Extension Calculation
101.DEF** XBRL Taxonomy Extension Definition
101.LAB** XBRL Taxonomy Extension Labels
101.PRE** XBRL Taxonomy Extension Presentation

** XBRL information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

MONOLITHIC POWER SYSTEMS, INC

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MONOLITHIC POWER SYSTEMS, INC.

Dated: August 27, 2012

/s/ MEERA RAO

Meera Rao

Chief Financial Officer

(Principal Financial and Accounting Officer)

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