

October 15, 2013

Via EDGAR and FedEx

Mr. Brian Cascio, Accounting Branch Chief
Mr. Kevin Kuhar, Accountant
United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, D.C. 20549

Re: Enphase Energy, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2012
Filed March 5, 2013
Form 10-Q for the Quarterly Period Ended June 30, 2013
Filed August 7, 2013
File No. 001-35480

Gentlemen:

This letter is being transmitted by Enphase Energy, Inc. (the "**Company**") in response to comments received from the staff (the "**Staff**") of the Securities and Exchange Commission (the "**SEC**"), by letter dated September 30, 2013 (the "**Comment Letter**"), with respect to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012 (the "**10-K**") and Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2013 (the "**10-Q**"). The text of each of the Staff's comments has been included in this letter in italics for your convenience, followed by the Company's response.

Form 10-K for the Fiscal Year Ended December 31, 2012

Note 5. Warranty Obligations, page 52

- We see that you recorded a \$10.2 million increase in your warranty expense related to the estimated long-term performance of previous generations of your products offset by a decrease of \$2.6 million from a reduction in replacement costs and claim rates. Please explain to us in greater detail the specific reason for the significant increase in the accrual and the related assumptions underlying these changes to your accrual. Please also clarify the reason for your change to present warranty obligation on a gross basis. Discuss how you determined that your warranty accruals are sufficient to cover future warranty claims and clarify each of the factors you considered in your analysis. Include a discussion of the following:*

- *Describe how you determined the change in the estimated long term performance of your previous generations of products including any changes in the estimated mean time between failures.*
- *Discuss how you quantifiably determined the change in the replacement cost for these products.*
- *Discuss how changes in replacement cost are described as a factor in both the increase and decrease in the accrual.*
- *Describe how claims history is cited as a factor in reducing the accrual when your products have a warranty term of 15 or 25 years.*
- *Discuss whether you still factor the "Entrust Program" into your accrual as described on page F-10 of amendment No. 10 to the Form S-1 filed March 28, 2012.*

Response:

Increase in Accrued Warranty Liability

The Company advises the Staff that the change in estimate of \$7.6 million made during 2012 resulted from two factors: (1) a \$10.2 million increase in warranty expense related to an increase in estimated failure rates for the Company's second generation microinverter as well as charges to reflect additional estimated labor costs expected to be paid to third party installers resulting from the increased failures of its second generation product; and (2) a \$2.6 million decrease in warranty expense related to decreased estimated replacement costs and estimated claim rates.

During 2012, the Company experienced actual failures of its second generation product that exceeded the Company's then current failure rate estimate. The Company analyzed field performance data collected during the year on its second generation product and performed diagnostic root cause failure analysis on those units actually returned by end users. As a result, the Company concluded that an increase in estimated failure rates for its second generation product was warranted. The Company also estimated that additional labor charges would be paid to third party installers who service end users' installations. The Company recorded an increase in warranty expense of approximately \$10.2 million to reflect the combined impact of these two changes in estimates.

These charges were partially offset by a \$2.6 million reduction in warranty expense during 2012 resulting from a decrease in the estimated per unit shipping cost for replacement units delivered to customers as well as a slight decrease in the number of warranty claims expected to be filed by customers during the warranty term. Prior to the third quarter of 2012, the Company's business practice was to expedite shipment of all replacement units to customers to fulfill warranty claims. These shipping costs are included in the Company's estimate of total per unit replacement cost. In order to save

on these discretionary costs, beginning in the third quarter of 2012, the Company revised its business practice to utilize non-expedited shipping terms for future replacement units, resulting in a reduction in estimated future replacement costs. The revision to estimated claim rates was based on the Company's observed historical end user behavior through the end of 2012. See response below for further discussion of the underlying key estimates and assumptions used by the Company to estimate warranty costs associated with its microinverter products.

The changes in estimates of \$10.2 million and \$2.6 million resulted from new information and subsequent developments, and accordingly, from better insight and improved judgment, consistent with ASC 250-10-20 which states:

"A change in accounting estimate is a necessary consequence of the assessment, in conjunction with the periodic presentation of financial statements, of the present status and expected future benefits and obligations associated with assets and liabilities. Changes in accounting estimates result from new information. Examples of items for which estimates are necessary are uncollectible receivables, inventory obsolescence, service lives and salvage values of depreciable assets, and warranty obligations."

As described further below, on a quarterly basis, the Company uses the best and most complete underlying information available, following a consistent, systematic and rational methodology to determine the liability. The Company considers all available evidence to assess the reasonableness of all key assumptions underlying its estimated warranty obligations for each generation of microinverter. The changes in estimates recorded in 2012 arose from new information available to management and were not the result of mathematical mistakes, mistakes in the application of generally accepted accounting principles, or oversight or misuse of facts that existed at the time.

Evaluation of Factors Considered when Estimating Warranty Accruals

The Company's warranty accrual provides for the replacement of microinverter units that fail during the product's warranty term (15 years for first and second generation microinverters and up to 25 years for third and fourth generation microinverters). On a quarterly basis, the Company employs a consistent, systematic and rational methodology to assess the adequacy of its warranty liability. This assessment includes updating all key estimates and assumptions for each generation of product, based on historical results, trends and the most current data available as of the filing date. The key estimates and assumptions used in the warranty liability are thoroughly reviewed by management and the Audit Committee on a quarterly basis. The key estimates used by the Company to estimate its warranty liability are: (1) the number of units expected to fail over time (i.e. failure rate); (2) the number of failed units expected to result in warranty claims over time (i.e. claim rate); and (3) the per unit cost of replacement units (including outbound shipping and limited labor costs) expected to be incurred to replace failed units over time (i.e. replacement cost).

Estimated Failure Rates – The Company’s Quality and Reliability department has primary responsibility to determine the estimated failure rates for each generation of microinverter. To establish initial failure rate estimates for each generation of microinverter, the Company’s quality engineers use a combination of industry standard MTBF (Mean Time Between Failure) estimates for individual components contained in its microinverters, third party data collected on similar equipment deployed in outdoor environments similar to those in which the Company’s microinverters are installed, and rigorous long term reliability and accelerated life cycle testing which simulates the service life of the microinverter in a short period of time. As units are deployed into production environments, the Company continues to monitor product performance via its Enlighten monitoring platform. It typically takes three to nine months between the date of sale and date of end-user installation. Consequently, the Company’s ability to monitor actual failures of units sold similarly lags by three to nine months. When a microinverter fails and is returned, the Company performs diagnostic root cause failure analysis to understand and isolate the underlying mechanism(s) causing the failure. The Company then uses the results of this analysis (combined with the actual, cumulative performance data collected on those units prior to failure via Enlighten) to draw conclusions with respect to how or if the identified failure mechanism(s) will impact the remaining units deployed in the installed base. In 2012, the Company estimated that second generation units remaining in the installed base would fail at a higher rate than previously estimated, resulting in a charge to warranty expense.

Estimated Claim Rates — Warranty claim rate estimates are based upon assumptions with respect to expected customer behavior over the warranty period. As the vast majority of the Company’s microinverters have been sold to end users for residential applications, the Company believes that warranty claim rates will be affected by changes in residential home ownership because the Company expects that subsequent homeowners are less likely to file claims than the homeowners who originally purchase the microinverters as subsequent owners were not involved in the initial purchase, are unaware of the home’s historical energy costs, and would be required to establish a relationship with a system installer to diagnose or replace failed or low-producing units. Another factor affecting estimated claim rates is the end user’s access to system performance data (at the microinverter level) that is available when using the Company’s web-based monitoring service, Enlighten. Both of these factors have been considered and included in the Company’s claim rate estimates.

In the fourth quarter of 2012, the Company revised its claim rate estimate to reflect a decrease in the percentage of end users who are able to access their system’s performance data using the Enlighten monitoring service. Approximately 80-90 percent of end users have purchased systems that include Enlighten. End users who have not purchased Enlighten do not have access to the same inverter-level performance data as

end users using Enlighten and, consequently are less likely to know if or when an individual microinverter has failed. In 2012, based on observation of historical results, the Company confirmed that non-Enlighten end users had a lower claim rate than originally estimated. As a result, the Company reduced the estimated claim rate in 2012 to reflect this information.

Estimated Replacement Cost – Three factors are considered in the Company’s analysis of estimated replacement cost: (1) the estimated cost of replacement microinverters; (2) the estimated cost to ship replacement microinverters to end users; and (3) the estimated labor reimbursement expected to be paid to third party installers performing replacement services for the end user. Because the Company’s warranty provides for the replacement of defective microinverters over long periods of time (between 15 and 25 years, depending on the generation of product purchased), the estimated per unit cost of current and future product generations is considered in the estimated replacement cost. Estimated costs to ship replacement units are based on observable, market-based shipping costs paid by the Company to third party freight carriers. While the Company’s warranty does not explicitly provide for the reimbursement of labor incurred to replace failed microinverters, the Company has a separate program that allows third-party installers to claim fixed-dollar reimbursements for labor costs they incur to replace failed microinverter units for a limited time from the date of original installation. Included in the Company’s estimated replacement cost is an analysis of the number of fixed-dollar labor reimbursements expected to be claimed by third party installers over the limited offering period.

As noted in the Company’s 10-K, Note 5. Warranty Obligations, page 52, changes in estimated replacement costs contributed to both an increase and a decrease in warranty expense during 2012. As discussed above, the decrease in estimated replacement cost resulted from the Company no longer shipping replacement units to end users on an expedited basis. The increase in estimated replacement cost noted in the Company’s disclosure resulted from additional labor reimbursements expected to be paid to third party installers related to the performance of its second generation microinverter.

Entrust Program – As described on page F-10 of amendment No. 10 to the Company’s Form S-1 filed March 28, 2012, historical disbursements for lost energy under the Company’s Entrust program had been insignificant. As a result, estimated disbursements under this program were not included in the Company’s estimated warranty accrual. To date, disbursements under this program continue to be insignificant and are expected to be insignificant in future periods. Accordingly, estimated disbursements under this program are not factored into the Company’s estimated warranty accrual.

Change in Presentation

The Company's warranty accrual includes the estimated cost of replacement units. Prior to the fourth quarter of 2012, warranty obligations were shown net of any related inventory write-downs if the related warranty replacement units had an inventory net book value less than cost. As a result, when the Company recorded inventory write-downs for units that may be used for warranty replacement, the Company recorded a corresponding decrease to the warranty obligations for such units, so as to not expense such amounts twice. Since warranty obligations and inventory are two separate units of accounting with no rights of offset, the Company determined that the appropriate presentation for warranty obligations should be on a gross basis and, therefore, revised its accounting presentation for units held for warranty replacement by recording an asset for the carrying value of those units and an equivalent increase to warranty liability.

The revision in balance sheet presentation resulted in an immaterial increase to other assets and warranty obligations of \$1.6 million. The revision had no impact on cost of sales, gross profit, net loss, accumulated deficit or cash used in operating activities for the current or any previously reported periods.

Note 11. Stock-Based Compensation, page 57

2. *We note that you disclose weighted averages for the assumptions underlying your Black-Scholes option pricing models on page 60. However, please tell us and revise future annual filings to provide a description of the significant assumptions used during the year to estimate the fair value of share-based compensation awards consistent with FASB ASC 718-10-50-2(f)(2).*

Response:

In future annual filings, the Company will provide a description of the significant assumptions to estimate the fair value of share-based compensation awards consistent with FASB ASC 718-10-50-2(f)(2) as follows:

The fair value of option awards is estimated on the date of the grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

- *Expected term* – The expected term of the option awards represents the period of time between the grant date of the option awards and the date the option awards are either exercised, converted or cancelled, including an estimate for those option awards still outstanding.
- *Expected volatility* – The Company uses the simplified method, as permitted by

the SEC for companies with a limited history of stock option exercise activity, to determine the expected term for its option grants. Expected stock price volatility is determined based on an average of the historical volatilities of the common stock of several companies with characteristics similar to those of the Company.

- *Risk-free interest rate* – The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant and with a maturity that approximates our expected term.
- *Dividend yield* – The dividend yield is based on our dividend history and the anticipated dividend payout over our expected term.

Form 10-Q for the Quarterly Period Ended June 30, 2013

Note 3. Warranty Obligations, page 8

3. *We reference the discussion in Note 3 of the significant increase in warranty expense resulting from changes in estimates arising from increased failure rates related to previous generation products. Please explain to us in greater detail the reason for the increased failure rates and how this was considered in your estimates of future warranty obligations. Please also clarify whether there were any changes made to your products related to the increased failure rates.*

Response:

As discussed in the Response to Comment 1 above, on a quarterly basis, the Company performs an extensive analysis of estimated future warranty obligations for each generation of microinverter, following a consistent, systematic and rational methodology. The Company analyzes key warranty estimates and assumptions considering historical results, trends and the most current data available.

During the second quarter of 2013, the Company experienced actual failures of its second generation microinverters that exceeded its then current failure rate estimate. In addition, the Company performed diagnostic root cause failure analysis and reviewed field performance data for its second generation microinverters. As a result of such analyses, and based upon consistent methodologies and the process described in Response to Comment 1 above, the Company concluded it was necessary to increase the estimated failure rates for such second generation microinverters and recorded additional warranty expense in the second quarter of 2013. The changes in estimates in the second quarter of 2013 resulted from new information and subsequent developments, and accordingly, from better insight and improved judgment.

The Company advises the Staff that based on the results of the Company's diagnostic root cause failure analysis, certain manufacturing and design modifications were made to its second generation microinverter in 2013 to correct identified failure mechanisms. As the Company no longer sells its second generation microinverter, all new second generation units produced are used to replace failed second generation units. The Company also performed an analysis on its third and fourth generation products to verify that the failure mechanisms identified in its second generation product were not present in its third or fourth generation products. Accordingly, no changes in failure rate assumptions were made with respect to the third or fourth generation products.

The Company further acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the SEC from taking any action with respect to the filing; and
- the Company may not assert Staff comments as a defense in any proceeding initiated by the SEC or any person under the federal securities laws of the United States.

Please contact me at 707-763-4784, ext. 7493 with any questions or further comments regarding the Company's responses to the Staff's comments.

Sincerely,

/s/ Kris Sennesael

Kris Sennesael
Vice President and Chief Financial Officer