



DIVISION OF
CORPORATION FINANCE

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

March 7, 2011

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, 2009
Filed May 11, 2010
File No. 001-32689

Dear Ms. Zhang:

We have reviewed your response letter dated February 16, 2011 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 within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 20-F as of December 31, 2009

Note 12. Investments in Affiliates, page F-29

1. With respect to the previous agreement with GDI Partners Consulting Limited dated March 27, 2007, please tell us the total MWs of Suntech solar PV modules sold by the Agent during the initial term of the agreement. Please also tell us Suntech's market share of the Spanish Solar PV Module market at the end of the initial term. Tell us how, if at all, the sales of solar PV modules sold by the agent or your market share of the Spanish Solar PV Module market impacted the term and termination provisions of the agreements.

Form 6-K filed December 6, 2010

Exhibit 99.1

2. We note your statement that “GSF is in the process of constructing 140MW of projects, of which at least 80MW are expected to be completed in the fourth quarter of 2010 and the remainder will be completed in 2011. As a result [you] expect that the fair value of those projects will increase significantly and [you] will recognize a related gain in earnings of affiliates in the fourth quarter of 2010 and in 2011.” Please address the following:
- Clarify for us your reference here that *GSF* is in the process of constructing 140MW of projects. Reconcile this statement with your prior disclosures that the projects are being constructed by the investee companies of GSF. To the extent that you are selling any products directly to GSF, tell us how you are accounting for such sales.
 - In this regard, please revise future filings to clearly and consistently describe the parties to transactions. For example, if a transaction is with an investee company of GSF, you should disclose that fact rather than referring to it as a transaction with GSF.
 - Revise future filings to explain to investors in greater detail why the value of GSF, your equity method investee, significantly increases upon completion of PV projects by the GSF investee companies. Clarify whether GSF or its investee companies have signed commitments for purchases of the generated electricity. Provide us with a sample of your proposed revised disclosure to be included in future filings.
 - In light of the potentially significant impact of changes in GSF’s valuation of its investee companies on your financial statements, revise future filings to disclose the significant estimates and assumptions and the methods used to value GSF’s investments in its investee companies.

Exhibit 99.2

3. We note from page 119 that you are recognizing gains on changes in the fair value of investee companies of GSF. In light of the complexities in the structure and accounting for the investment in GSF and GSF’s investments in the investee companies, please revise to more clearly explain how you account for your investment in GSF. Separately, explain how GSF accounts for its investments in investee companies. Explain to the readers how changes to the fair value of the investee companies impact the results of GSF, and further how those changes impact your financial statements. For example, clarify in future filings that in accordance with paragraph 323-10-35-4 of the FASB Accounting Standards Codification you are recognizing your share of the earnings or

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losses of your equity investment in GSF and that since GSF is an investment company, its net income or loss is affected by the changes in the fair value of its investee companies.

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

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief