



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

October 21, 2009

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 filing and have the following 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

A. Operating Results, page 48

1. You state on page 55 that selling expenses include provisions for warranties. Please explain to us why you concluded that warranty costs are not a direct cost of revenue that should be included in cost of sales.
2. Further to the above, you state that you maintain product quality insurance with a liability cap of approximately \$4.4 million. Please explain in greater detail the nature of this liability cap including how it relates to your warranty provision. For example, clarify if this cap is on a per-incident basis.

Critical Accounting Policies, page 58

– Warranty, page 58

3. We note from page 16 that you accrue 0.3% of your MSK PV module revenues and 1.0% of your other PV module revenues as warranty costs. We note from your disclosure here that you accrue the estimated costs of these warranties based on your assessment of competitors' accrual history while incorporating some estimates of failure rates through your quality review staff. Please address the following:
 - Tell us and revise future filings to disclose how you are able to estimate warranty costs for the 10, 12 and/or 25-year warranties against specified declines in the initial minimum power generation capacity at the time of delivery considering your limited operating history and limited warranty claim period.
 - Tell us and revise your footnotes and critical accounting policies in future filings to disclose how you determined that your warranty accruals are sufficient to cover future warranty claims and clarify each of the factors you considered in your analysis. Expand the disclosure to clarify what you mean by your reference to "estimates of failure rates through your quality review staff." Discuss what testing is performed and clarify the significance of these estimates on your warranty cost accrual estimates.
 - Clarify why you believe it is appropriate to base your estimates of warranty costs on an assessment of competitors' accrual history. Please specifically discuss how you considered the differences in your products versus those of your competitors. Finally, also discuss how you considered the fact that many of your competitors also base their estimates of warranty costs on an assessment of competitors' accrual history.

– Valuation of Derivative Financial Instruments, page 60

4. We note your disclosure that the selection of valuation models and the inputs used in them require the exercise of significant judgment. Please expand your disclosure in future filings to discuss the specific judgments involved in the selection of valuation models for your derivative financial instruments and the inputs used in the models. For example, discuss the specific valuation models you chose and discuss why you believe these models produce the best estimates of the fair values of the derivative financial instruments. If material, discuss how the results might have differed if you had used different models or different key assumptions.

– Fair Value Control Processes, page 60

5. Please revise your disclosure here in future filings to discuss how the fair value control process impacts your financial statements. For example, discuss the areas where you utilize pricing information. In addition, also discuss the factors that caused management to conclude that this represents a critical accounting estimate. Refer to the guidance in Section V of SEC Release 33-8350.

– Valuation of Inventories, page 61

6. We note your disclosure here that the determination of the value of excess and slow moving inventory is based upon assumptions of future demands and market conditions. Separately, you state that you evaluate quantities and value of your inventories and record write-downs for a decline in net realizable value, which appears to be based on the estimates of future demands and market conditions. Finally, you state that in estimating obsolescence, you utilize your backlog information and project future demand. Please tell us and expand your disclosures in future filings to explain how you develop your assumptions of “future demands and market conditions” and how you “project future demand” for purposes of your inventory valuation analysis. For example, discuss how you arrived at your estimates for future demands, how accurate your estimates of future demand have been in the past and how much the estimates of future demand have changed in the past.
7. You state that management monitors the changes in the purchase price paid for polysilicon, including prepayments to suppliers. Revise this disclosure in future filings to discuss how changes in the prices of polysilicon can impact the valuation of your inventories.
8. Further to the above, we note that you recorded a lower of cost or market provision for inventories of \$50.1 million and a charge of \$7.0 million for purchase commitments during 2008. With respect to these charges, please tell us and revise future filings to explain in detail how you determined the amount of the write-off, including the significant estimates and assumptions. Please also address the following:

- With reference to your disclosure on page F-45 of “take-or-pay” obligations and other long-term supply agreements totaling \$21,448.2 million, please tell us and revise future filings to disclose how these agreements impacted the amount of your inventory provisions as of December 31, 2008.
- Clarify for us whether you have evaluated all of the “take-or-pay” commitments for possible impairment in accordance with paragraph 330-10-35-17 of the FASB Accounting Standards Codification. Discuss whether or not your current sales projections support the recovery of these commitments.
- With reference to your disclosures throughout the filing that raw material prices have fallen significantly and that your ability to adjust your raw materials costs may be limited as a result of entering into multi-year supply agreements, please tell us and revise future filings to disclose how these factors impacted the amount of your inventory provisions as of December 31, 2008. Also discuss how these trends could impact your future results of operations.

B. Liquidity and Capital Resources, page 69

9. We note your disclosures regarding your outstanding short-term bank borrowings with terms of one year. You state that you “have historically been able to obtain extensions of some of the facilities shortly before they mature.” Further, you state that you plan to repay these short-term bank borrowings with cash generated by your operating activities in the event you are unable to obtain extensions or alternative funding. However, we note that your cash flows from operating activities have been negative for each of the past three years. Please revise this disclosure in future filings to provide additional discussion regarding your ability to repay short-term bank borrowings should you not obtain the extensions or alternative funding. Discuss management’s plans in the event that you have negative operating cash flows. In addition, discuss how management expects the current credit environment to impact its ability to obtain extensions or alternative financing.
10. We note the significant amounts outstanding on your 2012 convertible notes. We further note that the holders of these notes have the right to require you to repurchase all or a portion of their notes on February 15, 2010. Please revise future filings to discuss management’s plans to address any potential exercise of this call option.
11. We note your disclosures that you increased your provision for doubtful accounts from \$1.4 million in 2007 to \$15.8 million in 2008. We note that you have extended credit to many new and existing customers and/or provided them with improved credit terms, including extending the time period before payments are due. Please tell us and revise future filings to discuss how these revised credit and payment terms have impacted your revenue recognition. Specifically, discuss how the changes have impacted your ability to estimate the provision for doubtful accounts and your ability to determine that the sales

price at the time of sale is fixed and determinable and that collectability is reasonably assured. Refer to SAB Topic 13.

Item 7. Major Shareholders and Related Party Transactions, page 86

12. Please disclose the nature and extent of Dr. Shi's investment in GSF. Refer to Item 7.B of Form 20-F.

Consolidated Financial Statements, page F-1

13. Please tell us and revise future filings as appropriate to clarify the nature of the "other receivables" reflected on your balance sheet.

Note 4. Business Acquisitions, page F-21

14. We note the allocation of amounts to "trade names" for each of the MSK Corporation and KSL-Kuttler Automation Systems GmbH acquisitions in 2008. We further note from your disclosure on page F-13 that you have determined your trade names have an indefinite useful life. Please provide us with your analysis discussing why you believe each of the trade names acquired in these transactions has an indefinite useful life.

Note 11. Investments in Affiliates, page F-25

15. We note that in June 2008 you committed to acquire 86% of Global Solar Fund for total cash consideration of \$364.6 million and that you have a 50% voting interest in Global Solar Fund. In addition, you disclose on page 86 that two of the three managers of Global Solar Fund are representatives of Suntech and that the favorable vote of at least one of your representatives is required for any investment/divestment decision. You state that you account for this investment using the equity method of accounting due to your "limited partner position." Please provide us with additional analysis that supports your conclusion that you should account for this investment using the equity method rather than consolidating it into your financial statements. Discuss your consideration of paragraphs 810-20 and 810-10-15 of the FASB Accounting Standards Codification as well as any other relevant accounting literature.
16. As a related matter, we note that during the six months ended June 30, 2009 sales to investee companies of Global Solar Fund were \$115.8 million. You state that sales to these related parties were conducted on terms comparable to those with unrelated parties. However, we note that outstanding accounts receivable from Global Solar Fund was \$108.4 million as of June 30, 2009 and that you expect to collect the remaining amounts due "by the end of 2009." Based on these factors, it appears that the payment cycles on your sales to investee companies of Global Solar Fund are significantly longer than on your sales to unrelated parties. Please discuss how the extended payment cycles from these related parties have impacted your revenue recognition policies.

17. We note your disclosures here regarding your investments in Gemini Solar Development and Gemini Fund. Please address the following:
- In light of your 50% ownership percentage, please provide us with your analysis that supports your conclusion that this investment should be accounted for using the equity method rather than consolidated in your financial statements. In this regard, we note from a review of Gemini Solar Development's website and related press articles that a representative from Suntech serves as the President of Gemini Solar Development.
 - We note your disclosures on page 34 regarding your intent to develop, finance, own and operate large-scale PV projects in the United States by way of your investment in Gemini Solar Development. With a view towards disclosure in future filings, tell us how your ongoing participation in developing, financing, owning and operating the projects may impact your revenue recognition relating to sales to this joint venture.
18. In light of the significant revenue and accounts receivable in 2009 relating to investee companies please tell us and revise future filings to disclose any significant revenue and accounts receivable balances attributable to any individual investee companies. Refer to Rule 4-08(k) of Regulation S-X.

Note 12. Long-term Investments, page F-26

19. We note here that you recorded a \$60 million impairment on your investment in Nitol Solar Limited and from page 66 a \$13.8 million impairment in Hoku Scientific and that you believe that both impairments are other-than-temporary. Please tell us and revise your future filings to disclose in more detail the facts and circumstances that led you to determine that your investments were other-than-temporarily impaired.

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

20. We note your disclosures here and on page 70 regarding the loans to MEMC in connection with the 10-year supply agreement. While we note you disclose that you have committed to loan \$625 million to MEMC, it appears that you have only loaned a portion of this amount. Tell us and revise your disclosures to discuss when you expect to disperse the remaining amounts due to be loaned to MEMC under this agreement. Expand your discussion in the liquidity and capital resources section of MD&A to discuss the impact that this commitment to lend additional money to the supplier could have on your liquidity situation.

Suntech Power Holdings Co., Ltd.
Ms. Amy Yi Zhang
October 21, 2009
Page 7

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.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

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. Please contact Timothy Buchmiller, Reviewing Attorney, at (202) 551-3635 if you have questions on any other comments. In this regard, do not hesitate to contact me or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief