

Mail Stop 6010

November 1, 2006

Matrix Solar Technologies, Inc.  
540-A Silver Creek NW  
Albuquerque, New Mexico 87121

**Re: Photowatt Technologies Inc.  
Amendment No. 1 to Registration Statement on Form F-1  
Filed October 17, 2006  
Registration No. 333-137044**

Dear Mr. Ghirardi:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. In future response letters, please tell us with specificity where you have addressed each of the prior comments that your letter dated October 16, 2006 says will be addressed in a future amendment.
2. We note that in response to prior comment 3 you have provided us with excerpts from the Solarbuzz industry report. Please provide us with a copy of the entire report. Once we have had an opportunity to review that report in its entirety, we may have further comments on your disclosure.

Prospectus Summary, page 1

3. We reissue prior comment 7. We note that the summary continues to repeat text found in other sections of your document rather than summarize key points in clear, plain language. Also, if it is appropriate to list your strengths and strategy in the prospectus summary, it is unclear why those points could not be summarized in a list of bullet points and, if necessary, one sentence per bullet point. Please see sample comments 28 and 29 in Updated Staff Legal Bulletin No. 7 (June 7, 1999) available on our web site at [www.sec.gov](http://www.sec.gov).
4. Please tell us how you have concluded that the information you have presented in your summary is a balanced presentation of your business. For example, we note on page 1 that you highlight the benefits of refined metallurgical silicon; however, on page 42 you mention the negative impact on margins. Disclosure of strengths should be balanced with equally prominent disclosure of weaknesses and challenges.

Our Business Strategy, page 2

5. If you continue to provide detail regarding Spherical Solar in your summary, your disclosure should be balanced to highlight the reasons for the related asset impairment charge and to indicate, if true, that you acquired the technology from a third party.
6. Please tell us what you know about any preliminary information regarding the January 2007 technical report. Also, please tell us the timetable for your review of the September 2006 assessment mentioned in your response to prior comment 17.

Our Relationship With ATS, page 4

7. We note your response to prior comment 11. Please disclose the substantive portions of that response in an appropriate location in your prospectus.

The Offering, page 5

8. As appropriate, please ensure that your bullet point disclosure at the end of this section, and your disclosure under "Dilution" on page 35, includes the stock option grants disclosed at the bottom of page 61.

Risk Factors, page 10

We may have a business conflict, page 26

9. We reissue the second sentence of prior comment 29. It is unclear how this risk factor addresses ATS's ability to compete with you beyond its Canadian Solar investment.

Because we are a Canadian corporation, page 29

10. We note your response to prior comment 12. Please expand your risk factor disclosure to include the substantive portions of that response.

Use of Proceeds, page 32

11. We note the disclosure you have added in response to prior comment 14. Please continue your revisions to also disclose the maturity date of the indebtedness and the uses to which the proceeds of such indebtedness were put.
12. Please discuss the proceeds from the over-allotment option.

Capitalization, page 34

13. Please revise to remove the "cash and cash equivalents" line item from the capitalization table.

Management's Discussion and Analysis, page 40

Revenue, pages 50, 53, and 56

14. Please expand your disclosure under "Revenue" on pages 50, 53 and 56 to explain how the last sentence of the first paragraph of each such section affects your results of operations.

Selling and administrative, page 51

15. Please quantify the aggregate amount of the incentive compensation increases. Clarify which group of employees were entitled to those increases and why.
16. Please quantify and provide the material reasons for the increase in your selling and administrative expenses for Spheral Solar for the periods compared.

Liquidity, page 57

17. We note your disclosure that you are currently considering a potential joint venture. Please update your prospectus, as appropriate, to include all of the material information regarding this joint venture and the related financing. File any agreements that are material to the joint venture as exhibits to your registration statement.

Contractual Commitments, page 60

18. Please file the agreements you entered into in September and October of 2006 as exhibits to your registration statement.
19. With a view toward disclosure, please tell us the amount and timing of the required payments under the October 2006 agreement. Also disclose any material effect on your margins based on the agreement.

Quantitative and Qualitative Disclosure About Market Risk, page 61

20. We note your response to prior comment 19 and we reissue the previous comment in its entirety.

Stock Option Grants, page 61

21. Please identify the executive officers who received the grants.

Patents and Trademarks, page 79

22. From your revisions in response to prior comment 27 it is unclear how you have rights to the technology that you use in your business other than the Spherical Solar technology. If you have patents for that business, please disclose the scope and duration of those patents.

Our Relationship with ATS, page 81

Ownership of assets, page 82

23. Please expand your response to prior comment 29 to clarify the extent to which your business relies on ATS assets that are not used exclusively in your business.

Financial Reporting, page 85

24. We note your response to prior comment 32. To clarify how the contractual provision could be consistent with the audit committee's responsibilities, please tell us what would happen if the audit committee chose a different auditor. Also please tell us how the audit committee would determine whether it was "required by law" to choose a different auditor. How does the "required by law" provision give the audit committee sufficient discretion to exercise its duties?

Transitional Services Agreement, page 85

25. We note your response to prior comment 33. Please revise your prospectus to include disclosure that is responsive to that prior comment.

Management, page 89

Directors and Executive Officers, page 89

26. We note your revised disclosure in response to prior comment 38. Please also disclose when Mr. Ghirardi became a director.
27. Please tell us the name of the publicly traded corporation where Mr. Ghirardi was employed and the exchange on which that entity's shares are traded. If Mr. Ghirardi was the president and chief operating officer of a division of the publicly traded corporation, please clarify.

Stock Option Plan, page 96

28. Please disclose the "specified percentage" agreed to in the options granted to each of Messrs. Ghirardi and Adams.
29. We note the cash bonuses that may be payable to Messrs. Ghirardi and Adams. Please provide examples that clearly show how these bonuses would be calculated using reasonable assumptions. Explain the purpose of the bonuses.
30. In addition to the disclosure you provided in response to prior comment 45, please provide us with a table that shows:
- each person to receive the option grants exercisable at the IPO price;
  - the relationship of each individual to you; and
  - the total number of shares underlying each individual's options.

Related Party Transactions, page 101

31. Please expand your disclosure in response to prior comment 47 to clarify the percentage of ATS's shares owned by the affiliates.

Description of Share Capital, 103

Common Shares, page 103

32. Please expand your disclosure to explain what the terms "plurality voting" and "fundamental matters" mean under the Canada Business Corporations Act.

Taxation, 110

33. It is unclear how you addressed the first sentence of prior comment 51. Therefore, we reissue that part of the comment.

Taxation of U.S. Holders, page 111

34. We reissue prior comment 55 which requested that you expand your disclosure in the second paragraph to clarify how the residency of a transparent entity is determined.

Financial Statements

Report of Independent Registered Accounting Firm, page F-15

35. We note your response to prior comment 61. Please note that PCAOB Auditing Standard 1 requires that audit reports on the financial statements of issuers must state that the auditor performed the audit in accordance with the standards of the PCAOB. The term "issuer" is defined in PCAOB Rule 1001 and Section 2(a)(7) of the Sarbanes-Oxley Act of 2002 to include an entity that files or has filed a registration statement that has not yet become effective under the Securities Act of 1933 and that it has not withdrawn. As such, upon the filing of your Form F-1 on September 1, 2006, you became an issuer for purposes of PCAOB Auditing Standard 1. Accordingly, please revise the filing to include financial statements that were audited in accordance with the standards of the Public Company Accounting Oversight Board and an audit report that reflects that fact. Also, refer to the requirements of AU 711.

Acknowledgement

36. We see the acknowledgements that you have provided at the end of your letter dated October 16, 2006. At, or prior, to the time you request acceleration of the effectiveness of your registration statement, please make the acknowledgements as specifically requested at the end of our comment letter dated September 28, 2006.

\* \* \* \* \*

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any registration statement for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kevin Vaughn at (202) 551-3643 or Martin James at (202) 551-3671 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc (via fax): Christopher J. Cummings, Esq.