



DIVISION OF
CORPORATION FINANCE

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

March 1, 2012

Via E-mail

Paul B. Nahi
Chief Executive Officer
Enphase Energy, Inc.
201 1st Street, Suite 100
Petaluma, CA 94952

**Re: Enphase Energy, Inc.
Registration Statement on Form S-1
Amendment No. 6 filed February 23, 2012
File No. 333-174925**

Dear Mr. Nahi:

We have reviewed your amended registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Market Opportunity, page 1

1. Please provide us your analysis supporting your conclusion that it continues to be appropriate to characterize the market as one that involves rapid growth and the growth rates that you cite. Include in your response the specific recent statements you considered from market participants.

Management's Discussion and Analysis

Inventory Valuation, page 52

2. Please revise to disclose the reasons for the significant increase in the inventory write-downs from \$0.1 million in fiscal 2010 to \$2.7 million in fiscal 2011.

Product Warranty, page 52

3. Please revise to disclose the specific reasons for the significant increase in the warranty provision from \$1.9 million in fiscal 2010 to \$7.0 million in fiscal 2011.

Transactions with Affiliate Controlled Companies, page 127

4. Please expand your response to prior comment 5 to tell us the percentage of your revenues in the current quarter represented by the agreement. Also tell us the effect on your named executive officers' compensation if you did not have the revenue from related-person agreement. In addition, please tell us whether your statement that the related-party paid "the Company's regular authorized distributor price" means that you charged the related-person the same price that you charge distributors or that the related person-paid the same price that distributors charge their customers. It remains unclear why the agreement need not be filed as an exhibit.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow

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adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Jeanne Bennett, Staff Accountant, at (202) 551-3606 or Brian Cascio, Accounting Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Ruairi Regan, Staff Attorney, at (202) 551-3269 or me at (202) 551-3617 with any other questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): John H. Sellers
Cooley LLP