



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

January 4, 2010

Ms. Amy Yi Zhang
Chief Financial Officer
Suntech Power Holdings Co., Ltd.
R&D Mansion, 9 Xinhua Road
New District, Wuxi
Jiangsu Province 214028
People's Republic of China

Re: Suntech Power Holdings Co., Ltd.
Form 20-F for the Fiscal Year Ended December 31, 2008
Filed May 8, 2009
File No. 001-32689

Dear Ms. Zhang:

We have reviewed your response dated December 4, 2009 and have the following additional comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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.

Form 20-F as of December 31, 2008

Item 5. Operating and Financial Review and Prospects, page 48

Critical Accounting Policies, page 58

– Valuation of Inventories, page 61

1. We note your response to prior comment 8. You state that in evaluating short-term and long-term purchase commitment inventory for impairment, you utilize the methodology described in your response to prior comment 6. The methodology described in prior comment 6 indicated estimates of sales prices are based on estimated prices for the following quarter and estimates of future demand are based on backlog sales orders. Given the size of the commitments, it appears that inventory to be purchased under these commitments will be sold in periods beyond the following quarter. Further, it appears that the quantity of inventory under “take or pay” purchase commitments would exceed the current backlog of sales orders. Please further explain to us and revise future filings to more clearly explain how you applied the methodology outlined in the response to prior comment 6 in evaluating the recoverability of your short-term and long-term purchase commitments. As applicable, explain why you concluded that the impairment evaluation on these commitments should consider only the estimated sales prices for the following quarter and estimated future demand based on current backlog sales orders.

Consolidated Financial Statements, page F-1

Note 11. Investments in Affiliates, page F-25

2. We note your response to prior comment 15. With respect to the operations of Global Solar Fund, please tell us and revise future filings to summarize the investments made by Global Solar Fund by discussing the number of investee companies of GSF and the percentage ownership of these entities held by GSF. In addition, as it relates to GSF’s investments, tell us and revise future filings to disclose any funding commitments GSF has to any of its investee companies.
3. You state that you have concluded that the Global Solar Fund does have sufficient equity at risk to finance its operation and lacks the characteristic described in paragraph 810-10-15-14(a) of the FASB Accounting Standards Codification. However, we note in your response to prior comment 16 that GSF is currently in the process of obtaining a facility agreement from a group of lenders and the funds from this agreement will be loaned to investee companies. Explain how you considered the facility agreement in your evaluation of whether there was sufficient equity at risk. Refer to paragraph 810-10-25-45 of the FASB Accounting Standards Codification.

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4. We note your response to prior comment 16. Please provide us with an update regarding the status of your collection of the outstanding receivables from investee companies of GSF.

Note 15. Long-Term Loans to Suppliers, page F-28

5. We note your response to prior comment 20. You state that you extend the loan to MEMC annually. Please tell us and revise this note to clarify how the amount of the annual loan is determined.
6. Further to the above, please clarify for us whether the amounts due from MEMC are required to be paid in cash or if there are other settlement alternatives available to MEMC.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Lynn Dicker, Staff Accountant, at (202) 551-3616 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief