



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

March 25, 2009

Via U.S. mail and facsimile

Mr. Robert Rubin
Chief Financial Officer
Solar Thin Films, Inc.
25 Highland Blvd.
Dix Hills, NY 11746

**RE: Form 10-KSB for the fiscal year ended December 31, 2007
Form 10-Q for the quarter ended September 30, 2008
File No. 001-13549**

Dear Mr. Rubin:

We have reviewed your response letter dated March 17, 2009 and have the following additional comments. If you disagree with any comments, we will consider your explanation as to why a comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation.

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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

FORM 10-KSB FOR THE YEAR ENDED DECEMBER 31, 2007

General

1. Where a comment below requests additional disclosures or other revisions to be made, please show us in your supplemental response what the revisions will look like. These revisions should be included in your future filings, including your interim filings.
2. We await your responses to comments 7 and 10 from our letter dated February 27, 2009.

Consolidated Financial Statements

Note 1 – Summary of Significant Accounting Policies, page F-7

3. We note your response to comment 4 from our letter dated February 27, 2009. Please address each of the following points separately for Factory Sales transaction and Equipment Sales transactions:
- It appears that you consider your Equipment Sale and Factory Sale arrangements to be revenue arrangements with multiple deliverables. Please tell us how you considered paragraph 9 of EITF 00-21 in arriving at this conclusion. Please also tell us considered paragraphs 11-16 of EITF 00-21 in determining the amount to allocate to each deliverable (ie: equipment, installation and commissioning);
 - Clarify whether the equipment sold is standard equipment manufactured in the same way each time or if the equipment is customized to meet the end user's needs and specifications;
 - If the equipment sold is standard equipment, please tell us how you evaluate the equipment prior to delivery to the customer to ensure that it will perform the same in the customer's environment as it does in your factory;
 - Please explain the circumstances (if any) under which customers are permitted to return the equipment;
 - Explain whether installation for Equipment Sales and installation and commissioning for Factory Sales could be performed by the customer or a third party; and
 - It appears that for Factory Sales, there are significant customer acceptance criteria that cannot be effectively tested before delivery or installation at the customer's site. Please tell us how you considered Question 2 of SAB Topic 13A.3.b in determining that it was appropriate to recognize revenue from the equipment component of Factory Sales prior to completion of installation and commissioning.

* * * *

Please respond to these comments within 10 business days. Please provide us with a response letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please furnish your response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

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If you have any questions regarding these comments, please direct them to Lisa Haynes, Staff Accountant, at (202) 551-3424 or, in her absence, to Jeanne Baker, Assistant Chief Accountant, at (202) 551-3691.

Sincerely,

Rufus Decker
Accounting Branch Chief