



DIVISION OF
CORPORATION FINANCE

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

July 12, 2011

Via E-mail

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

**Re: Enphase Energy, Inc.
Registration Statement on Form S-1
Filed June 15, 2011
File No. 333-174925**

Dear Mr. Nahi:

We have reviewed your 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.

Inside Cover Page

1. Please revise your graphics as follows:
 - If significant text, technical terms or jargon like you have included is necessary to understand graphics, the presentation generally is inappropriate for the prospectus cover. If you elect to include graphics, please revise so that they do not require the current lengthy text, jargon or technical explanations. Likewise, revise the inside back cover of the prospectus to eliminate the jargon that may be appropriate to market your product but not for a securities offering disclosure document.

- From the first full-page graphic and the picture of the house on the following page, it appears that you sell solar panels. If this is not true, please revise to remove any implication to the contrary.

Table of Contents

2. Please tell us how you believe the last sentence of the second paragraph following your table of contents is consistent with Section 12(a)(2) of the Securities Act.

Prospectus Summary, page 1

3. It is unclear whether all of the information regarding your solutions, strengths and strategies is appropriate for a prospectus summary; see Updated Staff Legal Bulletin No. 7 (June 7, 1999) sample comments 28 and 29. If the disclosure is appropriate for a summary, please explain to us why and ensure that you provide equally prominent disclosure of negative elements of this offering and your business. We note that you present separately captioned and explained bullet points regarding your strengths and strategy but provide only brief bullet points regarding your challenges on page 5. Also, if your system requires a higher initial investment than competitive systems, has a limited market due to its wattage, has lower conversion efficiencies than competitive products, or faces competition from significant new entrants into the market producing products like yours, please highlight these issues clearly and directly. In this regard, we note that the bullet point on page 6 merely suggests that you are expecting additional competition generally and that you are not aware of any actual specific significant new competitive threats.

Enphase Energy, Inc., page 1

4. Please provide us independent, objective support for your claim that your technology is fundamentally new in the first sentence. Also, provide us such support for the following statements that you make:
 - your product is “industry leading,” in the first bullet on page 3 and on page 66;
 - your claim regarding greater system uptime on page 3;
 - your claim of industry leading reliability on page 4;
 - that you were first to market, in the third bullet, on page 4. Address how you concluded that other companies did not market microinverters in the past;
 - you are the “leading supplier of microinverters,” on page 5.

- SunWize Technologies, Inc., Focused Energy LLC, SolarNet Holdings, LLC, Conergy AG and AEE Solar Inc. are among the largest solar distributors, on page 79; and
 - Wesco and GexPro are some of the largest electrical contractor distributors in North America, on page 79.
5. Please provide us with copies of reports of Westinghouse Solar where it makes the statements that you cite in the summary. Clearly mark the supporting statements in the supplemental materials.
 6. Please tell us whether the chart of “Market Share Evolution” reflects your typical market share. If it is not typical, it is unclear why you believe it is appropriate to highlight it in your prospectus summary. Likewise, where you repeat this data elsewhere in your document, please ensure that you present sufficient context so that investors can evaluate the extent to which it reflects your typical market share.

Our Solution, page 3

7. Please highlight in your prospectus summary your statement on page 54 regarding your insignificant revenue from the web-based monitoring service. Also, if you sell any of the three components separately and those separate sales represent a material portion of your revenue, please highlight that fact here. In an appropriate section of your document, provide the three-year revenue history by product class required by Regulation S-K Item 101(c)(1)(i).

The Offering, page 7

8. Please update the disclosure in the bullet points in this section. We note for example the updated information on page 122 and in the penultimate paragraph on page 105.
9. Refer to the last sentence on page 8. Please tell us why you believe it is appropriate to not reflect the effect a split that apparently will occur before investors become owners of your shares.

Risk Factors, page 11

10. In an appropriate risk factor, please describe recent trends experienced by participants in the solar industry.

If our contract manufacturers are unable to obtain raw materials, page 19

11. Please describe recent cycles in the availability of silicon. Also, if you will compete with solar panel manufacturers for silicon in times of shortage, please describe this risk.

If we fail to maintain an effective system of internal controls..., page 23

12. Please describe the identified significant deficiencies you mention here.

Use of Proceeds, page 33

13. Given that you appear to have no specific plan for the proceeds, please discuss the principal reasons for the offering of this size.
14. We note your disclosure that you currently have no agreements or commitments relating to any material acquisitions. Please tell us if you are currently involved in any negotiations regarding material acquisitions and the status of such negotiations.
15. Although we note your statement that you have no commitment or specific plans to repay debt, Regulation S-K Item 504 requires you to disclose your current intentions regarding the use of the proceeds; see instruction 7 to Item 504. Please revise accordingly, and provide the disclosure required by instruction 4 to Regulation S-K Item 504. Also, with a view toward disclosure, please tell us whether you currently intend to use proceeds for:
- the move to the new headquarters mentioned on page 53;
 - the expansion into China mentioned on page 72; or
 - to repay the debt under your June 14, 2011 convertible facility, which appears, based on your disclosure in the last paragraph on page 51, to mature upon the closing of your initial public offering.

Capitalization, page 35

16. Please revise to remove the caption relating to cash and cash equivalents from your presentation of capitalization, since this item is not a component of capitalization for purposes of this disclosure.

Dilution, page 37

17. Please provide your computations of net tangible book value and pro forma net tangible book value at the end of the fiscal year and interim period.

Results of Operations, page 42

18. Your explanations for the increase in general and administrative expenses do not appear to explain the entire change. Please explain the balance of the increase.

19. Where you attribute changes to multiple causes, like in your discussion of cost of revenues on page 44, please quantify the effect of each material cause.
20. Please tell us why you do not discuss the impact that the increased cost of your 2011 leases will have on your results of operations.

Net Revenues, pages 44 and 46

21. Please revise to explain the reason for the decline in average selling price of your microinverter units discussed on pages 44 and 46.

Debt Obligations, page 51

22. Given your previously existing resources, please clarify the purposes for the additional debt you incurred.
23. Given your second risk factor on page 23, please discuss the material debt covenants to which you are subject under your existing loan agreements.

Critical Accounting Policies and Significant Estimates

Revenue Recognition, page 54

24. Please revise to disclose the sales incentives, rebates and discounts offered to customers and distributors, how these incentives, rebates and discounts are estimated and the related accounting treatment.

Product Warranty, page 54

Warranty Obligations, page F-9

25. Please revise to clarify how you determined the estimated accrual for claims under your 15-year and 25-year limited product warranties each period, considering your limited operating history and the fact that this is new technology in the solar industry. Please clarify whether this accrual is based on a percentage of revenue and, if so, how that percentage was determined each period. Please disclose your assumptions regarding estimated failure rates and replacement costs and how these were determined. We also note your reference on page 67 that you provide a “100% system uptime guarantee.” Please disclose the nature of this guarantee and clarify how you have estimated your warranty accrual related to this guarantee.

Stock-Based Compensation, pages 55 to 59

Note 10. Stock Based Compensation, pages F-19 to F-21

26. We reference the disclosure on page 55 of the many factors your board of directors, with input from management, considered to determine the fair value of your common stock. We also see on pages 57 through 59 that you subsequently determined that a stock compensation charge should be calculated for the difference between the exercise price at the grant date and the estimated fair value at the grant date, based on an independent valuation report as of January 31, 2011. Please tell us the extent of your reliance on this independent valuation report for the updated estimated fair value of your stock and key assumptions disclosed on pages 57 through 59.
27. Please revise to disclose the significant assumptions used to determine the estimated fair value of the common shares utilized for stock compensation purposes in fiscal 2010 and 2011 under the income and market approaches and the basis for these assumptions. For example, revise to clarify how you considered lack of marketability of your common stock associated with private company status and how you determined the related discounts each period. In addition, highlight any transactions with unrelated parties believed by management to be particularly evident of an objective fair value per share determination. Please clarify how the issuances of preferred stock were considered in the fair values per share at grant date disclosed on page 56.
28. Please indicate when discussions were initiated with your underwriter(s) about possible offering price ranges and provide us a history of those discussions. Please provide us with a chronological bridge of management's fair value per share determinations to the current estimated IPO price per share. We will delay final assessment of stock based compensation pending inclusion of the estimated IPO price in the filing.

Business, page 61

29. Please provide support for the figures presented in the tables on pages 69 and 70. Tell us:
 - how you determined that the data presented in the tables is fairly representative of all installations;
 - whether each installation presented actually uses your product and is achieving the results disclosed;
 - whether competitors other than providers of traditional central inverters could achieve the same or better results; and
 - why you have not identified the installer named as a source and provided its consent as an exhibit.

Also, explain the term energy harvest.

30. Please disclose the phase-out dates and termination dates of material incentives that you mention on page 12.
31. Please describe the product qualification and certification process that you mention on page 15.
32. Please describe the export control laws, regulations and requirements that limit which products you sell and where and to whom you sell you products as mentioned in the second sentence of the first risk factor on page 26.

Industry Overview, page 62

33. Please tell us whether:
 - the industry data that you cite here and throughout your document is publicly available;
 - the data was commissioned by you;
 - the data was prepared for use in your registration statement;
 - you have any relationship with the authors; and
 - you are using the most recently available data.

Also, tell us whether you obtained the consent of the authors to cite the data as you have done. Include in your response the California Solar Initiative and Westinghouse Solar data that you mention in your prospectus and the other data mentioned in the last paragraph on page 32.

Rapidly Expanding Distribution Channels, page 72

34. Please tell us the criteria you used to determine which parties to name in this section, whether other unnamed parties also satisfy those criteria, how your disclosure fairly presents those parties' contribution to your business, and whether unnamed parties provide a greater contribution to your business. Also provide us this information with regard to the names in the first full sentence on page 79 and your reference to Wesco and GexPro on page 79.

Expand our Technology Leadership, page 73

35. You disclose here that you are developing a module for direct attachment of the microinverter to solar modules. However, your disclosure in this prospectus, including your graphics, suggests that your current module already does this. Please clarify.

Envoy Communications Gateway, page 75

36. Please clarify how the device communicates with the “local web” if no broadband connection is available.

Web-Based Software, page 78

37. Please tell us why you do not believe that you must disclose the name of your “datacenter infrastructure provider” and the material terms of your agreement with the provider.

Customers and Sales, page 78

38. Please provide us with copies of your agreements with your distributors disclosed in the last risk factor on page 19, and tell us how you determined that these agreements need not be filed as exhibits to your registration statement.
39. Please disclose the material terms of your agreements with your strategic partners including your agreements with Siemens disclosed here and on page 72; include term and termination provisions. Tell us how you determined that you need not file these agreements as exhibits.
40. Please clarify what you mean by “2,200 installer and integrator partners.” Are there parties with which you have a current contractual arrangement, or do you mean parties who have at some time in the past purchased a product from you?

Manufacturing..., page 79

41. Please disclose the material terms of your relationships with the manufacturers and suppliers disclosed in this section, including the term and termination provisions of material agreements.

Intellectual Property, page 80

42. We note your disclosure in this section that you license open source software. Please disclose the terms of your material licenses, including duration, termination provisions and material obligations of the parties.

Competition, page 81

43. Please address both your competitive position relative to providers of central inverters and relative to providers of alternatives to central inverters. Also discuss competitive conditions; for example, if you are aware of significant new competitors, please provide a discussion of these developments.

Executive Officers and Directors, page 83

44. Please tell us why you have not disclosed Dennis Hollenbeck's business experience from July 2006 to December 2010.

Board Composition, page 87

45. Please tell us when you intend to disclose in the prospectus, relative to the time that you begin any meetings with prospective investors, the composition of each class of directors.

Base Salary, page 92

46. It appears that your compensation committee considered objective factors - like company performance and individual performance - in determining the increases in base salary of your executive officers. Please provide specific disclosure regarding how the factors were reflected in the compensation decisions. Please refer to Regulation S-K Item 402(b)(2)(v) and (vii).

Cash Bonuses, page 93

47. Please clarify how the committee determined the size of the \$133,325 payment to the Vice President of Worldwide Sales. From your disclosure that the payment was made for "exceeding his sales performance targets," it appears that the payment was based on more than a percentage of sales. Please disclose the target and how the amount of payment relative to the target was determined. See instruction 4 to Regulation S-K Item 402(b).
48. Please clarify what the CFO did to strengthen your financial and accounting and organizational processes and how the committee determined that \$50,000 was the amount that should be paid for that activity.
49. Please tell us why this section does not discuss the Vice President of Products' compensation for 2010.

Equity Compensation, page 94

50. Please discuss with specificity how the factors you cite resulted in the size of option that you granted to each named executive officer.

Grant of Plan-Based Awards, page 98

51. Please provide the disclosure in columns (b), (c), (d) and (e) of the table required by Regulation S-K Item 402(d) with regard the compensation plans for your CEO and Vice President of Worldwide Sales that you mention under “Cash Bonuses” on page 93.
52. Please tell us how you concluded that the grant date fair value disclosed in the last column in the table does not reflect the actual economic value realized by the named executive officers as you state in the final sentence of footnote (2).
53. Please discuss the reasons for setting the vesting commencement dates before the grant date of options.
54. Please reconcile the grant date of Mr. Loebbaka’s award disclosed here with the date in the last paragraph on page 102.

Employment Agreements, page 100

55. Please tell us where you disclose in the prospectus the 6.5% of the outstanding common stock mentioned in Exhibit 10.5.
56. Please reconcile your disclosure in the first sentence of your description of Raghuvveer Belur’s employment agreement on page 103, regarding his employment on at will basis, with section 4 of Exhibit 10.9.

2010 Potential Payments Upon Termination or Change of Control, page 104

57. Please quantify how the new 2011 agreements that you disclose beginning on page 101 would change the amounts in the table.

Compensation Risk Assessment, page 113

58. Your disclosure suggests that you have not yet reviewed the risks associated with your compensation plans. Please reconcile this disclosure with the requirement of Regulation S-K Item 402(s).

Certain Relationships..., page 114

59. Please disclose the date of each transaction in the table on page 114. Also disclose the material rights of each class of preferred stock that you issued to related parties and the number of shares of common stock into which each share of preferred stock will convert in connection with this offering. If shareholder approval is required for such conversion, please disclose whether you obtained the required approval.

60. Please tell us why this section does not reflect the March 31, 2009 transaction with “key investors” mentioned on page F-13.

61. Please tell us which exhibit represents the voting agreement described on page 117.

Investors’ Rights Agreement, page 116

62. Please identify the related persons that are subject to this agreement, and disclose the material terms of the agreement, including the rights and covenants that will terminate upon completion of this offering.

Principal Stockholders, page 119

63. With respect to each principal shareholder that is a legal entity, please identify clearly all natural persons who exercise the sole or shared voting and/or dispositive powers with respect to the shares held by that shareholder.

Description of Capital Stock, page 122

Preferred Stock, page 122

64. Please describe the conversion terms of the preferred stock.

Warrants, page 123

65. Please file as exhibits to this registration statement the warrants mentioned in the first and third paragraphs of this section.

66. Please ensure that the disclosure here and throughout your prospectus is current. For example, we note the warrant mentioned on page F-24.

Anti-Takeover Effects, page 125

67. The last paragraph of the risk factor that you cite in this section as containing a description of anti-takeover positions indicates that it does not identify all anti-takeover provisions. Please provide complete disclosure required by Regulation S-K Item 202(a)(5).

Material U.S. Federal Income and Estate Tax Consequences..., page 129

68. It is inappropriate to disclaim liability for your disclosure as you appear to do in the first sentence of the second paragraph and in the last paragraph in this section. Please revise.

Underwriting, page 133

69. Refer to the last paragraph on page 136. Please provide more specific information regarding the financial advisory and investment banking services that the underwriters have provided to you. Also disclose the portion of your business derived from the supply and service agreements, the date the agreements end, and the exercise price of the warrant. File your agreements with the underwriters as exhibits to this registration statement.
70. The last paragraph on page 138 indicates that this document is merely a prospectus supplement. Please tell us what prospectus this document supplements and whether you intend to file that prospectus.

Financial Statements

71. Please update the financial statements when required by Rule 3-12 of Regulation S-X.

Recent Sales, page II-2

72. Please tell us where this section reflects the first common stock sale shown on page F-5.
73. Please clarify which transactions you believe were exempt from registration based on Regulation D, and tell us when you filed the Form D for each such transaction.

Exhibits and Financial Statement Schedules, page II-3

74. Except as permitted for exhibits filed pursuant to Regulation S-K Item 601(b)(2), you should file complete copies of all documents you file as exhibits, including all attachments such as schedules, exhibits and annexes. Please refile Exhibits 4.2, 10.7, 10.10, 10.11, 10.12, 10.21, and 10.22 with the attachments that are currently missing.
75. Please file your agreements with your “other executive officers” mentioned in the penultimate paragraph on page 95.

Consents of Independent Registered Public Accounting Firms – Exhibits 23

76. To the extent there is a delay in requesting effectiveness of your registration statement, or there is any change, other than typographical, made to the financial statements, or there have been intervening events since the prior filing that are material to the company, please provide a currently dated and signed consent from your independent accountants with your next amendment.

Paul B. Nahi
Enphase Energy, Inc.
July 12, 2011
Page 13

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 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 Gary Todd, Senior Staff Accountant, at (202) 551-3605 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