

**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM S-1  
REGISTRATION STATEMENT***Under  
The Securities Act of 1933***ENPHASE ENERGY, INC.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)**3674**  
(Primary Standard Industrial  
Classification Code Number)**20-4645388**  
(I.R.S. Employer  
Identification Number)**201 1st Street, Suite 100  
Petaluma, California 94952  
(707) 774-7000**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Paul B. Nahi  
Chief Executive Officer  
c/o Enphase Energy, Inc.  
201 1st Street, Suite 100  
Petaluma, California 94952  
(707) 774-7000**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:***John H. Sellers  
Cooley LLP  
3175 Hanover Street  
Palo Alto, CA 94304  
(650) 843-5000****Bruce K. Dallas  
Davis Polk & Wardwell LLP  
1600 El Camino Real  
Menlo Park, CA 94025  
(650) 752-2000****Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this Registration Statement.If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), check the following box. If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  333-174925If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box. **CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (3)
Common stock, \$0.00001 par value	1,951,515	\$6.00	\$11,709,090	\$1,341.86

(1) Represents only the additional number of securities being registered. Does not include the securities that the Registrant previously registered on the Registration Statement on Form S-1 (File No. 333-174925).

(2) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(a) under the Securities Act of 1933, as amended.

(3) The Registrant previously paid \$11,610 in connection with the filing of the Registration Statement on Form S-1 (Registration No. 333-174925) on June 15, 2011. Of that amount, \$6,709.31 was paid in connection with registering \$58,545,452 worth of its common stock. Pursuant to Rule 457(p) of the Securities Act, the remainder satisfies in full the amount due under this registration statement.

**This registration statement shall become effective upon filing with the Commission in accordance with Rule 462(b) of the Securities Act of 1933, as amended.**

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## **INCORPORATION OF CERTAIN INFORMATION BY REFERENCE**

This Registration Statement is being filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 462(b) under the Securities Act of 1933, as amended. This Registration Statement relates to the public offering of common stock of the Registrant contemplated by the Registration Statement on Form S-1, as amended (File No. 333-174925), originally filed by the Registrant on June 15, 2011 (the "Prior Registration Statement"), and is being filed for the sole purpose of registering additional securities of the same class as were included in the Prior Registration Statement. The contents of the Prior Registration Statement and all exhibits thereto are hereby incorporated by reference.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Petaluma, State of California, on the 29<sup>th</sup> day of March, 2012.

### ENPHASE ENERGY, INC.

By: /s/ Paul B. Nahi  
Paul B. Nahi  
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Paul B. Nahi</u> Paul B. Nahi	President and Chief Executive Officer (Principal Executive Officer)	March 29, 2012
<u>/s/ Sanjeev Kumar</u> Sanjeev Kumar	Chief Financial Officer (Principal Financial and Accounting Officer)	March 29, 2012
* <u>Raghuveer R. Belur</u>	Director	March 29, 2012
* <u>Neal Dempsey</u>	Director	March 29, 2012
* <u>Steven J. Gomo</u>	Director	March 29, 2012
* <u>Benjamin Kortlang</u>	Director	March 29, 2012
* <u>Jameson J. McJunkin</u>	Director	March 29, 2012
* <u>Chong Sup Park</u>	Director	March 29, 2012
* <u>Robert Schwartz</u>	Director	March 29, 2012
* <u>Stoddard M. Wilson</u>	Director	March 29, 2012

\*By: /s/ Paul B. Nahi  
Paul B. Nahi  
Attorney-in-Fact

The Power of Attorney granted by each director was filed as an exhibit to the Prior Registration Statement.

**EXHIBIT INDEX**

<u>Exhibit Number</u>	<u>Description</u>
5.1	Opinion of Cooley LLP
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm
23.2	Consent of Cooley LLP (included in Exhibit 5.1)
24.1*	Power of Attorney

\* Incorporated by reference from the Prior Registration Statement.

March 29, 2012

Enphase Energy, Inc.  
201 1st Street, Suite 100  
Petaluma, CA 94952

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by Enphase Energy, Inc., a Delaware corporation (the “**Company**”), of a Registration Statement on Form S-1 (the “**Registration Statement**”) with the U.S. Securities and Exchange Commission, covering an underwritten public offering of up to 1,951,515 shares of common stock, par value \$0.00001, including 254,545 shares of common stock that may be sold pursuant to the exercise of an over-allotment option (the “**Shares**”). The Registration Statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the “**Securities Act**”). The contents of the Registration Statement on Form S-1, as amended (File No. 333-174925) (the “**Prior Registration Statement**”), including the prospectus included therein (the “**Prospectus**”), are incorporated by reference in the Registration Statement.

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and related Prospectus, (b) the Company’s Amended and Restated Certificate of Incorporation and Bylaws, as currently in effect, (c) the Company’s Amended and Restated Certificate of Incorporation, filed as Exhibit 3.3 to the Prior Registration Statement, and the Company’s Amended and Restated Bylaws, filed as Exhibit 3.5 to the Prior Registration Statement, each of which will be in effect upon the closing of the offering contemplated by the Registration Statement, and (d) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents where due execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of officers of the Company and have not sought to independently verify such matters. Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Registration Statement and the related Prospectus, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

**COOLEY LLP**

By: /s/ John H. Sellers

John H. Sellers

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated February 22, 2012 (March 28, 2012 as to the effects of the reverse split described in the first paragraph of Note 17 and the second paragraph of Note 17) relating to the consolidated financial statements of Enphase Energy, Inc. appearing in the Prospectus, included in Registration Statement No. 333-174925.

We also consent to the reference to us under the heading "Experts" in such Prospectus, included in Registration Statement No. 333-174925.

/s/ DELOITTE & TOUCHE LLP

San Francisco, California  
March 29, 2012