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PUBLIC VERSION

January 29, 2014

The Honorable Lisa R. Barton
Acting Secretary
U.S. International Trade Commission
500 E Street, S.W., Room 112
Washington, DC 20436

Investigation Nos. 701-TA-511 and
731-TA-1246-47
(Preliminary Investigation)
Number of Pages: 436

PROPRIETARY INFORMATION
HAS BEEN REMOVED
from pages 16-19, 29, 37-41, 44-45 and from exhibits 1, 3, 5-8, and 32

Re: Certain Crystalline Silicon Photovoltaic Products from China and Taiwan: Post-Conference Brief of Chinese Chamber of Commerce for Import and Export of Machinery and Electronics Products

Dear Madame Secretary:

On behalf of the China Chamber of Commerce for Import and Export of Machinery and Electronic Products ("CCCME"), and its members, interested parties in the above-captioned investigations, as defined under 19 U.S.C. § 1677(9)(A), we hereby electronically submit the confidential version of CCCME's Post-Conference Brief. We also will file eight true paper copies of this submission with the Commission today.

We will electronically submit the public version of CCCME's Post-Conference Brief on January 29, 2014, one day after the date of filing. We also will file four true paper copies of the public version with the Commission on that day.

Pursuant to section 201.6 of the Commission's rules, CCCME requests business proprietary treatment for certain information designated by brackets in the attached submission. This information includes:

(i) detailed information regarding the customer relationships, sales, pricing, marketing strategies and pricing of CCCME's members and their customers;

(ii) reports obtained from subscription services that may not be generally disseminated under the terms of those services;

(iii) the identity of parties from whom proprietary information was obtained; and

(iv) information submitted to the Commission by other parties, who have requested proprietary treatment therefor.

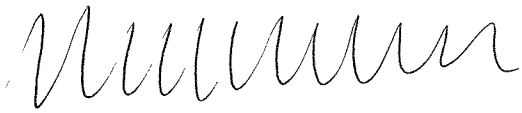
Disclosure of this information, which is not otherwise publicly available, would cause substantial harm to the competitive positions of CCCME's members and other implicated companies and would impair the ability of the Commission to obtain information in the future necessary to fulfill its statutory functions.

The required certification that substantially identical information is not available to the public is set forth as an attachment to this letter, in accordance with section 201.6(b)(3)(iii) of the Commission's rules. Also attached are the required certifications regarding the completeness and accuracy of the information contained in the brief.

Copies of this submission are being served on the parties identified in the attached certificate of service.

Please contact the undersigned if you have any questions regarding this submission.

Respectfully submitted,



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Counsel to the China Chamber of Commerce for Import and Export of Machinery and Electronic Products, and its member companies

CERTIFICATION

I, Huiqing Chen, Director of the Legal Service Department, currently employed by the China Chamber of Commerce for Import and Export of Machinery and Electronic Products (CCCME), certify that (1) I have read the attached submission (except for portions containing business proprietary information of other companies), and (2) the information contained in this submission (to the extent I have had access) is, to the best of my knowledge, complete and accurate.

Dated: January 28, 2014

Chen Huiqing

Huiqing Chen
Director of Legal Service Department
China Chamber of Commerce for Import and Export of Machinery and Electronic Products

CERTIFICATION

I, Robert R. Petrina, Managing Director, currently employed by Yingli Green Energy Americas, certify that (1) I have read the attached submission (except for portions containing business proprietary information of other companies), and (2) the information contained in this submission (to the extent I have had access) is, to the best of my knowledge, complete and accurate.

Dated: January 28, 2014

Robert R. Petrina
Managing Director
Yingli Green Energy Americas

DC1 4686010v.1

CERTIFICATION

I, Allen Wang, Director of Legal Affairs, currently employed by Canadian Solar Inc., certify that (1) I have read the attached submission (except for portions containing business proprietary information of other companies), and (2) the information contained in this submission (to the extent I have had access) is, to the best of my knowledge, complete and accurate.

Dated: January 28, 2014

Allen Wang
Director of Legal Affairs
Canadian Solar Inc.

DC1 4686011v.1

CERTIFICATION

I, Neil R. Ellis, of Sidley Austin LLP, counsel to the China Chamber of Commerce for Import and Export of Machinery and Electronic Products, certify pursuant to section 207.3(a) of the Commission's rules that, based on the information available to me, I have no reason to believe that this submission contains any misrepresentation or omission of fact.

I also certify, pursuant to section 201.6(b)(3)(iii) of the Commission's rules, that information substantially identical to the information for which we are requesting proprietary treatment in the attached submission is not otherwise available for public summary.

Pursuant to 28 U.S.C. § 1746, I further declare under penalty of perjury that the foregoing statements are true and correct.

Dated: January 28, 2014

Neil R. Ellis

CERTIFICATE OF SERVICE

I hereby certify that copies of the attached proprietary submission have been served by courier on January 28, 2014, addressed to the following parties, and that copies of the public and final proprietary versions of the attached submission will be served by courier on January 29, 2014, addressed to the following parties:

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Further, I hereby certify that copies of the public version of the attached submission will be served by courier on January 29, 2014, addressed to the following parties:

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PUBLIC VERSION

BEFORE THE
UNITED STATES
INTERNATIONAL TRADE COMMISSION

In the Matter of:	)	
	)	Investigation Nos.
CERTAIN CRYSTALLINE SILICON	)	701-TA-511 and 731-TA-1246-1247
PHOTOVOLTAIC PRODUCTS	)	(Preliminary)
FROM CHINA AND TAIWAN	)	

PROPRIETARY INFORMATION HAS BEEN REMOVED from pages 16-19, 29, 37-41, 44-45 and from exhibits 1, 3, 5-8, and 32

POST-CONFERENCE BRIEF OF CHINA CHAMBER OF COMMERCE FOR IMPORT AND EXPORT OF MACHINERY AND ELECTRONIC PRODUCTS

VOLUME I OF II

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January 29, 2014

PUBLIC VERSION

TABLE OF CONTENTS

Page No.

Table of Authorities iv

I. Introduction 2

II. Negligibility: The Proper Application of U.S. Rules of Origin Indicates that There Are No Subject Imports from China Within the Scope of These Investigations 4

III. Questionnaire Data: The Commission Has Obtained Data That Cannot Support Affirmative Preliminary Determinations 8

A. Questionnaire Response Data Are Fundamentally Flawed Because of Ambiguities in the Definition of CSPV Products and Inconsistency of that Definition with the Proper Application of U.S. Rules of Origin 9

B. The Questionnaires Have Elicited Data on Products Covered by the Prior Investigations, Which Cannot Serve as a Basis for the Commission's Determinations in these Investigations 11

C. The Questionnaires' Pricing Product Data Are Flawed Because They Do Not Distinguish CSPV Products By Relevant Technical Characteristics or By Market Segment 12

D. The Questionnaires Ask Questions That Shed Little Light on Whether Any Injury to the Domestic Industry May Be "By Reason Of" Subject Imports 12

IV. Domestic Like Product: The Commission Should Find the Domestic Like Product to Be Solar Cells and Modules, Whether Made from CSPV or Thin-Film Technologies 14

V. Conditions of Competition 18

A. Demand Side Factors 18

1. Demand for Solar Modules Has Increased Dramatically Over the POI, Particularly in the Utility Sector 18

2. Demand for Solar Modules Is Highly Price Elastic, and Is Derived from Demand for Solar Electricity 19

3. The Impetus to Achieve "Grid Parity" with Conventional Energy Sources Drives CSPV Product Sales and Prices 20

a. In the Utility Sector, the Expected Wholesale Price of Electricity During Times of Peak Demand, Which Is

Determined Principally by the Cost of Natural Gas, Drives CSPV Product Sales and Prices 21

b. In the Commercial and Residential Sectors, Expected Retail Electricity Prices Offered by Local Utilities, Which Are Also Impacted by the Cost of Conventional Energy, Drive CSPV Product Sales and Prices 23

4. Competition with Thin-Film Products Impacts CSPV Product Sales and Prices 23

5. The Decline in Government Incentives Impacts CSPV Product Sales and Prices 24

B. Supply Side Factors 26

1. CSPV Product Prices Derive from the Cost of Polysilicon 26

2. CSPV Product Prices Are Differentiated By Several Technical Characteristics, Including Cell Efficiency, Cell Count, and Voltage 27

3. CSPV Product Prices Are Differentiated Among the Residential, Commercial, and Utility Sectors 29

VI. Material Injury and Causation: The Domestic Industry Is Not Materially Injured By Reason of Subject Imports 30

A. Volume: There Is No Indication that the Volume of Subject Imports, or Any Increase in Volume, Is Significant 32

B. Price: There Are No Negative Price Effects from Subject Imports 33

1. Underselling 34

2. Price Depression and Suppression 35

3. Lost Revenue and Lost Sales 37

C. Impact: There Is No Indication that Subject Imports Have Had a Negative Impact on the Domestic Industry 38

D. Causation: Any Material Injury Suffered By the Domestic Industry Is Not By Reason of Subject Imports, But Rather By Reason of Other Factors 39

1. The Confluence of the Conditions of Competition Discussed Above Demonstrates that Any Material Injury Is Not By Reason of Subject Imports 40

2. The Imposition of AD/CVD Orders Would Simply Result in Increased Imports of CSPV Products From Non-Subject Countries, Not Increased Sales by the Domestic Industry 42

3. SolarWorld's Business Decisions Not to Compete at the Forefront of Technology in Each Market Segment Break the Causal Link Between Subject Imports and Injury to the Domestic Industry 43

4. The Domestic Industry Does Not Have Sufficient Capacity to Satisfy Domestic Demand 45

VII. Threat of Material Injury: Subject Imports Do Not Threaten the Domestic Industry With Material Injury 46

A. Threat Factor I: Neither the Type of Alleged Subsidies Nor their Value Provide a Basis for a Finding of Threat 46

B. Threat Factor II: Demand Growth in Other Markets Is Sufficient to Absorb Chinese Production Capacity of Subject Merchandise 47

C. Threat Factor III: The Volume of Subject Imports Increased Due to a Rapidly Expanding Market 48

D. Threat Factor IV: Prices of Subject Imports Are Unlikely to Depress or Suppress Domestic Prices 49

E. Threat Factor V: Any Increase in Inventories of Subject Merchandise Is Due to a Rapidly Expanding Market 49

F. Threat Factor VI: There Is No Potential For Product-Shifting 49

VIII. Conclusion 50

First Solar Exhibit 2010, Page 12 of 223
JinkoSolar v. First Solar - IPR2025-01130

TABLE OF AUTHORITIES

Page No.

Cases

Altx, Inc. v. United States, 26 CIT 709 (2002) 32
American Lamb Co. v. United States, 785 F.2d 994 (Fed. Cir. 1986) 3, 9, 30
Bratsk Aluminium Smelter v. United States, 444 F.3d 1369 (Fed. Cir. 2006) 31
Changzhou Trina Solar Energy Co., Ltd. v. United States, Court No. 13-00014 2
Gerald Metals, Inc. v. United States, 132 F.3d 716 (Fed. Cir. 1997) 30, 31
Metallverken Nederland B.V. v. United States, 744 F. Supp. 281 (Ct. Int'l Trade 1990) 46
Mittal Steel Point Lisas Ltd. v. United States, 542 F.3d 867 (Fed. Cir. 2008) 30, 31, 39
Nippon Steel Corp. v. United States, 182 F. Supp. 2d 1330 (Ct. Int'l Trade 2001) 32
Nippon Steel Group v. Int'l Trade Comm'n, 345 F.3d 1379 (Fed. Cir. 2003) 40
Torrington Co. v. United States, 747 F. Supp. 744 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) 15

Statutes

19 U.S.C. § 1671(a) 2
19 U.S.C. § 1671b(a) 3, 30, 39
19 U.S.C. § 1671b(a)(1) 7, 8
19 U.S.C. § 1673 2
19 U.S.C. § 1673b(a) 46
19 U.S.C. § 1673b(a)(1) 7, 8
19 U.S.C. § 1677(4)(A) 18
19 U.S.C. § 1677(7)(B) 30
19 U.S.C. § 1677(7)(B)(i)(III) 38
19 U.S.C. § 1677(7)(C)(i) 32
19 U.S.C. § 1677(7)(C)(ii) 34, 35
19 U.S.C. § 1677(7)(C)(ii)(I) 12
19 U.S.C. § 1677(7)(C)(iii) 18, 38
19 U.S.C. §1677(7)(F)(ii) 46
19 U.S.C. § 1677(10) 14
19 U.S.C. § 1677(24)(A) 8

Administrative Determinations

Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia, Investigation Nos. 701-TA-470-471 and 731-TA-1169-1170 (Final), USITC Pub. No. 4192 (November 2010) 14, 15
Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan: Initiation of Antidumping Duty Investigations (dated January 22, 2014) 7
Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China: Initiation of Countervailing Duty Investigation (dated January 22, 2014) 7

Certain Frozen Fish Fillets From Vietnam, Inv. No. 731-TA-1012 (Preliminary), USITC Pub. No. 3533 (August 2002). 15
Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe from China, Inv. Nos. 701-TA-469 and 731-TA-1168 (Final), USITC Pub. No. 4190 (November 2010) 14, 15
Crystalline Silicon Photovoltaic Cells and Modules From China, Inv. Nos. 701-TA-481 and 731-TA-1190 (Final), USITC Pub. No. 4360 (November 2012) ..... *passim*
Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 and 731-TA-1190 (Preliminary), USITC Pub. No. 4295 (December 2011) 15
Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Countervailing Duty Order, 77 Fed. Reg. 73017 (December 7, 2012) 47
Drill Pipe and Drill Collars from China, Inv. Nos. 701-TA-474 and 731-TA-1176 (Preliminary), USITC Pub. 4127 (March 2010) 14
Erasable Programmable Read Only Memories (EPROMs) From Japan; Final Determination of Sales at Less than Fair Value, 51 Fed. Reg. 39680 (October 30, 1986) 6
Notice of Initiation of Countervailing Duty Investigation: Dynamic Random Access Memory Semiconductors from the Republic of Korea, 67 Fed. Reg. 70927 (November 27, 2002) 6
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Other Authorities

Appellate Body Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector / Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS412/AB/R / WT/DS426/AB/R, circulated May 6, 2013 48

First Solar Exhibit 2010, Page 14 of 223
JinkoSolar v. First Solar - IPR2025-01130

PUBLIC VERSION

BEFORE THE
UNITED STATES
INTERNATIONAL TRADE COMMISSION

In the Matter of: CERTAIN CRYSTALLINE SILICON PHOTOVOLTAIC PRODUCTS FROM CHINA AND TAIWAN	)))))))	Investigation Nos. 701-TA-511 and 731-TA-1246-1247 (Preliminary)

POST-CONFERENCE BRIEF OF CHINA CHAMBER OF COMMERCE FOR IMPORT AND EXPORT OF MACHINERY AND ELECTRONIC PRODUCTS

We {the project developer} tell him {the module manufacturer} the price that we need to have in order to be able to build a solar farm. If we can't make our pro formas work, can't get the financial modeling right, and that includes our biggest cost factor, which are the modules, if we can't get that financial pro forma correct, we simply can't do the project.

– John Morrison, Strata Solar[1]

The China Chamber of Commerce for Import and Export of Machinery and Electronic Products ("CCCME") and its members, interested parties in the above-captioned investigations, herewith submit this post-conference brief.[2] For the reasons offered at the Staff Conference held on January 22, 2014, and described more fully below, CCCME submits: (i) no imports from China are properly within the scope of these investigations, and therefore the Commission must immediately terminate these investigations with respect to China; and (ii) the record before the Commission provides no reasonable indication that imports of certain crystalline silicon photovoltaic ("CSPV") products from China and Taiwan ("subject merchandise" or "subject

[1] Transcript of the USITC Staff Conference (January 22, 2014) ("Tr.") 158:23-159:4 (Mr. Morrison).
[2] Responses to questions from the Staff to the Respondents' and Petitioners' panels during the Staff Conference are attached hereto at Exhibits 1 and 2, respectively. CCCME's slide presentation at the Staff Conference, with accompanying source materials, is attached hereto at Exhibit 3.

imports") cause or threaten to cause material injury to the domestic industry, and therefore the Commission must reach negative preliminary determinations in these investigations.

I. Introduction

At the outset, CCCME stresses four fundamental and overarching legal points. First, this is not a run-of-the-mill injury investigation as usually comes before the Commission, where simply applying the Commission's typical framework for analyzing material injury and non-attribution factors can support a finding that material injury to the domestic industry is "by reason of" subject imports. Rather, as will be discussed more fully below, given the relevant conditions of competition, in order to establish causation in this case properly, the Commission must consider the *hypothetical* question of whether the domestic industry would have been better off during the period of investigation ("POI") in the absence of (i.e., "but for") subject imports. Without answering that question, the Commission cannot logically establish causation here.[3]

Second, a fundamental point of U.S. law is that it does not prohibit dumping or subsidization per se, but rather only dumped or subsidized imports that cause or threaten to cause material injury to the domestic industry. In other words, for antidumping or countervailing duties ("AD/CVD") to be imposed, the Department of Commerce ("Department") must find dumping or subsidization *and* the Commission must find that a U.S. industry is materially injured or threatened with material injury "*by reason of*" those dumped or subsidized imports.[4] Therefore, the remark by Mr. Brinser of SolarWorld Industries America, Inc. ("SolarWorld" or "Petitioner") that dumping or subsidization "is not justified in any market with any product for

[3] The Commission failed to address this necessary question in the prior investigations concerning CSPV cells and modules from China, and that issue is on appeal before the U.S. Court of International Trade in Changzhou Trina Solar Energy Co., Ltd. et al v. United States, Court No. 13-00014.
[4] 19 U.S.C. §§ 1671(a), 1673 (emphasis added).

any reason"[5] is legally incorrect and irrelevant. Even if the subject imports were dumped or subsidized (an allegation that CCCME rejects), that fact by itself would not justify affirmative injury determinations – or the Commission would have no role in trade remedies proceedings. Rather, for the Commission to vote affirmative, it must find material injury or threat of material injury "by reason of" the dumped or subsidized subject imports, and here, as encapsulated by the epigraph above, the applicable conditions of competition, including "the impetus to grid parity,"[6] indicate that such a causal nexus cannot exist.

Third, in a preliminary investigation, the Commission determines whether, based upon the record evidence available at the time, there is a "reasonable indication" that a domestic industry is materially injured or threatened with material injury by reason of the allegedly unfairly traded imports.[7] In this regard, the Federal Circuit has held that in order to reach an affirmative preliminary determination, the Commission must find that the available record evidence shows a "reasonable indication of injury," and not a mere "possibility" of injury:

> {The Commission} would not be able to fulfill … the "limited purpose" of weeding out "those cases which were clearly without merit" if it must proceed to a final determination whenever it finds a mere "possibility" of injury in the petition and accompanying information. Virtually every petitioner can be expected to submit allegations and information sufficient to show some "possibility" of injury.[8]

The Federal Circuit has also held that the Commission is charged with determining whether there is "a reasonable indication of injury, *not a reasonable indication of need for further inquiry*."[9] Here, the record as it stands does not establish a "reasonable indication of injury," because it

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[5] Tr. 256:20-21 (Mr. Brinser).
[6] Crystalline Silicon Photovoltaic Cells and Modules From China, Inv. Nos. 701-TA-481 and 731-TA-1190 (Final), USITC Pub. No. 4360 (November 2012) ("CSPV Cells and Modules ITC Final") at 34.
[7] 19 U.S.C. §§ 1671b(a), 1673b(a).
[8] American Lamb Co. v. United States, 785 F.2d 994, 1002 (Fed. Cir. 1986). See also id. at 1001-1004.
[9] Id. at 1001 (emphasis added).

shows that any injury suffered by the domestic industry was caused by factors other than subject imports, and the Commission may not move to a final phase simply to obtain better information.

Finally, despite Petitioner's focus on the Commission's determinations from its previous investigations concerning CSPV cells and modules from China,[10] the Commission must make its determinations here based on the record of the *current investigations*, and based on the *current POI*, for the obvious reason that the subject merchandise in the prior case was entirely different, and indeed even explicitly excluded from the current scope.[11] Moreover, as the discussion below will reveal, there are important differences in the prevalent market conditions now versus then (despite the partial overlap in POIs), including (but not limited to): (i) the CSPV and thin-film technologies have become increasingly interchangeable; (ii) the utility segment comprises a much larger share of the market; (iii) government incentives have undeniably declined; (iv) the link between polysilicon prices and CSPV product prices has become more evident; (v) non-subject imports appear to be more substantial and growing; and (vi) global supply and demand for CSPV products have been converging.

II. Negligibility: The Proper Application of U.S. Rules of Origin Indicates that There Are No Subject Imports from China Within the Scope of These Investigations

During the Conference, the Staff rightly expressed puzzlement at Petitioner's proposed scope for these investigations.[12] While Petitioner's intention may be to close an alleged "loophole" in the existing AD/CVD orders,[13] it cannot do so in a manner contrary to U.S. law.

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[10] See Tr. 19:9-25:8 (Mr. Brightbill), 267:15-268:11 (Mr. Brightbill).
[11] See Tr. 274:4-17 (Mr. Grace).
[12] See, e.g., Tr. 36:15-17 (Mr. Cassise) ("{W}hat exactly is the scope of the investigation we're dealing with here{?}").
[13] Tr. 39:11 (Mr. Brightbill). As explained at the Conference, use of the term "loophole" is "unbecoming," given that Petitioner's previous petitions addressed "cells from China whether or not incorporated into modules." Tr. 163:22-164:15 (Mr. Weiner).

The fact is, Petitioner's proposed scope is inconsistent with the application of proper, well-established U.S. rules of origin.

Petitioner defined the intended scope of these investigations in its petitions filed on December 31, 2013,[14] and then modified its intended scope on January 9, 2014, and January 13, 2014.[15] Petitioner's revised scope, in relevant part, now reads as follows:

> The merchandise covered by this investigation is crystalline silicon photovoltaic cells, and modules, laminates and/or panels consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including building integrated materials. For purposes of this investigation, subject merchandise also includes modules, laminates and/or panels assembled in the subject country consisting of crystalline silicon photovoltaic cells that are completed or partially manufactured within a customs territory other than that subject country, using ingots that are manufactured in the subject country, wafers that are manufactured in the subject country, or cells where the manufacturing process begins in the subject country and is completed in a non-subject country.
>
> ...
>
> ... Also excluded from the scope of this investigation are any products covered by the existing antidumping and countervailing duty orders on crystalline silicon photovoltaic cells, whether or not assembled into modules, from the People's Republic of China ....[16]

Petitioner has explained that the second sentence of the first paragraph of its proposed scope is intended to implement a so-called "two-out-of-three" rule, where a module is considered to be from a subject country if both (i) module assembly, and (ii) ingot production, wafer production,

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[14] Letter from Wiley Rein LLP to the Hon. Penny S. Pritzker and the Hon. Lisa R. Barton, DOC Case Nos. A-570-010, C-570-011, and A-583-853, and USITC Inv. Nos. 701-TA-511 and 731-TA-1246-1247 (Preliminary), dated December 31, 2013 ("Petitions").

[15] Letter from Wiley Rein LLP to the Hon. Penny S. Pritzker and the Hon. Lisa R. Barton, DOC Case Nos. A-570-010, C-570-011, and A-583-853, and USITC Inv. Nos. 701-TA-511 and 731-TA-1246-1247 (Preliminary), dated January 9, 2014 ("Supplement I"); Letter from Wiley Rein LLP to the Hon. Penny S. Pritzker and the Hon. Lisa R. Barton, DOC Case Nos. A-570-010, C-570-011, and A-583-853, and USITC Inv. Nos. 701-TA-511 and 731-TA-1246-1247 (Preliminary), dated January 13, 2014 ("Supplement II").

[16] Supplement II at 4.

or partial cell assembly, occur in the same subject country, even though (iii) the cell is completed or partially manufactured in some other country.[17]

However, as the Commission is aware, in the prior investigations concerning CSPV cells and modules from China, the Department found that "module assembly did not substantially transform the solar cell and thereby, the module's country of origin is the country of origin of the solar cell."[18] Specifically, the Department concluded that "where solar cell production occurs in a different country from solar module assembly, the country-of-origin of the solar modules/panels is the country in which the solar cell was produced."[19]

Moreover, application of the Department's standard substantial transformation analysis for determining country of origin[20] also indicates that the origin of wafers or ingots does not confer origin on a cell; rather, substantial transformation occurs in the cell production step, such that the country of cell production is properly the country of origin of the cell.[21] Even Petitioner would appear not to dispute this point, explaining that upon completion of wafer production:

> {A} wafer is no more capable of producing electricity than a sliver of river-rock. The wafer is the main building block of a PV cell, but so far its only notable

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[17] See Supplement II at 3; Tr. 39:13-19 (Mr. Brightbill).

[18] CSPV Cells and Modules ITC Final at I-8 n.14 (citing Scope Clarification: Antidumping and Countervailing Duty Investigations of Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China, Memorandum to Gary Taverman, Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, March 19, 2012 ("Scope Clarification Memo") (attached hereto at Exhibit 9)).

[19] Scope Clarification Memo at 8 (attached hereto at Exhibit 9).

[20] See id. at 5 ("In determining the country-of-origin of a product, the Department's practice has been to conduct a substantial transformation analysis. The CIT has upheld the Department's 'substantial transformation' analysis as a means to carry out its country-of-origin analysis.").

[21] In this regard, the Department has consistently concluded that the country of conversion of silicon wafers to memory microcircuits confers origin to the microcircuit. See Notice of Initiation of Countervailing Duty Investigation: Dynamic Random Access Memory Semiconductors from the Republic of Korea, 67 Fed. Reg. 70927, 70928 (November 27, 2002); Erasable Programmable Read Only Memories (EPROMs) From Japan; Final Determination of Sales at Less than Fair Value, 51 Fed. Reg. 39680, 39692 (October 30, 1986); Notice of Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination: Static Random Access Memory Semiconductors From Taiwan, 62 Fed. Reg. 51442, 51444 (October 1, 1997). U.S. Customs and Border Protection ("CBP") has also multiple times reached the same conclusion. See HQ 732357 (May 21, 1990); C.S.D. 80-227 (February 13, 1980); NY C80261 (October 17, 1997). These rulings by the Department and CBP are attached hereto at Exhibit 10, and discussed further in Exhibit 1 at Question 3.

> characteristics are its crystal structure and positive potential orientation. All of that changes in the third, multistep, cell-production phase of PV manufacturing.[22]

Thus, Petitioner's "two-out-of-three" rule is untenable, and must be stricken from the scope, for the same reasons that led to the Department's scope clarification in the prior investigations. Namely, "{a} product can only have one country-of-origin for AD/CVD purposes," and Petitioner's proposal "would either necessitate making inconsistent country-of-origin determinations for a single product, or require ignoring the country-of-origin when considering whether merchandise entering the Untied States is covered by the scope of these investigations."[23] Indeed, in initiating its investigations in the current case, the Department made clear that "when considering product coverage with respect to these investigations, the Department will be informed by the product coverage decisions that it made in the investigations that resulted in the existing orders on crystalline silicon photovoltaic cells, whether or not assembled into modules, from the PRC."[24]

While it is true that ultimately the proper scope of these investigations will be determined by the Department,[25] the Commission must consider the issue of the proper scope here because it is tasked in these preliminary investigations with determining whether subject imports from any of the countries under investigation are negligible,[26] meaning less than 3 percent of total imports

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[22] SolarWorld Production Brochure at 12 (attached to Petitions at Exhibit I-8); see also Petitions at 14-15 (noting the conversion of wafers to cells is the processing step that makes cells capable of generating electricity).
[23] Scope Clarification Memo at 8 (attached hereto at Exhibit 9).
[24] Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan: Initiation of Antidumping Duty Investigations (dated January 22, 2014) (not published in Federal Register as of January 27, 2014), at 3 (typewritten version); Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China: Initiation of Countervailing Duty Investigation (dated January 22, 2014) (not published in Federal Register as of January 27, 2014), at 3 (typewritten version). The Department's product coverage decisions from the prior investigations are discussed further in Exhibit 1 at Question 3.
[25] Tr. 168:18-25 (Mr. Cassise).
[26] 19 U.S.C. §§ 1671b(a)(1), 1673b(a)(1).

of the like product.[27] If subject imports from any given country are negligible, the Commission must immediately terminate its investigations with respect to that country.[28]

During the Conference, the Staff was rightly concerned that subject imports from China may be negligible.[29] In fact, when the proper rules of origin are applied, it should be evident that there are *no imports from China subject to these investigations*. This is demonstrated below, with reference to the 12 categories of U.S. imports identified by Mr. Cassise at the Conference.

Category	Proper Origin	Status in These Investigations
1) Cells from China	Chinese	Excluded (in scope of existing order)
2) Modules from China using Chinese cells	Chinese	Excluded (in scope of existing order)
3) Modules from China using Taiwanese cells	Taiwanese	Included
4) Modules from China using third country cells	Third Country	Excluded (third country origin)
5) Cells from Taiwan	Taiwanese	Included
6) Modules from Taiwan using Chinese cells	Chinese	Excluded (in scope of existing order)
7) Modules from Taiwan using Taiwanese cells	Taiwanese	Included
8) Modules from Taiwan using third country cells	Third Country	Excluded (third country origin)
9) Cells from third countries	Third Country	Excluded (third country origin)
10) Modules from third countries using Chinese cells	Chinese	Excluded (in scope of existing order)
11) Modules from third countries using Taiwanese cells	Taiwanese	Included
12) Modules from third countries using third country cells	Third Country	Excluded (third country origin)

Consequently, regardless of the data collected by the Commission pursuant to its questionnaires, the Commission must find subject imports from China to be negligible (indeed non-existent), and immediately terminate these investigations with respect to China.

III. Questionnaire Data: The Commission Has Obtained Data That Cannot Support Affirmative Preliminary Determinations

Even if the Commission does not find subject imports from China to be negligible, the record before the Commission does not support a determination that there is a reasonable indication of material injury or threat of material injury to the domestic industry by reason of subject imports. One (though not the only) reason why the Commission may not reach affirmative preliminary determinations here is that its questionnaires did not elicit meaningful

[27] 19 U.S.C. § 1677(24)(A).
[28] 19 U.S.C. §§ 1671b(a)(1), 1673b(a)(1).
[29] See Tr. 53:23-54:5 (Mr. Cassise), 72:11-14 (Ms. Hughes).

data that can support a determination of reasonable indication of injury, and as the Federal Circuit has indicated, the Commission may *not* proceed to final investigations on the basis of a mere possibility of injury or need to conduct further inquiry.[30] CCCME now elaborates on why the Commission's questionnaire data cannot support affirmative determinations in this case.[31]

A. Questionnaire Response Data Are Fundamentally Flawed Because of Ambiguities in the Definition of CSPV Products and Inconsistency of that Definition with the Proper Application of U.S. Rules of Origin

The Commission's questionnaires have elicited data that cannot serve as the foundation for affirmative determinations in these preliminary investigations due to problems stemming from the Commission's definition of CSPV products.

First, there are ambiguities in the definition of CSPV products provided in the instructions and the various questionnaires. While the definition of "CSPV Products" in the instructions note that "{f}urther instructions concerning the imported article may be found in the U.S. importer questionnaire," the table containing definitions of categories of U.S. imports at page 9 of the U.S. Importers' Questionnaire is indicated to apply to questions II-5 and III-2 of that questionnaire. Thus, it is unclear whether those definitions apply to other questions in the U.S. Importers' Questionnaire, or to any questions in the Foreign Producers'/Exporters' Questionnaire or the U.S. Producers' Questionnaire, that call upon parties to identify CSPV products by country of origin.[32] Moreover, the questionnaires use the term "CSPV products" in some questions and "CSPV cells and modules" in other questions, without any indication as to

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[30] American Lamb, 785 F.2d at 1001-04.

[31] Additional discussion of the problems with the Commission's questionnaire data is provided in Exhibit 1 at Question 7.

[32] For example, questions II-3, III-10, III-18, and III-19 of the U.S. Importers' Questionnaire, and questions II-11, II-12, II-15, II-16, II-17, and II-18 of the Foreign Producers'/Exporters' Questionnaire. The U.S. Producers' Questionnaire does not ask U.S. producers whether they purchase or import ingots or wafers with which to produce cells, apparently presuming that any cells they produce are U.S. origin regardless of the origin of the ingots or wafers. The U.S. Producers' Questionnaire requires identification of cells by origin in questions II-13 and II-16, and modules by origin in question II-17. Further, U.S. producers are asked in question III-12 to identify purchases of cell by source, and in questions IV-18 and IV-19 to compare CSPV products based on where they were "produced."

whether those terms were intended to be distinguished from one another or wholly interchangeable. These ambiguities have permitted individual respondents to use differing interpretations of these terms in their questionnaire responses. Consequently, respondents have not provided consistent data pertaining to a consistent definition of CSPV products across and even within questionnaires, making it impossible for the Commission to draw any meaningful conclusions from the aggregated data.

Second, as discussed in the previous section, Petitioner's proposed scope for these investigations is contrary to the application of proper U.S. rules of origin. In attempting to apply Petitioner's proposed scope, the Commission asserts that the origin of wafers or ingots may be determinative of the origin of cells, as well as the origin of modules. Specifically, for purposes of U.S. importer questions II-5 and III-2, in defining modules "from China" made of "Chinese-origin" or "Taiwanese-origin" cells, the Commission explains, respectively:

- "Chinese-origin cells" are defined as cells "that were manufactured either completely or partially in China. Partially manufactured in China is defined as using ingots or wafers of Chinese origin in the production of the completed cell regardless of country of cell assembly"; and
- "Taiwanese-origin cells" are defined as cells "that were manufactured either completely or partially in Taiwan. Partially manufactured in Taiwan is defined as using ingots or wafers of Taiwan origin in the production of the completed cell regardless of country of cell assembly."[33]

The Commission's attempt to apply Petitioner's muddled scope proposal to the definition of CSPV products has not only confused many respondents, but also made it impossible for many respondents to adequately respond to the Commission's questions. Many companies simply do not keep records regarding the origin of the wafers and ingots used in the modules and

[33] See U.S. Importers' Questionnaire at 9.

cells they supply, because such data are not determinative of module or cell origin in the ordinary course of business under U.S. law.[34]

In short, the ambiguities in the questionnaires' definitions of CSPV products means that the Commission has obtained data that do not permit it to distinguish between subject and non-subject merchandise. The Commission therefore cannot rely on its collected data to support a conclusion that there is a reasonable indication of material injury or threat of material injury to the domestic industry by reason of subject imports in this case.

B. The Questionnaires Have Elicited Data on Products Covered by the Prior Investigations, Which Cannot Serve as a Basis for the Commission's Determinations in these Investigations

Adding to the problems just discussed is the fact that the Commission has elicited data on products covered by the existing AD/CVD orders on CSPV cells and modules from China. As the Commission states in its notes, several of its defined categories of U.S. imports pertain to products covered by the existing orders.[35] However, there are many instances where data pertaining to products covered by the existing orders cannot be separated from data pertaining to merchandise that is properly within the scope of the present investigations.[36] By law, the Commission may not find a reasonable indication of material injury or threat of material injury in this case based on data pertaining to products covered by the existing AD/CVD order, which Petitioner itself has also explicitly excluded from the scope of these investigations.[37]

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[34] Indeed, Mr. Mendenhall of Trina Solar testified at the Conference that prior to the Department's scope ruling in the previous investigations in March 2012, his company did not even track the origin of the cells used in its modules. See Tr. 193:8-16 (Mr. Mendenhall).

[35] See U.S. Importers' Questionnaire at 9. The Commission's notes, however, do not direct respondents to exclude or separately identify such non-subject merchandise in their responses.

[36] For example, U.S. Importers' Questionnaire questions II-3, II-5, III-10, III-18, and III-19. Moreover, as indicated in note 34 above, with respect to pricing data requested in question III-2, the origin of the cells used to produce modules was generally not tracked by the respondent companies prior to March 2012.

[37] Supplement II at 4.

C. The Questionnaires' Pricing Product Data Are Flawed Because They Do Not Distinguish CSPV Products By Relevant Technical Characteristics or By Market Segment

As discussed further in Sections V.B.2 and V.B.3 below, technical characteristics other than wattage (i.e., cell efficiency, cell count, and voltage) and market segment (i.e., utility, commercial, and residential) are significant factors in the pricing of CSPV products. Yet, the U.S. Producers' and Importers' Questionnaires fail to request pricing data that distinguish CSPV products by these factors. Absent such data, the Commission cannot properly evaluate the pricing data and reach a conclusion as to whether under- or overselling has occurred, because the existing data do not permit the Commission to ensure product comparability in its price comparisons. In the absence of usable data on under- or overselling, it is impossible for the Commission to make a determination on an important and required aspect of its injury analysis.[38]

D. The Questionnaires Ask Questions That Shed Little Light on Whether Any Injury to the Domestic Industry May Be "By Reason Of" Subject Imports

Finally, as discussed further in Section VI below, given the presence of non-subject price-competitive substitutable products in the U.S. market at the same time as subject imports and the domestic like product, the Commission has an obligation to consider the *hypothetical* question of whether the domestic industry would be better off in the absence of subject imports in order to establish that any injury the domestic industry may have suffered is "by reason of" subject imports. However, none of the Commission's questions elicits information that would address this hypothetical inquiry. Instead, the Commission asks the same types of questions it asked in the prior investigations, generating only skewed, petitioner-oriented results regarding the U.S. CSPV market that cannot support affirmative preliminary determinations here.

[38] 19 U.S.C. § 1677(7)(C)(ii)(I) (requiring the Commission to consider whether "there has been significant price underselling by the imported merchandise as compared with the price of domestic like products").

Of note, none of the questionnaires asks how entities that are building or installing electricity generation systems would react in the absence of subject imports when faced with the prospect of purchasing domestic CSPV products at higher prices. That is, when making initial purchase decisions with respect to a new electricity generation system, in the absence of subject imports, would these purchasers still buy domestic CSPV products at higher prices, or would they instead switch to other solar energy products (e.g., thin-film), other renewable energy products (e.g., wind), or other conventional energy products (e.g., natural gas)? Such questions would generate critical information regarding whether conditions for the domestic CSPV industry would improve in the absence of subject imports, and consequently, whether any injury to the domestic industry may properly be attributed to subject imports.

Moreover, while question III-13(b) in the U.S. Importers' Questionnaire asks, "{h}ow have government incentives affected demand for CSPV products since January 1, 2010," that is not a particularly relevant question, because incentives are intended to stimulate demand, so the natural response to this question would be that demand for CSPV products has increased. Rather, the critical questions here would ask whether government incentives have *declined*, and how a *decline* in government incentives affects both demand for and prices of CSPV products. Again, such information could be used to evaluate whether conditions for the domestic CSPV industry would improve in the absence of subject imports, and therefore whether any injury to the domestic industry could properly be attributed to subject imports.

* * *

For the foregoing reasons, the questionnaire data obtained by the Commission cannot support a conclusion that there is a reasonable indication of material injury or threat of material injury to the domestic industry by reason of subject imports. That said, CCCME now explains

why, notwithstanding the flaws in the questionnaire data, the record of these investigations must nonetheless lead the Commission to negative preliminary determinations.

IV. Domestic Like Product: The Commission Should Find the Domestic Like Product to Be Solar Cells and Modules, Whether Made from CSPV or Thin-Film Technologies

The term "domestic like product" is defined as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle."[39] Petitioner has argued that "this proceeding involves a single domestic like product: certain c-Si PV cells and modules," excluding those products made using thin-film technology,[40] and "coterminous with the scope of this proceeding."[41] However, Petitioner's exclusion of thin-film products from the definition of the domestic like product ignores commercial realities, and is not in accordance with the applicable legal standard.

The Commission determines whether various products comprise a single "like product" based upon an analysis of six factors: (1) physical characteristics and end uses; (2) the products' interchangeability; (3) channels of distribution; (4) customer and producer perceptions; (5) common manufacturing facilities, production processes and production employees; and (6) price.[42] Every one of these factors need not be satisfied for a single like product determination,[43] as the analysis is applied on a case-by-case basis, and no single factor is

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[39] 19 U.S.C. § 1677(10).
[40] Petitions, Volume I at 23-24.
[41] Supplement I at 4.
[42] See, e.g., Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe from China, Inv. Nos. 701-TA-469 and 731-TA-1168 (Final), USITC Pub. No. 4190 (November 2010) ("Seamless SLP Pipe ITC Final"), at 4 and n. 20; Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia, Investigation Nos. 701-TA-470-471 and 731-TA-1169-1170 (Final), USITC Pub. No. 4192 (November 2010) ("Certain Coated Paper ITC Final"), at 4 & n.10.
[43] See, e.g., Drill Pipe and Drill Collars from China, Inv. Nos. 701-TA-474 and 731-TA-1176 (Preliminary), USITC Pub. 4127 (March 2010) ("Drill Pipe and Drill Collars ITC Prelim"), at 12-13 (finding drill collars and drill pipes to be a single domestic like product where the evidence on record showed "some overlapping physical characteristics and similar uses (but not interchangeability), overlapping channels of distribution, some commonality in manufacturers, manufacturing processes, and labor – but differences in prices.").

dispositive.[44] The Commission looks for "clear dividing lines" among possible like products and disregards minor variations.[45]

CCCME understands that in the prior investigations, the Commission found CSPV products and thin-film products not to comprise a single like product based on the record of those investigations.[46] However, the Commission noted at the outset that whether "to include thin film {as a like product} is a close question."[47] CCCME submits that the evolution of these technologies and new facts now available on the record warrant a different conclusion here. CCCME elaborates on this topic in response to the question posed by Ms. Hughes in Exhibit 1 at Question 8, but summarizes that discussion here.

First, with respect to *physical characteristics and end uses*, previously, the Commission found that "{t}here {we}re significant differences in physical characteristics and capabilities between CSPV and thin-film products,"[48] based on differences in physical appearance, application, and conversion efficiencies.[49] However, based on the current record, these differences can no longer be considered significant. As Mr. Stanton of Solar City testified, "we have installed monocrystalline, polycrystalline and thin-film solar panels and consider all three technologies to be part of the same market."[50] He has also provided photographs of thin film residential rooftop installations,[51] demonstrating that thin film can no longer be considered

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[44] See, e.g., Seamless SLP Pipe ITC Final at 4-5; Certain Coated Paper ITC Final at 17; Certain Frozen Fish Fillets From Vietnam, Inv. No. 731-TA-1012 (Preliminary), USITC Pub. No. 3533 (August 2002) ("Frozen Fish Fillets ITC Prelim"), at 4.
[45] Torrington Co. v. United States, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991).
[46] See CSPV Cells and Modules ITC Final at 8-12.
[47] Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 and 731-TA-1190 (Preliminary), USITC Pub. No. 4295 (December 2011) ("CSPV Cells and Modules ITC Preliminary") at 9.
[48] CSPV Cells and Modules ITC Final at 8.
[49] CSPV Cells and Modules ITC Final at 8-9.
[50] Tr. 133:5-9 (Mr. Stanton); see also Statement of John M. Stanton at paras. 22-26 (attached hereto at Exhibit 4).
[51] See Statement of John M. Stanton at Attachment 4 (attached hereto at Exhibit 4).

"more suited to … projects without space restrictions."[52] Further, regarding efficiencies, First Solar now reports average conversion efficiencies of 13.3% for cadmium-telluride ("CdTe") modules,[53] and even set a CdTe module conversion efficiency record of 16.1%.[54] The gap between CSPV and thin film efficiencies has not "widened," as Petitioner contends.[55] Instead, thin film, CSPV multicrystalline (14%-15% efficiency), and CSPV monocrystalline (16%-20% efficiency) products are properly considered a continuum.[56]

Second, on *interchangeability*, the point is that purchasers consider both CSPV and thin-film technologies on an equal footing when undertaking a new project, and this point was reinforced in Conference testimony: "{A}t a design level and where we're starting to put together the overall design and cost for a project, they're completely interchangeable."[57] Moreover, "{t}he [

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Third, the Commission previously recognized similar *channels of distribution* for CSPV and thin film products,[59] and this conclusion was only strengthened at the Conference.[60]

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[52] CSPV Cells and Modules ITC Final at 9.
[53] First Solar 10-Q, November 1, 2013, at 59 (attached hereto at Exhibit 11).
[54] First Solar Press Release, April 9, 2013, available at http://investor.firstsolar.com/releasedetail.cfm?releaseid=755244 (attached hereto at Exhibit 12).
[55] Tr. 57:4-58:1 (Mr. Brinser).
[56] Michaela D. Platzer, U.S. Solar Photovoltaic Manufacturing: Industry Trends, Global Competition, Federal Support, CRS Report R42509, June 13 2012, at 11 (attached hereto at Exhibit 13).
[57] Tr. 199:3-7 (Mr. Hershman). See also Tr. 133:5-8 (Mr. Stanton) ("Over the years, we have installed monocrystalline, polycrystalline and thin-film solar panels and consider all three technologies to be part of the same market."); Tr. 178:5-7 (Ms. Shaw) ("When we're talking about the utility scale, we're talking about projects that are 10 megawatts and above, where we compete with thin film by all the time."); Tr. 178:17-20 (Mr. Hershman) ("We're a large commercial contractor, building specifically utility space solar plants and are agnostic to panel manufacturer as well as balance of system manufacturing.").
[58] Statement of George W. Hershman at para. 5 (attached hereto at Exhibit 7). Id. at Attachment A includes [

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[59] See CSPV Cells and Modules ITC Final at 10.
[60] See, e.g., Tr. 200:2-7 (Ms. Shaw) ("{T}here's no separate request for proposals when a utility goes out for power between thin films or crystalline. A utility goes out with a request for proposals for power or solar power. Both compete right there.").

Fourth, the Commission was not previously convinced that *customers and producers perceived* the two technologies similarly.[61] However, at the Conference, purchasers explained that they are "agnostic" as to the technology they employ.[62] Major CSPV producers also see thin film, and First Solar in particular, as a direct competitor.[63] And First Solar unequivocally states that: "With respect to our components business, *our primary sources of competition* are currently crystalline silicon solar module manufacturers, as well as other thin-film module manufacturers and companies developing solar thermal and concentrated PV technologies."[64]

Fifth, with respect to *manufacturing facilities, production processes, or employees*, First Solar employees appear now to be involved in developing CSPV technology, given its April 2013 acquisition of TetraSun, Inc., a company "developing a novel, high-efficiency, low-cost crystalline silicon cell technology." First Solar plans to sell these modules as a "complement" to its thin film modules, "using the First Solar name," once production begins by early 2015.[65]

Sixth, on *price*, again, it is the "{o}verall costs of the whole system used to generate a customer's desired amount of electricity"[66] that is dispositive. Moreover, CSPV producers see thin film as directly impacting CSPV product prices,[67] which is not a coincidence, because First Solar purposefully sets its prices to be competitive with CSPV.[68]

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[61] See CSPV Cells and Modules ITC Final at 11.

[62] Tr. 133:3-4 (Mr. Stanton) ("SolarCity is agnostic as to the particular solar technology we deploy."); Tr. 178:16-20 (Mr. Hershman) ("We're … agnostic to panel manufacturer …."). See also Statement of John M. Stanton at 22 (attached hereto at Exhibit 4); U.S. Importer Questionnaire Response of [ ] at Introductory Statement ([ ]).

[63] See, e.g., U.S. Importer Questionnaire Response of [ ] at III-12(a) ([ ]).

[64] First Solar 10-K, February 27, 2013, at 5 (attached hereto at Exhibit 14) (emphasis added); see also id. at 2 (describing steps to remain competitive in face of CSPV).

[65] First Solar 10-Q, November 1, 2013, at 49 (attached hereto at Exhibit 11).

[66] Tr. 197:15-20 (Mr. Pal).

[67] See, e.g., U.S. Importer Questionnaire Response of [ ] at III-12(b); U.S. Importer Questionnaire Response of [ ] at III-12(b); U.S. Importer Questionnaire Response of [ ] at III-12(b); U.S. Importer Questionnaire Response of [ ] at III-12(b); U.S.

For the foregoing reasons and as elaborated in Exhibit 1 at Question 8, the Commission should define the "domestic like product" to consist of solar cells and modules, whether made from CSPV or thin-film technologies, and the "domestic industry" to be domestic producers of CSPV and thin-film cells and modules.[69]

V. Conditions of Competition

Pursuant to 19 U.S.C. § 1677(7)(C)(iii), the Commission must evaluate "all relevant economic factors ... within the context of the business cycle and conditions of competition that are distinctive to the affected industry." As detailed below, several important conditions of competition should inform the Commission's analysis in this case.

A. Demand Side Factors

1. Demand for Solar Modules Has Increased Dramatically Over the POI, Particularly in the Utility Sector

As a preliminary matter, U.S. demand for solar modules has continued to increase dramatically during the POI. During the 2010-2013 period, solar installations grew by 402%.[70]

There are three primary market segments in the solar industry: (i) utility; (ii) commercial or non-residential; and (iii) residential.[71] Demand growth for commercial and residential rooftop

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Importer Questionnaire Response of [ ] at III-12(b); U.S. Importer Questionnaire Response of [ ] at III-12(b); U.S. Importer Questionnaire Response of [ ] at III-12(a).

[68] First Solar 10-Q, November 1, 2013, at 45 (attached hereto at Exhibit 11) ("{O}ur total average manufacturing costs were $0.59 per watt {in Q3 2013}, which is competitive on a comparable basis with, or lower than, those of traditional crystalline silicon solar module manufacturers .... {W}e believe that we can ... maintain cost competitiveness with traditional crystalline silicon solar module manufacturers.").

[69] 19 U.S.C. § 1677(4)(A) (defining the "industry" as the producers of a "domestic like product").

[70] Tr. 115:7-10 (Mr. Button); CCCME's Slide Presentation at Slide 1 (citing SEIA U.S. Solar Market Insight, 2010 Year in Review, Executive Summary, p. 5; SEIA Solar Energy Facts: Q2, 2011; SEIA Solar Market Insight: Q2 2012; U.S. Solar Market Insight: Q3 2013, Executive Summary) (attached hereto at Exhibit 3).

[71] See Petitions, Volume I at 27 ("{T}here are three primary market segments: (1) utility-scale, where large-scale solar panel arrays are installed as stand-alone units; (2) commercial, where panels are affixed to large, flat non-residential rooftops or installed in stand-alone systems; and (3) residential, where panels are affixed to residential rooftops or installed in standalone systems. The utility-scale channel uses large-scale, free-standing arrays of solar panels to generate power for electricity consumers.").

installations increased greatly by 210% from 2010 to 2013.[72] But the growth has been truly extraordinary in the utility sector, in which annual installations increased by 818% from 2010 to 2013.[73] As a result of this extraordinary growth, the utility sector's share of total demand grew from an already sizable 31.4% in 2010 to a strong majority 57.5% in 2013.[74]

2. Demand for Solar Modules Is Highly Price Elastic, and Is Derived from Demand for Solar Electricity

Another critical condition of competition is the high price elasticity of demand for solar modules, meaning a small increase in the price of solar modules results in a significant decrease in demand.[75] Solar module demand is highly price elastic because it is derived from demand for solar electricity, which itself is highly price elastic. Solar module demand is derived from demand for solar electricity because solar modules constitute roughly 30% to 40% of the total cost for a solar electricity system, so a reduction in the price of solar modules has a substantial direct impact in reducing the total cost of a solar electricity generation system.[76]

Demand for solar electricity is highly price elastic because electricity is a commodity product – i.e., electrons are fungible. Thus, end-users do not distinguish one electron from another based on generation technology.[77] Accordingly, for solar electricity to be demanded, the cost of electricity produced by a solar electricity system must be competitive with the levelized cost of electricity ("LCOE") produced by electricity systems using other generation technologies,

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[72] Tr. 115:16-18 (Mr. Button); CCCME's Slide Presentation at Slide 3 (citing SEIA U.S. Solar Market Insight: 2010 Solar Market in Review; SEIA U.S. Solar Market Insight: Q3 2013) (attached hereto at Exhibit 3).
[73] Tr. 115:13-15 (Mr. Button); CCCME's Slide Presentation at Slide 2 (SEIA U.S. Solar Market Insight: 2010 Solar Market in Review; SEIA U.S. Solar Market Insight: Q2 2012; SEIA U.S. Solar Market Insight: Q3 2013) (attached hereto at Exhibit 3).
[74] See CCCME's Slide Presentation at Slides 1 and 2 (attached hereto at Exhibit 3).
[75] [ ] U.S. Producers' Questionnaire Response of [ ], Question IV-13. Similarly, [ ]." U.S. Producers' Questionnaire Response of [ ], Question IV-13.
[76] See Tr. 117:1-23 (Mr. Button); Statement of John M. Stanton at para. 30 (attached hereto at Exhibit 4).
[77] See Tr. 111:11-12 (Mr. Petrina), 270:12-13 (Mr. Grace).

that is, with the expected future cost of generating electricity.[78] The Commission recognized these critical conditions of competition in the prior investigations.[79]

3. The Impetus to Achieve "Grid Parity" with Conventional Energy Sources Drives CSPV Product Sales and Prices

In light of the basic principle that demand for solar modules is highly price elastic and derived from demand for solar electricity, it should be evident that competition with the LCOE produced by conventional energy sources – the so-called "impetus toward grid parity"[80] – is the key determinant of price and demand for CSPV products. This is because, if the cost of solar electricity cannot remain competitive with the cost of conventional energy, no manufacturer – whether foreign or domestic – will be able to sell solar products. This fundamental point is reflected in the statement by Mr. Morrison of Strata Solar, a company that develops and builds large commercial and utility scale solar farms,[81] reproduced in the epigraph to this brief above.

The order of magnitude of differences in the LCOE for different power sources feeding electricity into the "grid" is large, and summarized below, based on Department of Energy ("DOE") estimates.[82] The message is simply that the expected going-forward cost of electricity from a solar system is much higher than the cost from generation from the competing conventional and alternative systems, before application of any solar subsidies or incentives:

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[78] As the Commission previously understood, the LCOE refers to "the sum of all costs over the life of an energy system divided by the quantity of electricity that system would be expected to generate during the period the system is financed." CSPV Cells and Modules ITC Final at 22 n. 171.

[79] See CSPV Cells and Modules ITC Final at 21 ("Demand for CSPV products is derived from the demand for solar electricity, which is affected by factors such as total energy consumption, environmental concerns, cost competitiveness with traditional energy sources, and the availability of Federal, state, and local incentives ....").

[80] CSPV Cells and Modules ITC Final at 34.

[81] Tr. 152:12-18 (Mr. Morrison).

[82] See U.S. Energy Information Administration, Levelized Cost of New Generation Resources in the Annual Energy Outlook 2013 (January 28, 2013) (attached hereto at Exhibit 15).

System Source	LCOE ($/MW hour)
PV Solar	144.3
Coal	123.0
Wind	86.6
Natural Gas	67.1

Not only does solar have the highest LCOE of any of these sources, but its LCOE is more than twice that of a natural gas system. Moreover, reflecting the fact that LCOE estimates are location/circumstance specific, the DOE data also include minimum and maximum LCOE figures for each energy source. In fact, solar's minimum cost figure is greater than the maximum cost figures for natural gas and wind.[83] In any location, it is the gap between (i) the relatively low cost of electricity prospectively offered into the grid by natural gas, wind, or other competing energy sources, and (ii) the higher cost of electricity prospectively offered into the grid by solar energy systems, that is the central competitive challenge for solar adoption.

The particular price with which solar electricity must compete, as set by "grid parity," varies by geography. The competitive mechanism operates somewhat differently in the utility sector versus the commercial and residential sectors, but the principle that competition with conventional energy drives CSPV product sales and prices remains the same in every sector.[84]

a. In the Utility Sector, the Expected Wholesale Price of Electricity During Times of Peak Demand, Which Is Determined Principally by the Cost of Natural Gas, Drives CSPV Product Sales and Prices

In the utility sector – where, as previously noted, solar demand exploded during the POI and reached 57.5% of the market in 2013 – the driving force is the expected wholesale price of

[83] Id.
[84] See Tr. 116:9-14, 116:18-25, 119:6-120:9 (Mr. Button); CCCME's Slide Presentation at Slide 4 (attached hereto at Exhibit 3). The topic of "grid parity" is addressed further in Exhibit 1 at Question 1.

electricity offered by conventional sources during times of peak demand.[85] If a new solar electricity generation system at the utility level cannot deliver electricity at a price competitive with the expected wholesale price of electricity offered by existing conventional systems during times of peak demand, that solar generation system will not be financially viable and therefore will not be built. Thus, a solar system designer must keep its costs down to a level where the electricity output by the system can compete with this expected wholesale electricity price.

Expectations for the wholesale price of electricity have continued to fall during the POI. This has been driven by the ongoing precipitous decline in the price of natural gas, due to fracking technology developments and discovery of various shale fields.[86]

Therefore, in the utility sector, it is principally competition with natural gas-generated electricity that drives sales and prices of CSPV products. The Commission noted in the previous investigations that "{f}or peak periods, natural-gas generated electricity sets the levelized cost of electricity that CSPV solar systems and other renewable systems *must seek to meet*, especially for sales to the utility segment."[87] While the Commission previously downplayed this factor,[88] it cannot do so here given the much larger share of the market comprised by the utility segment during the current POI, and the substantial majority segment in 2013.[89]

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[85] See Tr. 112:2-4 (Mr. Petrina), 126:24-127:11 (Ms. Shaw), 221:18-22 (Ms. Shaw). During times of non-peak demand, only lowest-cost "baseload" generators (traditionally coal and nuclear plants) are able to sell electricity to the grid. See CSPV Cells and Modules ITC Final at 22.

[86] See Tr. 119:16-120:5 (Mr. Button), 147:13-19 (Mr. Kobes), 233:6-9 (Mr. Button). See also U.S. Energy Information Administration, Natural gas production by source, 1990-2040 (attached hereto at Exhibit 16); Jeff Brady, Solar Panels Compete With Cheap Natural Gas, January 5, 2012, available at http://www.npr.org/2012/01/05/144526652/solar-panels-compete-with-cheap-natural-gas (attached hereto at Exhibit 17) ("{I}n recent years, the price of one fossil fuel — natural gas — has declined so much that solar panels are having difficulty competing.").

[87] CSPV Cells and Modules ITC Final at 22 (emphasis added).

[88] See CSPV Cells and Modules ITC Final at 34.

[89] In the prior investigations, the Commission found: "The share of shipments from all sources to utility codevelopers increased from 5.2 percent in 2009 to 12.3 percent in 2010, and 29.8 percent in 2011, and was 17.6 percent in interim 2011 and 42.3 percent in interim 2012." CSPV Cells and Modules ITC Final at 25. By contrast, as noted in Section V.A.1 above, the utility segment here grew from an already sizable 31.4% of all installations in 2010 to a strong majority 57.5% in 2013.

b. In the Commercial and Residential Sectors, Expected Retail Electricity Prices Offered by Local Utilities, Which Are Also Impacted by the Cost of Conventional Energy, Drive CSPV Product Sales and Prices

In the commercial and residential sectors, the competitive dynamic is somewhat different. In these sectors, the key determinant is that an installed solar energy system must be able to produce electricity at a cost that is below the retail price that a commercial or residential customer would otherwise expect to pay for electricity over the expected life of that solar energy system. Otherwise, it would make little financial sense for a commercial or residential customer to invest in a solar energy system.[90]

Here, again, the rapidly declining price of conventional energy, particularly natural gas, is an important factor that affects retail electricity prices. As the anecdote of one couple in Pennsylvania demonstrates, solar panels they installed on their roof in March 2011 that appeared to be a sound investment at that time no longer appeared to be one less than a year later, due in part to low natural gas prices (as well as the decline in government incentives, a topic addressed further in Section V.A.5 below). Consequently, this couple is "not so comfortable telling other people" to install rooftop solar panels any longer.[91]

4. Competition with Thin-Film Products Impacts CSPV Product Sales and Prices

Aside from competing with conventional energy sources, CSPV products also compete with other renewable technologies, and principally thin-film solar technologies. As already discussed, CSPV and thin-film products are properly considered a single like product, making clear that these technologies are directly substitutable. But even if the Commission finds these products not to be a single like product, competition between CSPV and thin-film products is

[90] See Tr. 127:4-11 (Ms. Shaw); Tr. 135:7-16. (Mr. Stanton). See also Statement of Evan Dube at paras. 5-6 (attached hereto at Exhibit 8).
[91] Jeff Brady, Solar Panels Compete With Cheap Natural Gas (attached hereto at Exhibit 17).

still an important and relevant condition of competition for purposes of the Commission's analysis, as demonstrated by the facts presented in Section IV above and Exhibit 1 at Question 8, as well as testimony during the Conference.[92] As U.S. thin-film producer First Solar has unequivocally said, CSPV products are among "*our primary sources of competition.*"[93]

5. The Decline in Government Incentives Impacts CSPV Product Sales and Prices

Another important condition of competition in the U.S. CSPV market is the *decline* in federal, state, and local government incentives during the POI.[94] In this regard, it is of utmost importance to understand that it is the *decline* in incentives, and not the mere existence of incentives, that matters for purposes of the Commission's analysis. These incentives were a form of "infant industry" support intended to help renewable technologies (such as solar) achieve "grid parity" so as to be able to compete in the electricity market – i.e., "have an incubator effect."[95] As such, they were inherently designed to, and did in fact, decline during the POI, forcing solar module manufacturers to either reduce price or risk losing sales.[96]

This is an important distinction from the previous investigations, where the Commission concluded that the overall mix of incentives "fluctuated over the POI," and that "during much of the POI, the overall mix of incentives was very favorable and stimulated demand

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[92] Tr. 120:10-121:3 (Mr. Button), 130:21-22 (Ms. Shaw), 133:5-13 (Mr. Stanton), 178:5-7 (Ms. Shaw), 198:10-15 (Mr. Stanton), 198:20-199:14 (Mr. Hershman), 199:15-24 (Mr. Stanton), 199:25-200:9 (Ms. Shaw), 200:10-21 (Mr. Mendenhall), 200:22-201:6 (Mr. Morrison), 201:7-202:3 (Mr. Hershman), 202:4-16 (Mr. Petrina), 202:17-203:6 (Mr. Button); 203:7-12 (Mr. Christy); CCCME's Slide Presentation at Slides 11-13 (attached hereto at Exhibit 3).
[93] First Solar 10-K, February 27, 2013, at 5 (attached hereto at Exhibit 14) (emphasis added).
[94] The decline in government incentives is discussed further in Exhibit 1 at Questions 2 and 22.
[95] Tr. 157:21 (Mr. Stanton).
[96] See Tr. 112:10-13 (Mr. Petrina), 121:4-123:3 (Mr. Button), 126:8-23 (Ms. Shaw), 128:2-129:12 (Ms. Shaw), 147:20-148:4 (Mr. Kobes), 155:20-156:10 (Mr. Button), 157:16-158:5 (Mr. Stanton), 158:9-158:19 (Mr. Morrison); 159:15-160:1 (Ms. Shaw), 241:7-25 (Ms. Shaw), 243:9-244:1 (Mr. Button). See also Statement of John Morrison at paras. 10-12 (attached hereto at Exhibit 6).

substantially."[97] Here, it is undeniable that incentives *declined* over the current POI. Even Petitioner concedes this point, correctly summarizing the facts as follows:

> Finally, the Section 1603 Treasury Cash Grant program under the American Recovery and Reinvestment Tax Act of 2009 has since expired. This program reimbursed applicants up to 30 percent of the eligible costs of installing solar energy property used in a trade or business. While an Investment Tax Credit, which reduces overall tax liability, will still be available for solar projects until 2016, this tax credit is viewed as a less favorable incentive than the cash grant. At the same time, state solar incentives have suffered. Indeed, "{w}ithin the span of just 2011 to 2012, median cash incentives from state and utility programs fell by $0.40/W to $0.60/W, depending on PV system size."[98]

Petitioner's attempt to disavow these facts during counsel's closing statement, arguing that despite what it wrote in its Petitions, only "some incentives are going down" and overall "the picture is very mixed,"[99] is disingenuous. Indeed, even Petitioner's own exhibit, cited in the passage above, explains that the incentives offered by state agencies and utilities, which Mr. Cassise suggested at the Conference may even be more "impactful" than federal incentives,[100] "have declined significantly over time, falling by roughly 85 percent over the past decade."[101] Moreover, the underlying data from the Lawrence Berkley National Laboratory ("LBNL") report referenced by Petitioner clearly illustrates that several solar incentive programs at the state level

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[97] CSPV Cells and Modules ITC Final at 34-35.
[98] Petitions, Volume I at 66-67 (citing U.S. Department of the Treasury, Recovery Act, 1603 Program: Payments for Specified Energy Property in Lieu of Tax Credits, available at http://www.treasury.gov/initiatives/recovery/Pages/1603.aspx; Press Release, Lawrence Berkley National Laboratory, Installed Price of Solar Photovoltaic Systems in the U.S. Continues to Decline at a Rapid Pace, August 12, 2013 ("Installed Price of Solar Photovoltaic Systems") (attached to Petitions at Exhibit I-lBO)).
[99] Tr. 260:16-17 (Mr. Brightbill).
[100] Tr. 154:9-13 (Mr. Cassise). Respondents' witnesses, however, explained that which incentives are more "impactful" really "depends." Tr. 154:14-15 (Mr. Morrison), 155:16-17 (Ms. Shaw).
[101] Installed Price of Solar Photovoltaic Systems (attached to Petitions at Exhibit I-lBO).

have been eliminated or materially decreased during the POI,[102] with the median cash incentive declining from $2.50/watt at the start of the POI in 2010 to $1.20/watt in 2012.[103]

While Petitioner correctly recognizes that incentives have significantly declined and that as a result "demand {will} suffer," it illogically concludes that these facts illustrate the vulnerability of the domestic industry.[104] The correct conclusion is that, given the decline in incentives, as a general matter (i.e., irrespective of foreign or domestic sourcing), CSPV product demand will suffer if CSPV product prices do not fall, or conversely, the CSPV product price increases sought by Petitioner will result in a collapse of CSPV product demand.[105] In other words, Petitioner's suggestion that absent subject imports it would not be vulnerable and would be able to sell additional volumes of domestically manufactured CSPV products at higher prices in an environment of declining government incentives is entirely fanciful. As a Credit Suisse report emphasizes: "Solar is competitive with subsidy but hard to survive without support."[106]

B. Supply Side Factors

1. CSPV Product Prices Derive from the Cost of Polysilicon

On the supply side, an important factor influencing the pricing of CSPV products has been the cost of polysilicon, the key raw material in the production of CSPV cells and modules. As the cost of polysilicon has plummeted in recent years, so too has the price of CSPV products. Mr. Button discussed this condition of competition during the Conference, importantly noting

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[102] See Lawrence Berkeley National Laboratory, Tracking the Sun VI: A Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012 (July 2013) ("Tracking the Sun VI") at Table B-4 (attached hereto at Exhibit 18).
[103] See Median Cash Incentives for Residential & Commercial PV by PV Incentive Program (attached hereto at Exhibit 19).
[104] Petitions, Volume I at 66-67.
[105] As discussed in Exhibit 1 at Question 22, most of the state renewable portfolio standards ("RPS") requirements contain cost caps, such that solar electricity must enter the grid at costs that do not increase the prices paid by consumers.
[106] See Credit Suisse, The Transformational Impact of Renewables (December 20, 2013) at 15 (attached hereto at Exhibit 20).

that the correlation between the cost of polysilicon and CSPV product prices is confirmed by the fact that very recently, there was a small up-tick in polysilicon prices, and at the same time there was a corresponding increase in module prices.[107] Goldman Sachs' 2014 Outlook for the solar industry also illustrates that as polysilicon prices stabilized in 2013 and are expected to remain flat in 2014-2015, so too are wafer, cell, and module prices.[108]

Because market prices for polysilicon are widely published, U.S. purchasers of CSPV modules are aware of declines in polysilicon prices and expect that the prices of CSPV modules offered by their suppliers will reflect these declines. As a result, purchasers place great pressure on CSPV module suppliers to lower module prices in step with falling polysilicon prices; and conversely, CSPV module suppliers have some ability to pass through increases in polysilicon prices, which, as noted, has been only a recent and minor phenomenon.[109]

2. CSPV Product Prices Are Differentiated By Several Technical Characteristics, Including Cell Efficiency, Cell Count, and Voltage

It is also critical to understand that wattage is not the only technical parameter that drives CSPV product pricing; rather, cell efficiency, cell count, and voltage are also important. In other words, two modules that have the same wattage rating may be priced differently due to other technical parameters. These other technical parameters must therefore be considered to ensure product comparability when undertaking price comparisons between different products.[110]

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[107] See Tr. 118:12-119:5 (Mr. Button), 231:6-232:8 (Mr. Button); CCCME's Slide Presentation at Slides 7-9 (attached hereto at Exhibit 3). Additional discussion of polysilicon prices is provided in Exhibit 1 at Questions 12 and 19.

[108] Goldman Sachs 2014 Outlook, Americas: Clean Energy: Solar (January 6, 2014) at 15 (attached hereto at Exhibit 21).

[109] Tr. 118:23-119:5 (Mr. Button).

[110] See Tr. 123:4-124:13 (Mr. Button).

The issues of wattage, cell efficiency, and cell count are inter-related, and product pricing cannot be determined by looking at any one of these characteristics alone.[111] In simple terms, a cell's efficiency refers to how much of the sun's energy is converted to electricity (i.e., watts) given the cell's fixed surface area (which is typically 6 inch by 6 inch). Monocrystalline cells are more expensive to produce and more efficient; and multicrystalline cells are less expensive to produce and less efficient. As a 2012 report from the Congressional Research Service explains:

> Monocrystalline PV cells are usually cut from a single grown silicon ingot, while multicrystalline PV cells are manufactured such that wafers are made from multiple crystals. Monocrystalline PV cells have an efficiency of 16% to almost 20%, while the cheaper to produce multicrystalline PV cells achieve an efficiency of 14% to 15%.[112]

Thus, for a fixed cell count on a module (e.g., 60 cells), the use of monocrystalline cells should output a higher wattage than use of the same number of multicrystalline cells. As a result, the former product should command a higher price due to its use of monocrystalline cells and higher wattage output. Alternatively, identical wattages may be achieved by using a higher number of multicrystalline cells (e.g., 72 cells) than monocrystalline cells (e.g., 60 cells), with the latter product commanding a higher price due to its use of monocrystalline cells and smaller surface area to output the same wattage. In this case, the latter (premium) product would be particularly desirable in applications where module size matters, such as rooftop applications in the commercial or residential sectors, and less relevant in applications where module size is less important, such as utility projects in wide open fields.

As a separate matter, as discussed at the Conference, the maximum voltage that a module can withstand is also a highly relevant purchasing criteria. Traditionally, modules were designed to withstand 600 volts, but more recently 1,000 volts has become the norm, with an anticipated

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[111] See Statement of Thomas Koerner at paras. 4-10 (attached hereto at Exhibit 5). This issue is also discussed further in Exhibit 1 at Question 18.
[112] CRS Report R42509 at 11(attached hereto at Exhibit 13).

increase to 1,500 volts in the future.[113] For any given wattage, a higher voltage module will naturally command a higher price.[114]

In short, price comparisons made on the basis of product wattage alone cannot yield meaningful results with respect to underselling or overselling. [

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3. CSPV Product Prices Are Differentiated Among the Residential, Commercial, and Utility Sectors

Finally, CSPV product pricing is also differentiated by market sector, due in part to differences in sales volumes.[116] Indeed, given that a significant utility project tends to be at least 10 MW in size,[117] such a project would require more than 30,000 modules.[118] In the commercial and residential sectors, there tend to be a larger number of customers (e.g., installers, retailers, etc.), with lower transaction volumes. Thus, as LBNL recently concluded:

> The median installed price of PV systems completed in 2012 was $5.30/W for residential and small commercial systems smaller than 10 kilowatts (kW) in size and was $4.60/W for commercial systems of 100 kW or more in size. Utility scale systems installed in 2012 registered even lower prices, with prices for systems larger than 10,000 kW generally ranging from $2.50/W to $4.00/W.[119]

Therefore, again, to accurately evaluate whether under- or overselling has occurred, the Commission must standardize its pricing data for market segment and volume discounts. [

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[113] See Tr. 177:17-20 (Mr. Morrison), 178:21-179:15 (Mr. Hershman), 211:16-18 (Mr. Morrison), 211:22-24 (Mr. Morrison), 212:4-12 (Mr. Hershman), 219:16-25 (Mr. Koerner). See also Statement of John Morrison at paras. 4, 9 (attached hereto at Exhibit 6); Exhibit 1 at Question 17.
[114] Statement of John Morrison at para. 6 (attached hereto at Exhibit 6).
[115] See Statement of Thomas Koerner at Attachments C and D (attached hereto at Exhibit 5).
[116] See Tr. 124:14-19 (Mr. Button); Statement of Thomas Koerner at paras. 11-12 (attached hereto at Exhibit 5); Exhibit 1 at Question 23.
[117] See Tr. 178:5-7 (Ms. Shaw).
[118] 10 MW divided by approximately 300 watts per module = 33,333 modules.
[119] Installed Price of Solar Photovoltaic Systems (attached to Petitions at Exhibit I-lBO).
[120] See Statement of Thomas Koerner at Attachments C and D (attached hereto at Exhibit 5).

VI. Material Injury and Causation: The Domestic Industry Is Not Materially Injured By Reason of Subject Imports

In the preliminary phase of an investigation, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured by reason of the subject imports.[121] As noted above, the Federal Circuit has stated that the "reasonable indication" standard requires more than a finding that there is a "possibility" of material injury.[122] Accordingly, a petitioner must demonstrate that the domestic industry is suffering current harm that is significant enough to warrant the cost and disruption to trade necessarily caused by an investigation that proceeds to the final phase.[123] If a petitioner fails to meet this burden, the Commission must issue a negative preliminary determination.[124]

In conducting the requisite inquiry, the statute directs the Commission to consider: (i) the *volume* of subject imports; (ii) the effect of subject imports on *prices* of like products in the United States; and (iii) the *impact* of subject imports on domestic producers of like products in the United States.[125] Having evaluated these factors, the Commission must ultimately determine whether there is a reasonable indication that material injury to the domestic industry is "*by reason of*" subject imports.[126] The Federal Circuit has explained that the "by reason of" requirement "mandates a showing of causal – not merely temporal – connection between the {subject imports} and the material injury."[127] The causation inquiry requires the Commission to determine whether "the injury to the domestic industry can reasonably be attributed to the subject imports."[128] In so determining, the Commission must examine all relevant evidence, including

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[121] See 19 U.S.C. §§ 1671b(a), 1673b(a).
[122] American Lamb, 785 F.2d at 1001-04.
[123] See id. at 1004.
[124] Id.
[125] See 19 U.S.C. § 1677(7)(B).
[126] 19 U.S.C. §§ 1671b(a), 1673b(a) (emphasis added).
[127] Gerald Metals, Inc. v. United States, 132 F.3d 716, 720 (Fed. Cir. 1997).
[128] Mittal Steel Point Lisas Ltd. v. United States, 542 F.3d 867, 876 (Fed. Cir. 2008).

any known factors other than dumped or subsidized imports, that may be injuring the domestic industry, and "ensure that it is not attributing injury from other sources to the subject imports."[129]

Moreover, the Federal Circuit has explained that in certain circumstances, the Commission must consider the question of "but for" causation, and "ask whether conditions would have been different for the domestic industry in the absence of dumping."[130] This inquiry "is a *hypothetical* one that sheds light on whether the injury to the domestic industry can reasonably be attributed to the subject imports,"[131] and not to other known factors.[132]

The Federal Circuit has found this obligation to consider "but for" causation to exist "whenever the antidumping investigation is centered on a commodity product, and price competitive non-subject imports are a significant factor in the market."[133] However, the Court's decisions do not suggest that this obligation is triggered *only* in that circumstance. Rather, those decisions suggest that the underlying basis for the obligation is the presence of *non-subject price-competitive substitutable products* in the U.S. market at the same time as subject imports and the domestic like product.[134]

In other words, the general principle that derives from the Federal Circuit's guidance is that: *when evidence on the record reveals the presence of a non-subject product that functions as a price-competitive substitute for both the subject imports and the domestic like product in the U.S. market, the Commission must consider whether subject imports are the "but for" cause of*

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[129] Id. at 877 (quoting Uruguay Round Agreements Act: Statement of Administrative Action, H.R. Doc. No. 103-316 (Vol. I) ("SAA"), at 851-52 (1994), reprinted in 1994 U.S.C.C.A.N. 4040, 4184-85).
[130] Id. at 876.
[131] Id. (emphasis added).
[132] Id. at 877.
[133] Bratsk Aluminium Smelter v. United States, 444 F.3d 1369, 1375 (Fed. Cir. 2006); accord Mittal, 542 F.3d at 877.
[134] See Bratsk, 444 F.3d at 1374 (explaining that in Gerald Metals, "*{g}iven that* the fairly-traded non-subject imports were *substitutable* for the Ukrainian subject imports *and undersold the domestic product just as the subject imports had*, we held that the Commission must explain, in its analysis of the harm caused by the subject imports, why domestic consumers would not have purchased the fairly traded non-subject imports") (emphases added) (citing Gerald Metals, 132 F.3d at 718, 720, 721-23); accord Mittal, 542 F.3d at 873-74.

material injury to the domestic industry in order to satisfy its statutory obligation to establish that such material injury is "by reason of" subject imports.

Those circumstances exist here, because subject CSPV imports and domestic CSPV products compete with CSPV products from non-subject countries, as well as with price-competitive substitutable renewable (e.g., thin-film) and conventional (e.g., natural gas) technologies, in the U.S. market. Thus, here, the Commission has an obligation to consider the hypothetical question of whether conditions for the domestic industry would have been different in the absence of subject imports "in fulfilling its statutory duty"[135] to determine whether any material injury is "by reason of" subject imports.

As detailed below, the statutorily required analysis reveals that the requisite causal link between subject imports and the alleged injury suffered by the domestic industry does not exist.

A. Volume: There Is No Indication that the Volume of Subject Imports, or Any Increase in Volume, Is Significant

In evaluating the volume of subject imports, the statute directs the Commission to "consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[136] The Court of International Trade has held that in order for a finding that subject import volume is "significant" to be supported by substantial evidence, the Commission cannot examine figures alone, but rather "must analyze the volume and market share data in the context of the conditions of competition."[137]

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[135] Mittal, 542 F.3d at 879.
[136] 19 U.S.C. § 1677(7)(C)(i).
[137] Altx, Inc. v. United States, 26 CIT 709, 719 (2002) (quoting Nippon Steel Corp. v. United States, 182 F. Supp. 2d 1330, 1335 (Ct. Int'l Trade 2001)).

Here, the questionnaire data with regard to import volumes are flawed, as already discussed. Whatever the precise import figures may be, those raw data are not, and legally cannot be, the end of the story.

As explained above and during the Staff Conference, because demand for CSPV products is highly price elastic, the decrease in CSPV product prices – which has resulted from competition with alternative conventional and renewable energy sources (mainly, natural gas and thin-film) and the need to offset the decline in government incentives – has greatly expanded the size of the CSPV "pie" in the United States.[138] The additional sales that have been made at lower price points are not sales that Petitioner, or any domestic or foreign producer for that matter, could have made at higher price points. In other words, Petitioner has not "lost sales" to lower-priced subject imports; rather, lower-priced subject imports have made sales that otherwise would never have been made.[139] Given these conditions of competition, the fact that subject imports have increased their market share by capturing more of the expanded "pie" does not mean that any observed increases in the volume figures make those increases "significant" for purposes of the Commission's material injury analysis. To the contrary, this is a classic economic situation involving high price elasticity of demand where the increase in subject imports' volume cannot be seen as taking sales that would otherwise have gone to higher-priced domestic competition, and therefore cannot be considered "significant."

B. Price: There Are No Negative Price Effects from Subject Imports

Regarding price, the statute directs the Commission to evaluate whether "there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States," and whether "the effect of imports of such

[138] Tr. 117:11-13 (Mr. Button), 272:18-22 (Mr. Grace).
[139] See, e.g., Tr. 136:9-137:8 (Mr. Stanton).

merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree."[140] In this context, the Commission also considers petitioners' "lost revenue" and "lost sales" allegations.[141] Here, the record does not support a finding that subject imports have had adverse price effects on domestic like products.

1. Underselling

When undertaking price comparisons for purposes of determining whether underselling exists, the Commission must carefully consider whether imported and domestic products are properly comparable such that the data provide an appropriate basis for a conclusion of underselling. Otherwise, the Commission would not be making apples-to-apples comparisons and could not properly substantiate a finding of underselling.

Here, that is precisely the problem with the Commission's data. The Commission defined the pricing products in its questionnaires by reference only to wattage ranges (i.e., 220 to 239 watts for Product 1, 240 to 259 watts for Product 2, 260 to 279 watts for Product 3, and 280 to 309 watts for Product 4). However, as explained in Sections V.B.2 and V.B.3 above, a wattage criterion alone, much less wattage ranges, is insufficient to ensure apples-to-apples comparisons between the pricing product data obtained from U.S. producers and importers. Other technical criteria (cell efficiency, cell count, and voltage), as well as the market segment into which the module is sold (utility, commercial, or residential), also affect the pricing of the product.

Indeed, LBNL recently concluded that the installed price differential between PV systems with Chinese and non-Chinese modules was "*negligible (and of inconsistent direction)*" when module efficiencies were considered:

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[140] 19 U.S.C. § 1677(7)(C)(ii).
[141] See, e.g., CSPV Cells and Modules ITC Final at 33.

> Focusing … on systems with module efficiencies of 14-16% – the range within which most Chinese-brand modules fall – the installed price differential between systems with Chinese and non-Chinese modules has generally be {sic} negligible (and of inconsistent direction). In other words, among systems employing standard-efficiency polycrystalline modules, there is no clear difference in installed prices between those with Chinese-brand modules and those with non-Chinese modules.[142]

Thus, the Commission cannot reach any conclusions with respect to under- or overselling here without controlling for, at a minimum, cell efficiency (i.e., mono- versus multicrystalline), cell count, voltage, and market segment/sales volumes, in addition to a particular wattage.

2. Price Depression and Suppression

Importantly, the statute directs the Commission to consider whether "the effect of imports" is price depression or suppression.[143] Therefore, it is insufficient for the Commission to simply observe a decline in prices, or evidence of a cost-price squeeze; rather, the Commission must answer the question of whether those observations are "the effect of imports."

Here, again, the evidence plainly demonstrates that any observed price depression and suppression is not the effect of imports, but rather the effect of a combination of the applicable conditions of competition – most importantly the "impetus toward grid parity," competition with thin-film products, and declining government incentives. These conditions of competition demonstrate that in the absence of subject imports, the domestic industry would continue to face the same downward pricing pressure it faces today. The notion that the domestic CSPV industry could raise prices when utilities could simply turn to lower cost natural gas or thin-film technologies, or when commercial and residential customers could simply continue to purchase electricity from their local electricity retailers instead of investing in new solar systems, is fanciful. The domestic industry's belief that it could raise prices in the absence of subject

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[142] Tracking the Sun VI at 32 (attached hereto at Exhibit 18) (emphasis added).
[143] 19 U.S.C. § 1677(7)(C)(ii).

imports is all the more absurd given the environment of declining government incentives. For these reasons, it is entirely unreasonable, and indeed logically impossible, for the Commission to conclude that any observed price depression or suppression is "the effect of imports."

Moreover, as discussed in Section V.B.1 above, trends in CSPV product prices closely follow trends in polysilicon prices, because polysilicon is the key raw material in the production of CSPV cells and modules. Given the correlation between the cost of polysilicon and CSPV module prices demonstrated at the Conference,[144] it should be evident that any observed price trends are largely the effect of polysilicon prices, not subject imports.

In this regard, Petitioner's suggestion at the Conference that the decline in module price trends starting in 2008 could not have been caused by any factor other than subject imports is erroneous.[145] To the contrary, the evidence shows that: (i) increasing production of shale gas started gaining momentum in 2007-2008;[146] (ii) thin-film costs were declining significantly around that time, with First Solar reporting that "{o}ur average manufacturing cost per watt has decreased from $2.94 during 2004 to $1.08 during 2008";[147] (iii) from 2008 to 2012, average incentives fell from $3.00/watt to only $1.20/watt;[148] and (iv) spot and contract polysilicon prices peaked in 2008 at $500/kg (spot) and $85/kg (contract), declining to $75/kg (spot) and $60/kg (contract) in 2009, and continuing to fall through 2012.[149]

Finally, Petitioner's allegations of price depression and suppression as an "effect of" imports are vitiated by Petitioner's own statements that the prices of Chinese imports have

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[144] See Tr. 118:12-119:5 (Mr. Button), 231:6-232:8 (Mr. Button); CCCME's Slide Presentation at Slides 7-9 (attached hereto at Exhibit 3).
[145] See Tr. 22:25-23:11 (Mr. Brightbill).
[146] See U.S. Energy Information Administration, Natural gas production by source, 1990-2040 (attached hereto at Exhibit 16).
[147] First Solar 10-K, February 25, 2009, at 29 (attached hereto at Exhibit 22).
[148] See Median Cash Incentives for Residential & Commercial PV by PV Incentive Program (attached hereto at Exhibit 19).
[149] See Polysilicon Spot and Contract Pricing Trends (attached hereto at Exhibit 23).

increased during the POI. As the SolarWorld AG-led "EU ProSun" lobby association explained in its May 2013 briefing paper, since the United States imposed its AD/CVD orders in 2012, "the prices of dumped Chinese products have increased, by about 10% to 15%, while imports of those products have decreased by around 70%," and "{t}oday the U.S. solar market is growing with more jobs across the sector."[150] Moreover, [

].[151]

3. Lost Revenue and Lost Sales

Petitioner's allegations that the domestic industry has "lost revenue" and "lost sales" to lower-priced subject imports are also false.[152] As already explained, the sales in which Petitioner claims to have lowered prices or lost volume due to the presence of lower-priced subject imports are not sales that Petitioner could have made, because at Petitioner's desired higher prices, those customers would not have purchased CSPV products.[153]

Moreover, it became clear during the Conference that Petitioner lost sales during the POI due to inadequate technology offerings, or other non-price factors, not due to lower-priced subject imports. In this regard, Petitioner lost sales in the residential segment because it did not offer Zep-compatible modules, and it lost sales in the utility segment because it did not offer the 72-cell, 300 watt or greater, 1,000 volt modules that utilities demanded.[154]

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[150] EU ProSun: Chinese dumping is seriously injuring the European solar industry and European suppliers, and endangers future solar installations in Europe (May 9, 2012) at 2 (attached hereto at Exhibit 24).
[151] See Statement of George W. Hershman at para. 10 and Attachment C (attached hereto at Exhibit 7) (emphasis added).
[152] See Petitions, Volume I at 41-42 and Lost Sales (revised) (attached to Supplement II at Exhibit I-Supp-12).
[153] See, e.g., Tr. 136:9-137:8 (Mr. Stanton), 158:23-159:4 (Mr. Morrison), 233:13-19 (Mr. Button).
[154] See, e.g., Tr. 138:2-12 (Mr. Stanton), 175:23-176:3 (Mr. Stanton), 177:17-20 (Mr. Morrison), 177:25-178:7 (Ms. Shaw), 178:8-178:15 (Mr. Mendenhall), 178:21-179:12 (Mr. Hershman), 180:19-181:13 (Mr. Stanton), 186:11-19 (Mr. Stanton); 219:12-15 (Ms. Shaw); Statement of John M. Stanton at paras. 17-21 (attached hereto at Exhibit 4); Statement of John Morrison at paras. 7-8 (attached hereto at Exhibit 6); Statement of George W. Hershman at paras. 7-8 (attached hereto at Exhibit 7).

Petitioner's "lost revenue" and "lost sales" allegations therefore do not support a claim that subject imports have had negative effects on the prices of domestic like products.

C. Impact: There Is No Indication that Subject Imports Have Had a Negative Impact on the Domestic Industry

Turning to the "impact of imports,"[155] the statute directs the Commission to "evaluate all relevant economic factors which have a bearing on the state of the industry in the United States," including the several factors enumerated in the statute.[156] Here, a proper evaluation does not reveal a domestic industry that has been adversely impacted by subject imports.[157]

As the applicable conditions of competition reveal, any injury suffered by U.S. CSPV module producers is not due to the "impact of imports," but rather the industry's inability to economically produce CSPV modules for sale at a price that is competitive with competing sources of electricity generation, such as natural gas. Here, the available data indicate that in 2012, [

].[158] Government incentives have been insufficient to make U.S. CSPV products cost competitive with other systems, and as already discussed, those incentives undeniably *declined* during the POI.

Moreover, the domestic industry producing CSPV modules has not in fact suffered any reduction in its U.S. commercial shipments volume during the POI. The domestic industry's volume of U.S. commercial shipments [

] over the period.[159] During

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[155] 19 U.S.C. § 1677(7)(B)(i)(III).
[156] 19 U.S.C. § 1677(7)(C)(iii).
[157] As explained in Section IV above, the domestic industry should include domestic producers of both CSPV and thin-film products, so the Commission should consider the financial data for the U.S. thin-film industry in its impact analysis. In this regard, CCCME notes that First Solar's third quarter 2013 financial results show that it has been profitable. See First Solar 10-Q, November 1, 2013, at 3 (attached hereto at Exhibit 11).
[158] U.S. Producers' Questionnaire Response of [ ] at Question III-11.
[159] U.S. Producers' Questionnaire Responses at Question II-13.

January-September 2013, commercial shipments [ ], compared to the part-year 2012 period.[160]

[

].[161]

With respect to the financial data, the domestic industry's net sales quantity (including both domestic and export sales) [

].[162] In January-September 2013, [

].[163] In short, [ ], and not subject imports, explain the domestic industry's financial performance during the POI.

D. Causation: Any Material Injury Suffered By the Domestic Industry Is Not By Reason of Subject Imports, But Rather By Reason of Other Factors

In addition to its volume, price, and impact inquiries, the Commission must also determine whether any injury suffered by the domestic industry is "by reason of" subject imports,[164] and ensure that it is not improperly attributing injury caused by other known factors to subject imports.[165] Here, several factors break the causal link between subject imports and any material injury the domestic industry may have suffered.

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[160] Id.
[161] U.S. Producers' Questionnaire Response of [ ] at Question II-13.
[162] U.S. Producers' Questionnaire Responses at Question III-11.
[163] Id.; U.S. Producers' Questionnaire Response of [ ] at Question II-13.
[164] 19 U.S.C. §§ 1671b(a), 1673b(a).
[165] Mittal, 542 F.3d at 877 (quoting SAA at 851-52).

1. The Confluence of the Conditions of Competition Discussed Above Demonstrates that Any Material Injury Is Not By Reason of Subject Imports

Most important, as shown in the discussions of volume, price, and impact above, the confluence of several factors – the highly price elastic nature of demand for CSPV products, competition from conventional energy sources (i.e., the "impetus toward grid parity") and thin-film products, and the environment of declining government incentives – leads to the conclusion that in the absence of subject imports, the domestic industry's condition would be largely similar to what we see today. In other words, "but for" subject imports, the domestic industry would still be materially injured. In this situation, subject imports cannot be more than an "incidental, tangential, or trivial" cause of material injury to the domestic industry, and therefore the domestic industry cannot be injured "by reason of" subject imports.[166]

Indeed, in a somewhat unprecedented occurrence for a preliminary Staff Conference, witnesses from every aspect of the CSPV industry, including major producers, and purchasers and installers of utility, commercial, and residential systems, all testified to the same point: given the aforementioned conditions of competition, SolarWorld would not have won additional sales, at the higher prices it desires, even in the absence of subject imports. Instead, at SolarWorld's desired prices, solar electricity systems would not be built because they could not deliver electricity at competitive rates, thereby jeopardizing the jobs of the over 140,000 Americans presently employed by the U.S. solar industry.[167] Given these facts, subject imports cannot be a cause of material injury to the domestic industry.

In the residential/commercial sector, [

[166] See Nippon Steel Group v. Int'l Trade Comm'n, 345 F.3d 1379, 1381 (Fed. Cir. 2003).
[167] The Solar Foundation, National Solar Jobs Census 2013 (January 27, 2014), available at http://www.thesolarfoundation.org/research/national-solar-jobs-census-2013 (attached hereto at Exhibit 25).

]. SolarCity indicates that, as of summer 2013, in the Arizona residential sector, the module price that would permit an installed SolarCity system to deliver electricity competitive with local utility bill rates had to be below $0.78 per watt.[168] In the California residential sector, the comparable figure was $0.85 per watt.[169] In contrast, during January-September 2013, [

].[170] [

] because it cannot compete with existing local utility rates, totally irrespective of the presence or absence of subject imports.

Moreover, in the utility sector, Strata Solar LLC reports that, for its projects in North Carolina, if its module price had been above [ ] per watt,[171] the resulting solar power system would not have been competitive with delivered electricity prices from competing energy sources, including natural gas, and the solar projects could not have been implemented. Again, [ ].

In sum, to the extent that the subject importers have sold CSPV modules in the U.S. market at prices competitive with prevailing electricity prices from other energy sources, the subject imports have created new demand that otherwise would not have been met by the domestic industry. Such subject import sales are not "lost sales" for SolarWorld. At the Staff Conference, John Stanton of SolarCity summarized this point as follows:

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[168] See Statement of John M. Stanton at paras. 32-33 (attached hereto at Exhibit 4).
[169] Id. at para. 34. SolarCity reports that Arizona and California are large, traditional markets for solar power and are states that have relatively high delivered electricity prices. During the POI, SolarCity was able to expand into states, such as Colorado, which have lower delivered electricity prices, and therefore a more challenging environment for solar energy. SolarCity estimates that if module prices had been above $0.74 per watt, the resulting solar power systems would not have been cost competitive with delivered electricity prices from local utilities in Colorado. Id. at para. 35.
[170] U.S. Producer Questionnaire Response of [ ] at Question III-11.
[171] See Statement of John Morrison at para. 13 (attached hereto at Exhibit 6).

> If modules are too expensive, SolarCity is not able to offer its potential customers sufficient energy cost savings, and these potential customers will not be enticed to switch from their traditional energy suppliers.
>
> Put another way, if SolarWorld offers to sell modules to us at prices that prevent us from installing cost competitive systems, the potential opportunity for the SolarWorld sale vanishes.
>
> We won't purchase what we can't install, and we can't install solar systems unless they have the potential to save customers approximately 10 to 15 percent in their first year after installation and allow them to hedge against the ever rising cost of electricity.
>
> The fact that in such circumstances, SolarCity may opt for a Chinese or Taiwanese import in order to construct a viable transaction does not mean that SolarWorld has lost a sale to the subject imports. Rather, imports have opened or created the possibility of a new lease or PPA transaction that would otherwise not exist.
>
> In other words, *in cases where SolarWorld modules are too expensive to create a viable solar proposal, imports are expanding the domestic market for solar systems, they are not taking sales away from SolarWorld or other U.S. producers.*[172]

2. The Imposition of AD/CVD Orders Would Simply Result in Increased Imports of CSPV Products From Non-Subject Countries, Not Increased Sales by the Domestic Industry

While the questionnaire responses provide indiscernible data with regard to subject and non-subject imports, it is evident from the public import data provided by Petitioner that the share of imports from other than China and Taiwan has increased during the POI, reaching almost 60% in YTD 2013.[173] Further, during the Conference, Mr. David observed that "there seems to be a growing production of crystalline silicon products in Malaysia,"[174] and Mr. Brinser agreed.[175] Both the apparent magnitude of non-subject imports and the fact that their volumes have increased during the current POI stand in stark contrast with the trends in non-subject imports that led the Commission to dismiss the importance of non-subject imports in the

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[172] Tr. 136:9-137:8 (Mr. Stanton) (emphasis added).
[173] See Import Data (attached to Petitions at Exhibit I-4).
[174] Tr. 101:5-6 (Mr. David).
[175] Tr. 101:20-21 (Mr. Brinser).

previous investigations.[176] Here, given the applicable conditions of competition, it is evident that if subject imports were removed from the U.S. market, imports from non-subject countries of CSPV (as well as thin-film) products offered at prices that would permit solar electricity developers to compete with electricity generated from other energy sources like natural gas, and not domestic CSPV products sold at higher prices, would capture U.S. market share. In these circumstances, the presence of non-subject imports breaks the causal link between subject imports and injury to the domestic industry.

3. SolarWorld's Business Decisions Not to Compete at the Forefront of Technology in Each Market Segment Break the Causal Link Between Subject Imports and Injury to the Domestic Industry

Conference testimony made clear that SolarWorld has made business decisions that have prevented it from offering the technologically-advanced products desired by the market.[177]

In the residential sector, SolarWorld has not offered Zep-compatible modules.[178] Zep is a proprietary mounting technology used primarily for residential rooftop applications.[179] Specifically, it "is the industry's first PV installation standard and is being rapidly adopted by a growing number of manufacturers and their channel partners."[180] Zep Solar publishes a list of its licensed partners, and SolarWorld is not one of them.[181] Petitioner's comment at the Conference that Zep "is a capability that we can switch to very quickly"[182] is meaningless. The key point for the Commission's inquiry is that SolarWorld has been, and continues to be, closed out of over

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[176] See CSPV Cells and Modules ITC Final at 38 (noting that, "{u}nlike subject imports, non-subject imports were considerably smaller in magnitude, and their volume declined during the POI, both in absolute and relative terms.").
[177] These issues are also addressed in Exhibit 1 at Question 17.
[178] See Tr. 138:2-12 (Mr. Stanton), 175:23-176:3 (Mr. Stanton); Statement of John M. Stanton at paras. 17-21 (attached hereto at Exhibit 4).
[179] See Statement of John M. Stanton at paras. 7-10 (attached hereto at Exhibit 4). SolarCity is "about to go to production with a Zep commercial application" as well. Tr. 239:22-23 (Mr. Stanton).
[180] See Zep Solar, Zep Compatible, available at http://www.zepsolar.com/index.php/zep-compatible (attached hereto at Exhibit 26).
[181] Id.; Statement of John M. Stanton at para. 12 (attached hereto at Exhibit 4).
[182] Tr. 255:6-7 (Mr. Brinser).

half of the residential segment of the market due to its failure to obtain Zep licensing.[183] Therefore any "injury" it may arguably have been suffering is due at least in part to a strategic error of its own making. Conjecture as to whether or not it could reverse that error in the future has no bearing on the Commission's injury determination *now* – which must be made on the basis of evidence regarding market conditions during the POI.

In the utility sector, it also became clear at the Conference that SolarWorld has been unable to compete in the sphere for 72-cell, 300 watt or greater, 1,000 volt modules, which are rapidly becoming the norm due to substantial balance of system cost savings.[184] While Petitioner's counsel claimed that SolarWorld has a qualified product in this regard,[185]

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].[186] Meanwhile, Chinese producers such as Canadian Solar, Yingli, Suntech, and Trina had UL certified 72-cell, 300 watt or greater, 1,000 volt modules as of 2012.[187] Again, SolarWorld's poor business decisions with respect to the

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[183] Tr. 173:13-15 (Mr. Stanton); Statement of John M. Stanton at paras. 13-14 (attached hereto at Exhibit 4).
[184] See Tr. 177:17-20 (Mr. Morrison), 178:1-4 (Ms. Shaw), 178:8-15 (Mr. Mendenhall), 179:1-8 (Mr. Hershman), 212:4-12 (Mr. Hershman); Eric Wesoff, SPI 2012: PV Module Makers Must Differentiate or Perish, September 12, 2012, available at http://www.greentechmedia.com/articles/read/SPI-2012-PV-Module-Makers-Must-Differentiate-or-Perish (attached hereto at Exhibit 27); Statement of John Morrison at para. 5 (attached hereto at Exhibit 6); Statement of George W. Hershman at para. 6 (attached hereto at Exhibit 7).
[185] Tr. 258:16-18 (Mr. Brightbill).
[186] Statement of George W. Hershman at paras. 7-8 and Attachment B (attached hereto at Exhibit 7). As Mr. Morrison indicated at the Conference, UL certification is required in order to sell modules of a given voltage. See Tr. 211:22-24 (Mr. Morrison). See also Exhibit 1 at Question 20.
[187] See Canadian Solar Achieves CSA1000V Certification Advancing Utility-Scale Deployments, August 7, 2012, available at http://www.prnewswire.com/news-releases/canadian-solar-achieves-csa1000v-certification-advancing-utility-scale-deployments-165254816.html (attached hereto at Exhibit 28); Eric Wesoff, SPI 2012: PV Module Makers Must Differentiate or Perish (attached hereto at Exhibit 27); Tr. 178:8-15 (Mr. Mendenhall).

critical utility segment, where, as Ms. Shaw said, if you don't sell 72-cell, 1,000 volt modules "you just don't compete,"[188] are undoubtedly causes of the injury it claims to be suffering.[189]

4. The Domestic Industry Does Not Have Sufficient Capacity to Satisfy Domestic Demand

Another important fact that breaks the causal link between subject imports and injury to the domestic industry is that the domestic industry does not have sufficient capacity to satisfy U.S. demand for CSPV modules. According to SEIA data, an estimated 4.3 GW of PV solar systems were installed in the U.S. market during 2013.[190] By contrast, according to the U.S. Producers' Questionnaire data, U.S. producers have a stated capacity to produce only [ ] of the U.S. market demand.[191] [ ],[192] constituting only [ ] of total U.S. demand. Further, [ ].[193] Thus, the umbrage expressed by Petitioner's counsel in his closing statement on the issue of insufficient U.S. capacity had no basis in fact.[194] Moreover, the bankrupt U.S. companies mentioned in those remarks (Helios and MX Solar) had trivial capacity when they existed,[195] and their bankruptcies in no way establish that the domestic industry is capable of satisfying domestic demand.

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[188] Tr. 178:3-4 (Ms. Shaw).
[189] See also Statement of John Morrison at paras. 4-9.
[190] See CCCME's Slide Presentation at Slide 1.
[191] U.S. Producers' Questionnaire Response of [ ] at Question II-13.
[192] U.S. Producers' Questionnaire Response of [ ] at Question II-13.
[193] U.S. Importers' Questionnaire Response of [ ] at Question III-16.
[194] See Tr. 264:12-265:3 (Mr. Brightbill).
[195] See Eric Wesoff, Wisconsin's Helios Solar, Part of SolarWorld's CASM, Is Bankrupt, September 17, 2013, available at http://www.greentechmedia.com/articles/read/Wisconsins-Helios-Solar-is-Bankrupt-Part-of-SolarWorlds-CASM (attached hereto at Exhibit 29) (noting a production capacity of 50 MW for Helios); MX Solar Begins Manufacturing At New Jersey Production Facility, December 15, 2010, available at http://www.solarindustrymag.com/e107_plugins/content/content.php?content.6878 (attached hereto at Exhibit 30) (noting a production capacity of 65 MW for MX Solar).

* * *

For the foregoing reasons, there is no reasonable indication that an industry in the United States is materially injured by reason of the subject imports.

VII. Threat of Material Injury: Subject Imports Do Not Threaten the Domestic Industry With Material Injury

In the preliminary phase of an investigation, the Commission also determines whether there is a reasonable indication that an industry in the United States is threatened with material injury by reason of the subject imports.[196] With respect to its threat inquiry, the statute identifies several economic factors that the Commission must analyze to determine whether "further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted."[197] In making its determination, the Commission cannot rely "on the basis of mere conjecture or supposition."[198] If a petitioner has not adduced "positive evidence tending to show an intention to increase the levels of importation," the Commission must reach a negative preliminary determination.[199]

As detailed below, an analysis of the most relevant economic factors, based on the information currently available, shows that subject imports do not threaten the domestic industry with material injury in the imminent future.

A. Threat Factor I: Neither the Type of Alleged Subsidies Nor their Value Provide a Basis for a Finding of Threat

With regard to the issue of subsidies, Petitioner has alleged virtually the same subsidies in these investigations as it did in the prior investigations concerning CSPV cells and modules from China. And in the prior investigations, the Department found the value of those subsidies

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[196] See 19 U.S.C. §§ 1671b(a), 1673b(a).
[197] 19 U.S.C. §1677(7)(F)(ii).
[198] Id.
[199] Metallverken Nederland B.V. v. United States, 744 F. Supp. 281, 287 (Ct. Int'l Trade 1990).

to be low, ultimately determining CVD rates of only 14.78% to 15.97%.[200] Subsidies at such levels do not substantially distort economic incentives or encourage excessive exportation of the subject merchandise, and therefore do not generate any sort of threat of imminent injury.

B. Threat Factor II: Demand Growth in Other Markets Is Sufficient to Absorb Chinese Production Capacity of Subject Merchandise

Petitioner's assertion that demand outside the United States is insufficient to absorb Chinese production capacity is incorrect.[201] As Goldman Sachs' 2014 Outlook – an earlier version of which Petitioner itself relied on in the prior investigations[202] – illustrates, growth in global solar demand has far exceeded expectations, with global demand coming in at 38 GW for 2013, roughly 30% above Goldman Sachs' initial forecast.[203] Global demand for 2014 is expected to be 43 GW, growing to 57 GW by 2016.[204] Importantly, global supply and demand have been converging. While Goldman Sachs estimates global capacity of 53 GW for 2014, its estimate for Asian capacity for 2014 is virtually identical to its 43 GW estimate for global demand. Moreover, by 2016, Goldman Sachs expects global capacity to approximately equal global demand.[205] Goldman Sachs further observes that "a majority of the Tier I manufacturers are close to 'sold out' in China," and it expects the average selling price of Chinese modules "to continue to converge toward the global average of roughly $0.60-$0.65/W."[206]

As for Europe, Petitioner is also wrong in suggesting that "the EU's recent imposition of trade restrictions on solar cells and modules from China is expected to curb Chinese exports

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[200] Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Countervailing Duty Order, 77 Fed. Reg. 73017, 73018 (December 7, 2012).
[201] See Petitions, Volume I at 58-63; Tr. 260:20-261:19 (Mr. Brightbill).
[202] See CSPV Cells and Modules ITC Final at VII-5 n.5.
[203] Goldman Sachs 2014 Outlook at 6 (attached hereto at Exhibit 21).
[204] Id. at 11, 14.
[205] Id. at 14.
[206] Id. at 14.

significantly."[207] To the contrary, the EU "undertaking," the details of which are addressed further in Exhibit 1 at Question 6, was widely expected to have a *favorable* impact on Chinese exports of solar cells and modules to Europe.[208] Indeed, since the "undertaking" was concluded in July 2013, there is no evidence of a diversion of Chinese solar exports from Europe to other markets, such as the United States.

Finally, it is worth noting that the Appellate Body of the World Trade Organization ("WTO") recently found rules requiring the use of locally-produced equipment in wind and solar electricity generation systems in order to qualify for feed-in tariffs in Ontario, Canada, to be inconsistent with WTO obligations.[209] As a consequence, Ontario has taken steps to remove the local content rules from its feed-in tariff program.[210] The WTO's decision should open not only the Ontario market, but also other markets around the world, to imported solar panels, as those other market regulators come to recognize that any such similar local content rules would likely also run afoul of their WTO obligations.[211]

C. Threat Factor III: The Volume of Subject Imports Increased Due to a Rapidly Expanding Market

The volume of subject imports does not demonstrate a threat of material injury to the domestic industry because, as explained above, given the high elasticity of demand for solar

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[207] Petitions, Volume I at 61.

[208] See Max Hall, Trina Solar welcomes EU move, December 9, 2013; Trefis Team, E.U. Approves Chinese Solar Deal, Likely To Be Positive For Tier-One Chinese Manufacturers, December 3, 2013; Jim Brunsden and Jonathan Stearns, China-EU Solar Panel Deal Avoids Tariffs With Import Cuts, July 28, 2013. These articles are attached hereto at Exhibit 31.

[209] See Appellate Body Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector / Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS412/AB/R / WT/DS426/AB/R, circulated May 6, 2013, at paras. 6.1.b.v (DS412) and 6.1.a.vi (DS426), available at http://www.wto.org/english/tratop_e/dispu_e/412_426abr_e.pdf.

[210] See Legislative Assembly of Ontario, Bill 153, Complying with International Trade Obligations Act, 2013, available at http://www.ontla.on.ca/web/bills/bills_detail.do?locale=en&Intranet=&BillID=2923.

[211] In this regard, cases pertaining to similar domestic content rules in the European Union and India have been pending before the WTO, but have not yet reached final resolution. See WTO Dispute Summary for DS452, available at http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds452_e.htm; WTO Dispute Summary for DS456, available at http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm.

products, the sales made by subject imports in the U.S. market are not sales that the domestic industry could have captured at higher price points, due to the "impetus toward grid parity," competition with thin-film, and declining government incentives. As such, these sales made by subject imports are, in fact, responsible for the great expansion of the U.S. CSPV market "pie," and do not threaten the domestic industry.

D. Threat Factor IV: Prices of Subject Imports Are Unlikely to Depress or Suppress Domestic Prices

The record establishes that subject imports are not the drivers of CSPV product pricing in the U.S. market. Rather, these prices are driven by competition with conventional energy sources (i.e., the "impetus toward grid parity"), competition with thin-film products, the environment of declining government incentives, and the declining cost of polysilicon. Due to these exogenous factors, the domestic industry would face the same pricing pressures it faces today, even in the absence of subject imports. Accordingly, the prices of subject imports cannot indicate any threat of material injury to the domestic industry.

E. Threat Factor V: Any Increase in Inventories of Subject Merchandise Is Due to a Rapidly Expanding Market

Due to the ambiguities in the questionnaires previously discussed, the questionnaires do not provide usable data regarding subject import inventories. However, given the rapidly growing U.S. market, any increase in inventories should not be surprising and does not indicate a threat to the domestic industry.

F. Threat Factor VI: There Is No Potential For Product-Shifting

The manufacturing of CSPV products is highly sophisticated, and the necessary equipment cannot be retooled to produce alternative products.[212] Therefore, there is no potential

[212] See Petitions, Volume I at 28-29 ("{T}he manufacture of c-Si PV cells is a highly automated, capital-intensive, and technologically sophisticated process, requiring skilled technicians with advanced degrees.").

for product shifting, and this factor does not support a finding of threat of material injury to the domestic industry in the imminent future.

* * *

For the foregoing reasons, there is no reasonable indication that an industry in the United States is threatened with materially injured by reason of the subject imports.

VIII. Conclusion

For the foregoing reasons, CCCME submits that the Commission should issue negative preliminary determinations and terminate these investigations.

Respectfully submitted,

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January 28, 2014

EXHIBIT LIST

Exhibit 1	**Responses to Staff Questions to Respondents**
Exhibit 2	**Responses to Staff Questions to Petitioner**
Exhibit 3	**CCCME's Slide Presentation and Supporting Materials for the Staff Conference**
Exhibit 4	**Statement of John M. Stanton**
Exhibit 5	**Statement of Thomas Koerner**
Exhibit 6	**Statement of John Morrison**
Exhibit 7	**Statement of George W. Hershman**
Exhibit 8	**Statement of Evan Dube**
Exhibit 9	**U.S. Department of Commerce, Scope Clarification Memorandum, March 19, 2012**
Exhibit 10	**U.S. Department of Commerce and U.S. Customs and Border Protection Decisions on Country of Origin**
Exhibit 11	**Excerpts from First Solar 10-Q, Third Quarter 2013**
Exhibit 12	**First Solar Press Release, First Solar Sets CDTE Module Efficiency World Record, Launches Series 3 Black Module, April 9, 2013, available at http://investor.firstsolar.com/releasedetail.cfm?releaseid=755244**
Exhibit 13	**Michaela D. Platzer, Congressional Research Service, U.S. Solar Photovoltaic Manufacturing: Industry Trends, Global Competition, Federal Support, Report 42509, June 2012**
Exhibit 14	**Excerpts from First Solar 10-K, 2012**
Exhibit 15	**U.S. Department of Energy, U.S. Energy Information Administration, Annual Energy Outlook 2013, Levelized Costs of New Generation Resources in the Annual Energy Outlook 2013, January 28, 2013**
Exhibit 16	**U.S. Department of Energy, U.S. Energy Information Administration, Annual Energy Outlook 2013, Market Trends – Natural Gas, April 15 – May 2, 2013**
Exhibit 17	**Jeff Brady, Solar Panels Compete With Cheap Natural Gas, January 5, 2012, available at http://www.npr.org/2012/01/05/144526652/solar-panels-compete-with-cheap-natural-gas**

Exhibit 18	**Excerpts from Lawrence Berkeley National Laboratory, Tracking the Sun VI: A Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012 (July 2013)**
Exhibit 19	**Median Cash Incentives for Residential & Commercial PV by PV Incentive Program**
Exhibit 20	**Excerpts from Credit Suisse, The Transformational Impact of Renewables (December 20, 2013)**
Exhibit 21	**Excerpts from Goldman Sachs 2014 Outlook, Americas: Clean Energy: Solar (January 6, 2014)**
Exhibit 22	**Excerpts from First Solar 10-K, 2008**
Exhibit 23	**Polysilicon Spot and Contract Pricing Trends, and Supporting Materials**
Exhibit 24	**EU ProSun: Chinese dumping is seriously injuring the European solar industry and European suppliers, and endangers future solar installations in Europe (May 9, 2013)**
Exhibit 25	**The Solar Foundation, National Solar Jobs Census 2013, January 27, 2014, available at http://www.thesolarfoundation.org/research/national-solar-jobs-census-2013**
Exhibit 26	**Zep Solar, Zep Compatible, available at http://www.zepsolar.com/index.php/zep-compatible**
Exhibit 27	**Eric Wesoff, Green Tech Media, SPI 2012: PV Module Makers Must Differentiate or Perish, September 12, 2012, available at http://www.greentechmedia.com/articles/read/SPI-2012-PV-Module-Makers-Must-Differentiate-or-Perish**
Exhibit 28	**Canadian Solar Achieves CSA1000V Certification Advancing Utility-Scale Developments, August 7, 2012, available at http://prnewswire.com/news-releases/canadian-solar-achieves-csa1000v-certification-advancing-utility-scale-deployments-165254816.html**
Exhibit 29	**Eric Wesoff, Green Tech Media, Wisconsin's Helios Solar, Part of SolarWorld's CASM, Is Bankrupt, September 17, 2013, available at http://www.greentechmedia.com/articles/read/Wisconsins-Helios-Solar-is-Bankrupt-Part-of-SolarWorlds-CASM**
Exhibit 30	**SI Staff, Solar Industry, MX Solar Begins Manufacturing At New Jersey Production Facility, December 15, 2010, available at http://www.solarindustrymag.com/e107_plugins/content/content.php?content.6878**

Exhibit 31 **Press Articles Regarding EU Undertaking**

Exhibit 32 **Official Documents Regarding the EU Undertaking**

Exhibit 33 **U.S. Department of Energy, U.S. Energy Information Administration, U.S. Wet Natural Gas Proved Reserves**

Exhibit 34 **U.S. Department of Treasury, 1603 Program: Payments for Specified Energy Property in Lieu of Tax Credits, March 4, 2013, available at http://www.treasury.gov/initiatives/recovery/Pages/1603.aspx**

Exhibit 35 **Solar Industry Growth Has Produced Steadily Falling Prices**

Exhibit 36 **Polysilicon Oversupply to Continue**

Exhibit 1

Responses to Staff Questions to Respondents

Exhibit 2

Responses to Staff Questions to Petitioner

Exhibit 3

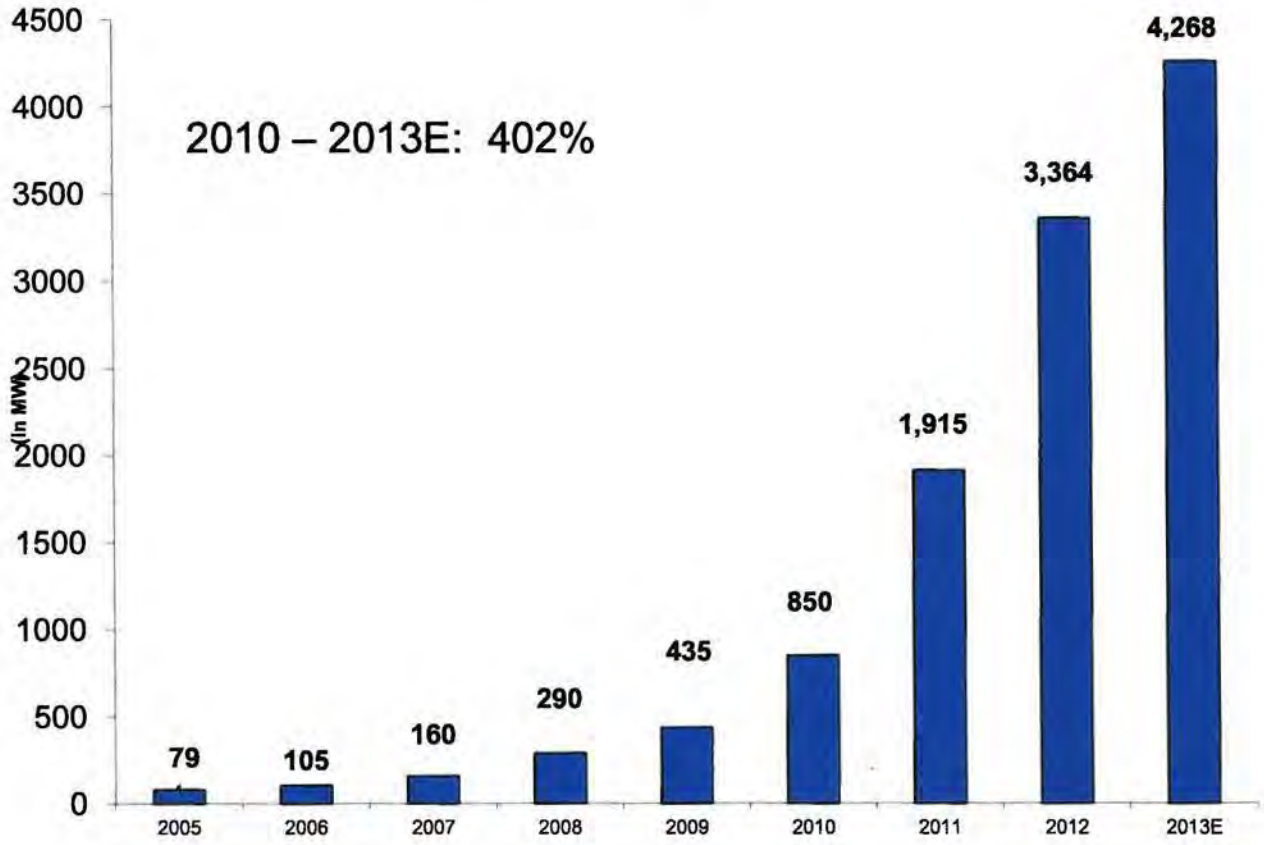
CCCME's Slide Presentation and Supporting Materials for the Staff Conference

Exhibits to Testimony on Behalf of the China Chamber of Commerce for Import and Export of Machinery and Electronic Products (CCCME)

Certain Crystalline Silicon Photovoltaic Products from China and Taiwan
Inv. Nos. 701-TA-511 and 731-TA-1246-1247
(Preliminary)

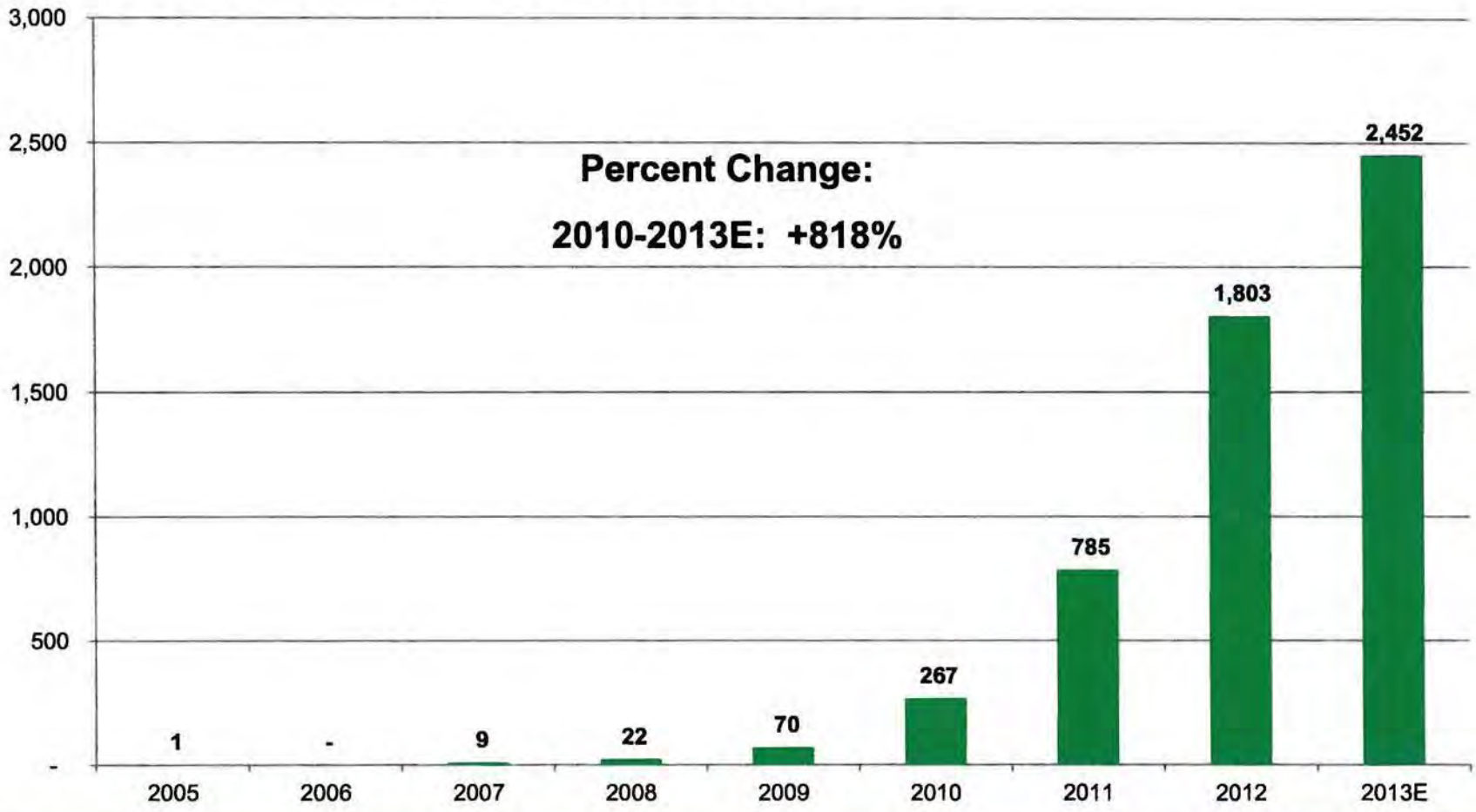
U.S. International Trade Commission
Staff Conference
January 22, 2014

New U.S. Photovoltaic Installations: Total (in megawatts)



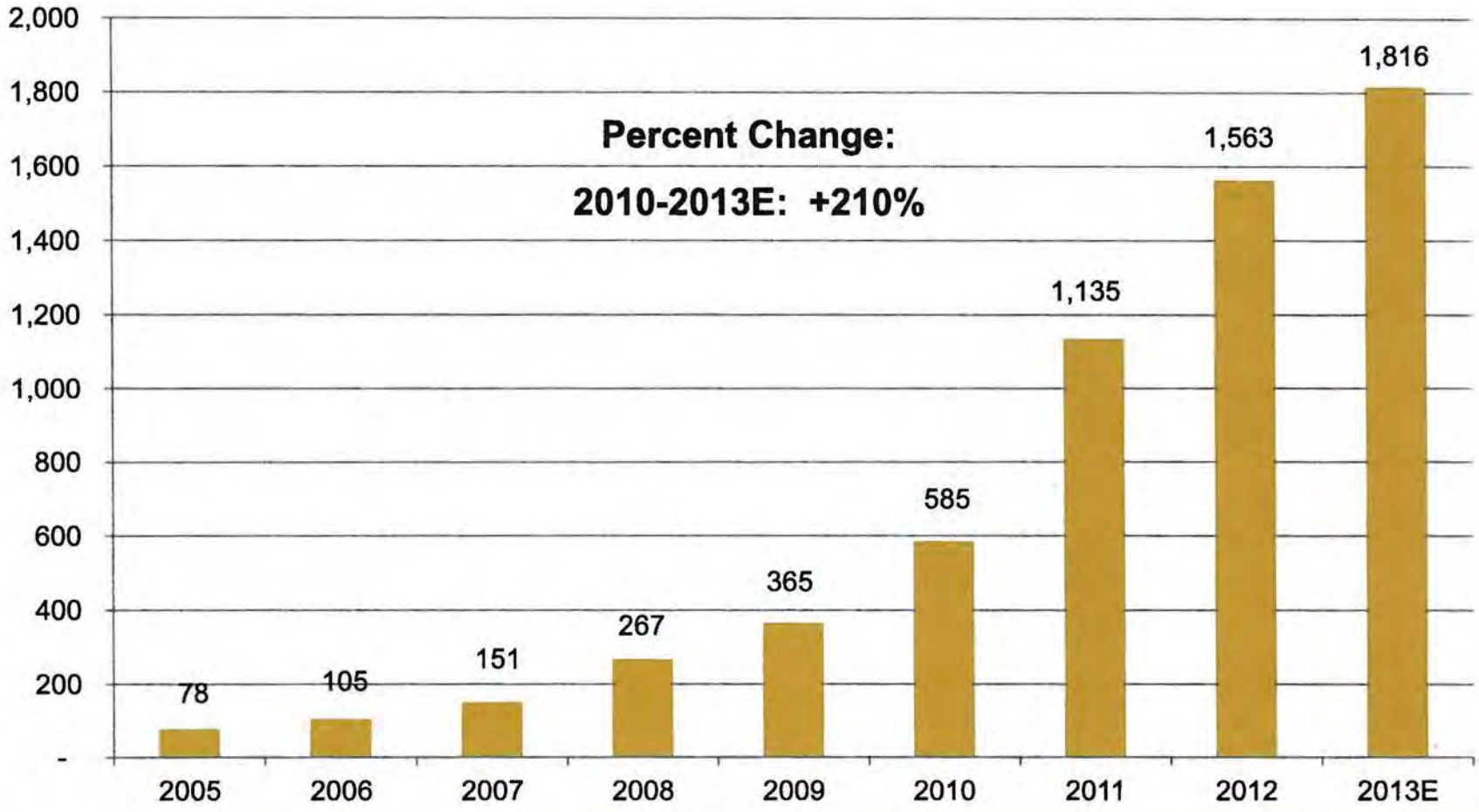
Source: SEIA U.S. Solar Market Insight, 2010 Year in Review, Executive Summary, p. 5; SEIA Solar Energy Facts: Q2, 2011, SEIA Solar Market Insight: Q2 2012; U.S. Solar Market Insight: Q3 2013, Executive Summary.

New U.S. Photovoltaic Installations in the Utility Sector (in megawatts)



Source: SEIA U.S. Solar Market Insight: 2010 Solar Market in Review; SEIA U.S. Solar Market Insight: Q2 2012; SEIA U.S. Solar Market Insight: Q3 2013.

New U.S. Photovoltaic Installations in the Residential/Commercial Sector (in megawatts)



Source: SEIA U.S. Solar Market Insight: 2010 Solar Market in Review; SEIA U.S. Solar Market Insight: Q3 2013.

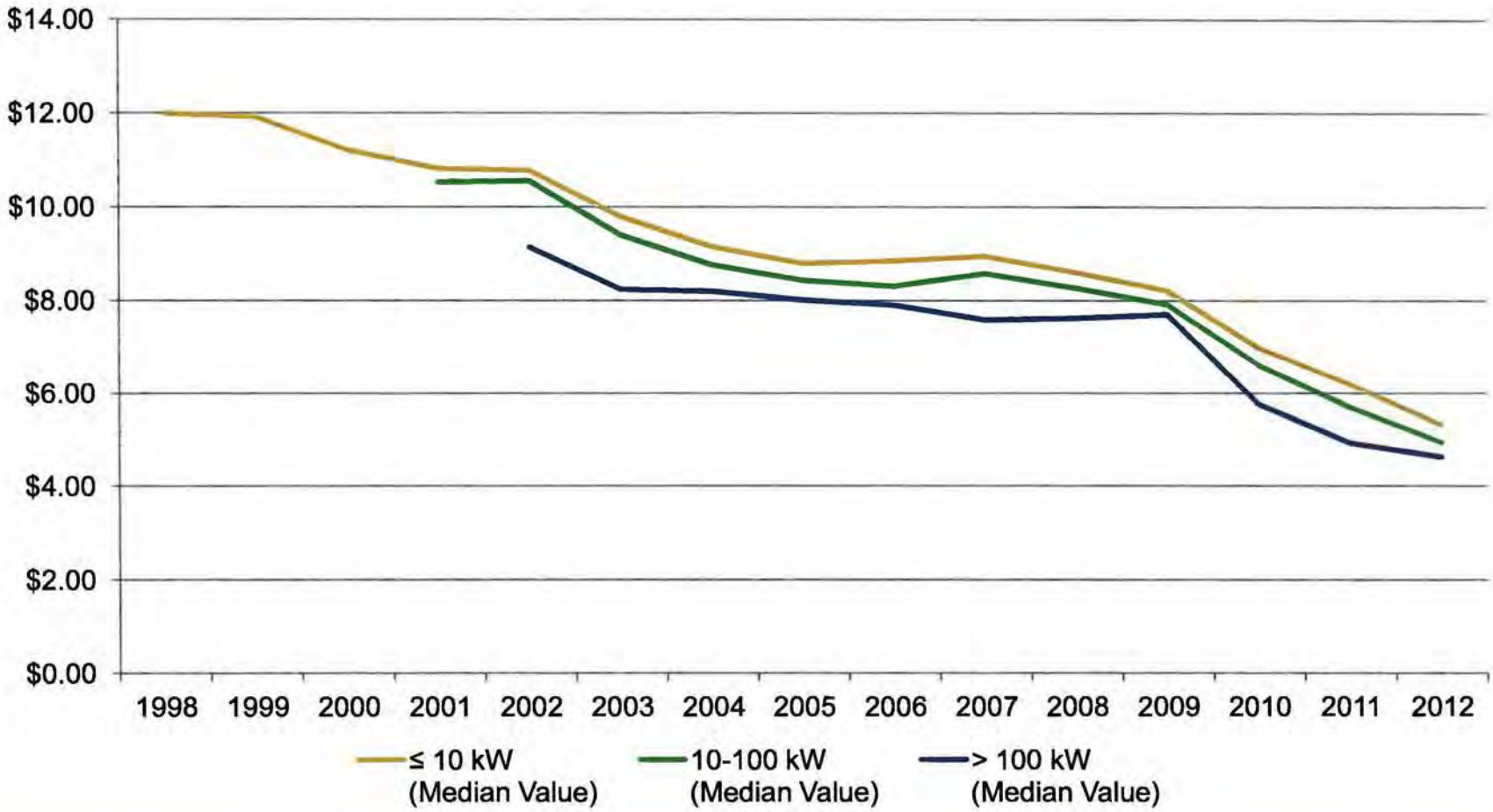
First Solar Exhibit 2010, Page 74 of 223
JinkoSolar v. First Solar - IPR2025-01130

Solar Market: Key Conditions of Competition

Solar Sector	
Utility	New systems must be competitive with "Grid Parity," forward-looking Levelized Cost of Electricity ("LCOE") generated from natural gas, wind, etc.
Residential/Commercial	New systems must generate electricity at a price below the current and expected future price paid by homeowner/business

First Solar Exhibit 2010, Page 75 of 223
JinkoSolar v. First Solar - IPR2025-01130

Installed (Total System) Price of Residential and Commercial PV 1998-2012 (Installed price in 2012$/W)



Source: Tracking the Sun VI: An Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012, July 2013, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory at 13.

First Solar Exhibit 2010, Page 76 of 223
JinkoSolar v. First Solar - IPR2025-01130

U.S. Market Forces Decreasing Prices of CSPV Solar Modules

- Falling polysilicon prices
- Natural gas supply increase and expectations of low future natural gas prices
- Competition with thin-film technology
- Developer demands for module price reductions to offset the impact of reduced subsidies/incentives

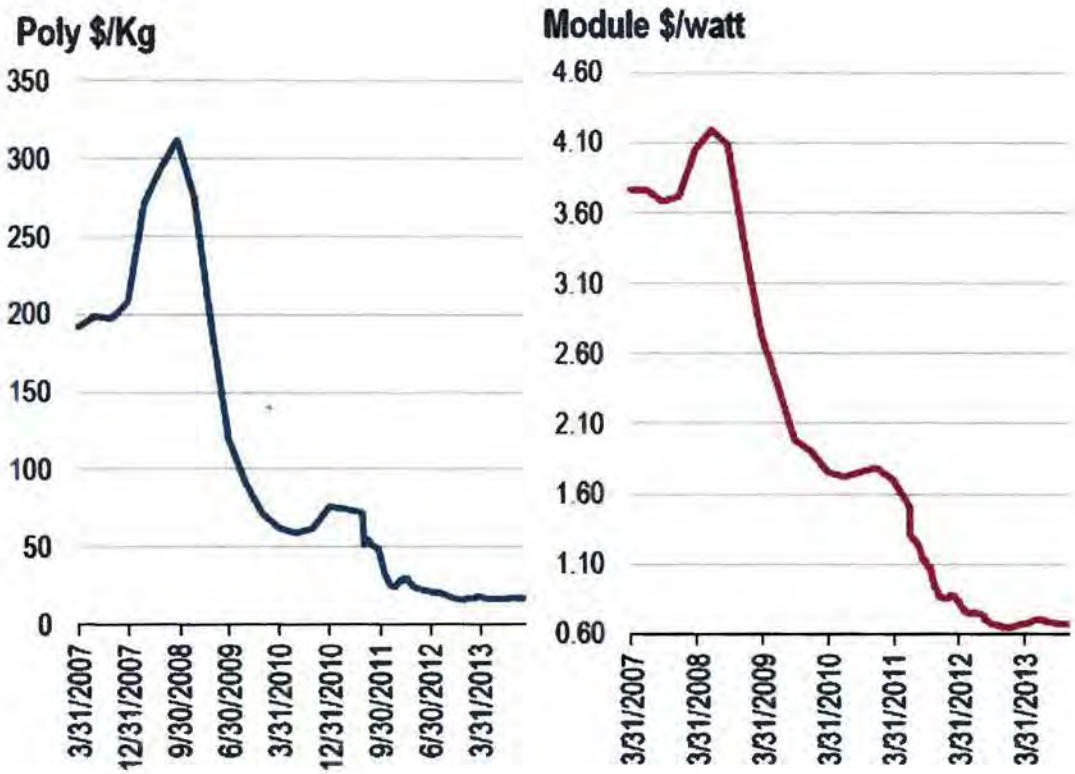
First Solar Exhibit 2010, Page 77 of 223
JinkoSolar v. First Solar - IPR2025-01130

Polysilicon Prices: Credit Suisse Analysis

"**A reduction in polysilicon prices**. Poly, a key material for photovoltaic cells, fell from >$300/kg in 2008 (~$2/watt) to $16-18/kg ($0.09/watt) in 2013, enabling the majority of the cost reductions in solar module pricing. Companies have also reduced their consumption of polysilicon with thinner wafers and diamond wire saws to reduce the cutting process' material loss and increase yields."

Source: Credit Suisse Securities Research & Analytics, "Equity Research: Electric Utilities," December 20, 2013 at 11 (emphasis added).

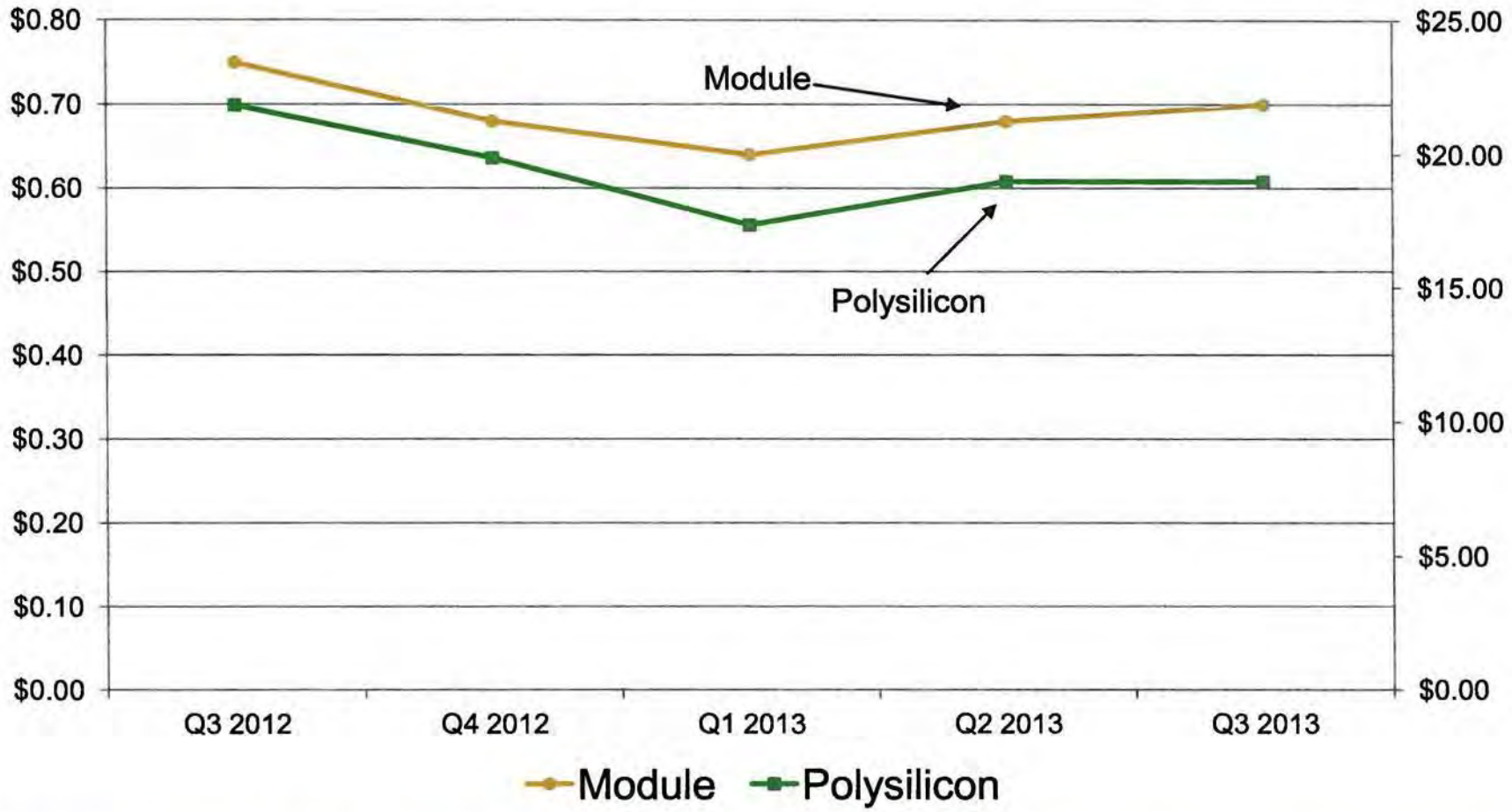
"Polysilicon pricing has been the primary driver of [CSPV module] price reduction"



Source: Credit Suisse Securities Research & Analytics, "Equity Research: Electric Utilities," December 20, 2013 at 12 (data from CS Estimates, PV Insights, Energy Trend).

U.S. Polysilicon and Module Prices, Q3 2012 – Q3 2013

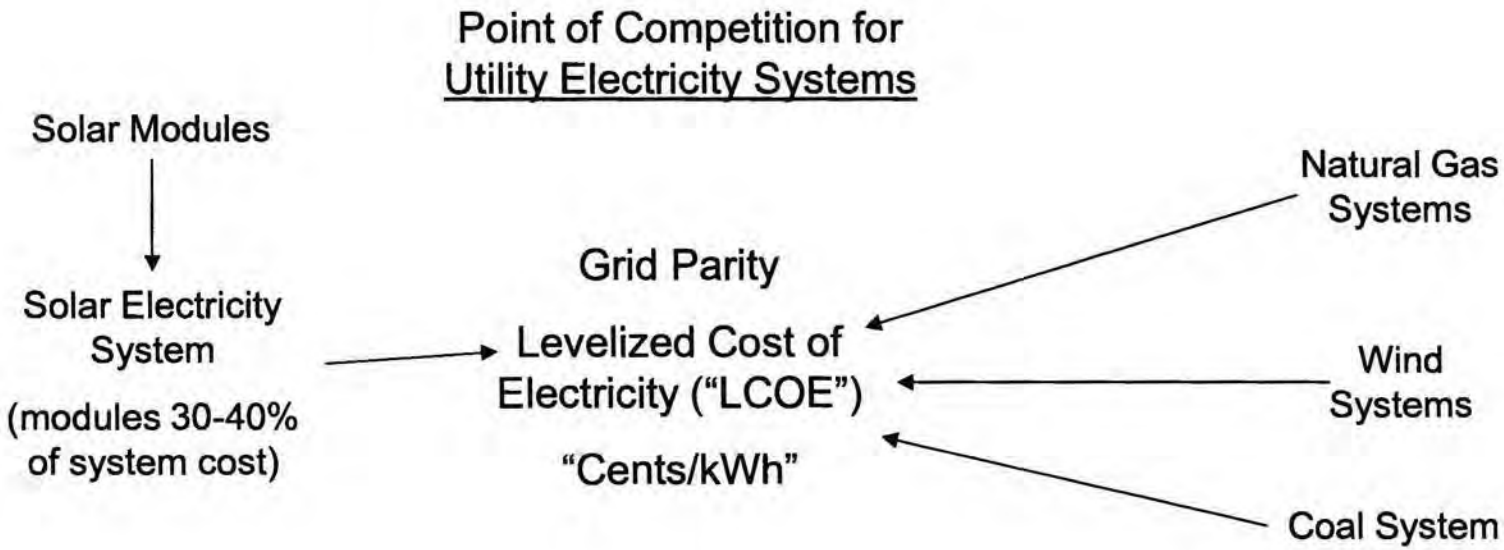
(module price in $/W, polysilicon prices in $/kg)



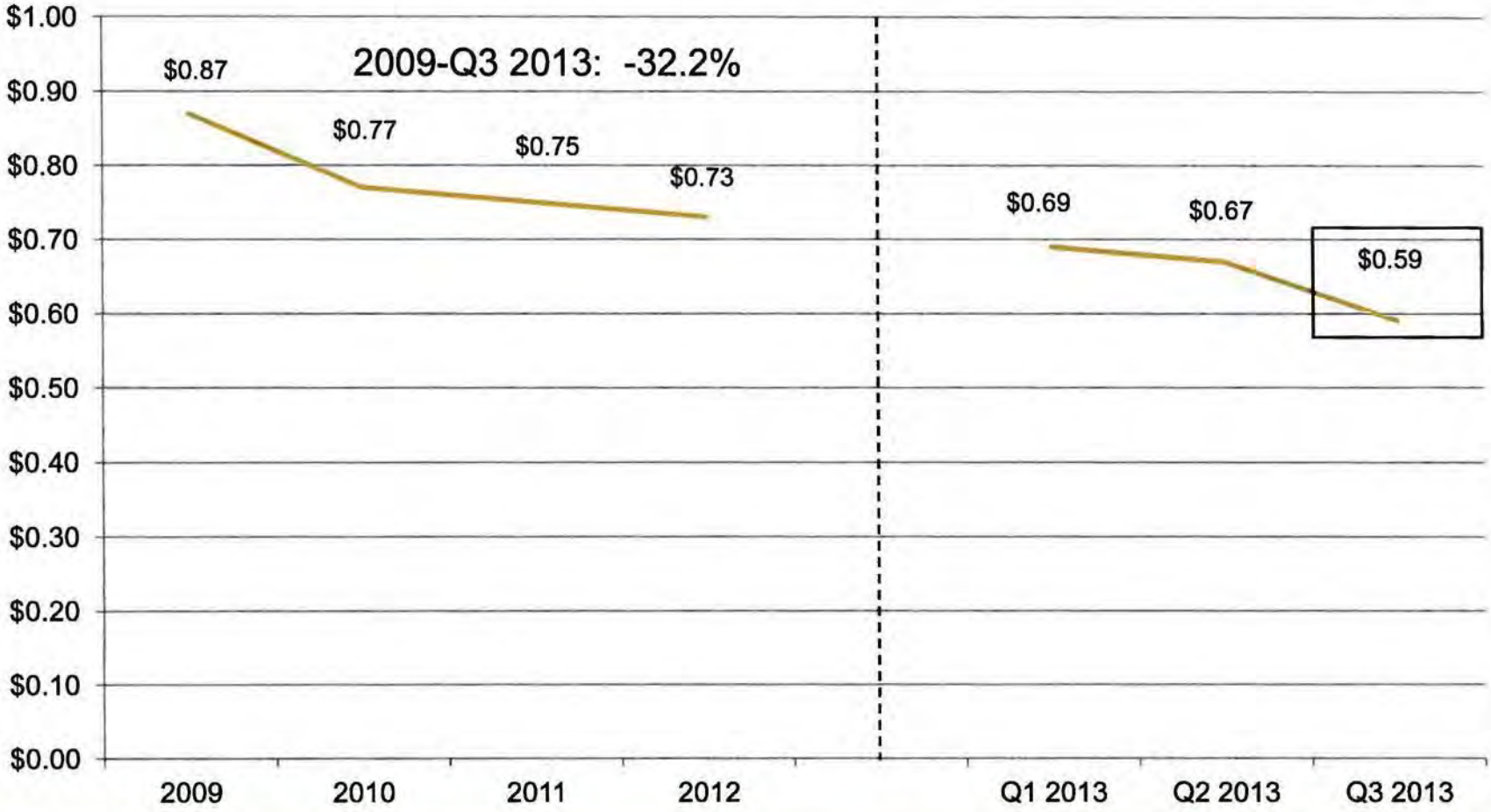
Source: SEIA U.S. Solar Market Insight: Q3 2013.

First Solar Exhibit 2010, Page 80 of 223
JinkoSolar v. First Solar - IPR2025-01130

Solar Modules Must be Sufficiently Low-Cost for a Solar Electricity System to Compete at "Grid Parity"

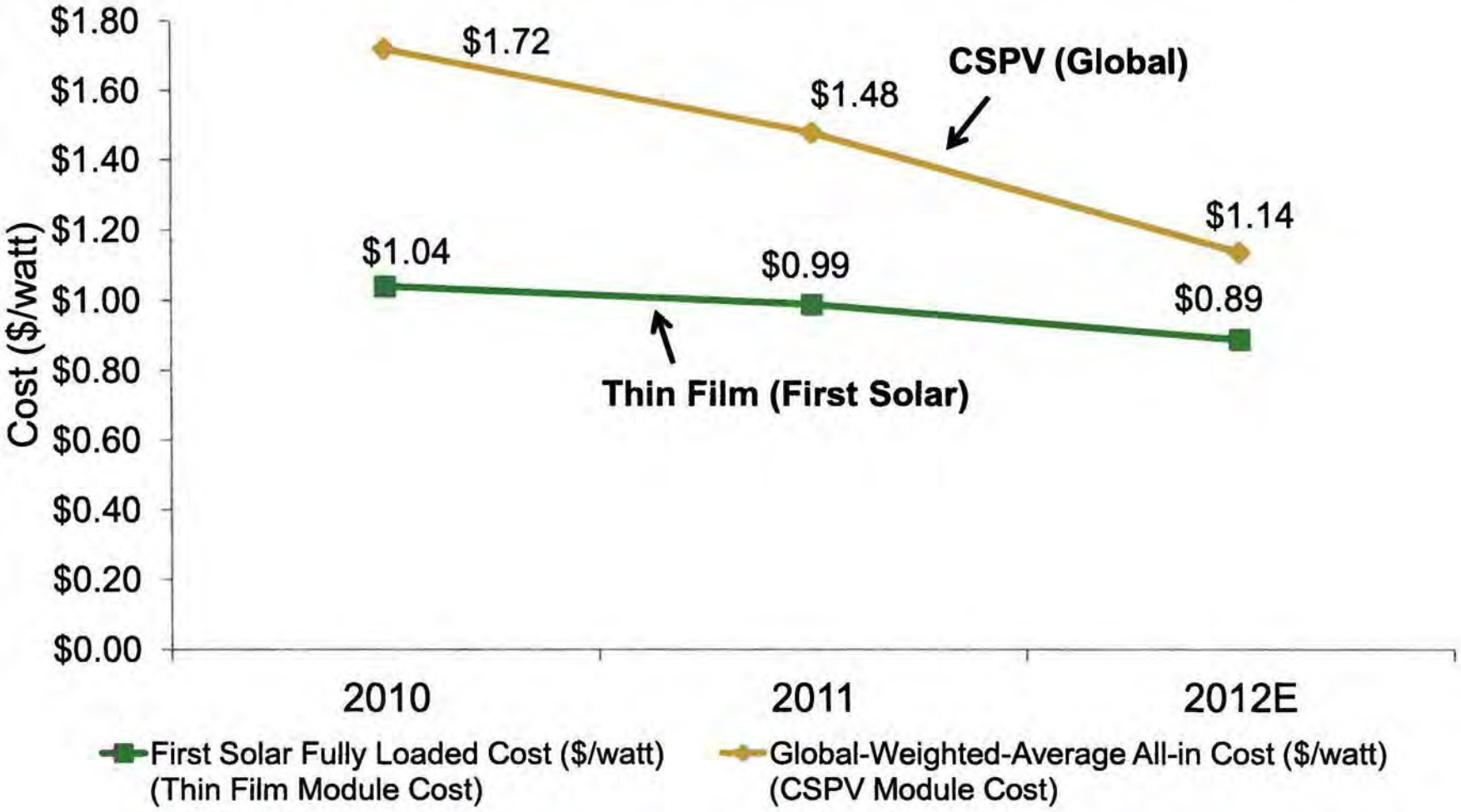


Thin-Film:
First Solar's Per-Watt Production Costs Have Declined Significantly
(in $/watt)



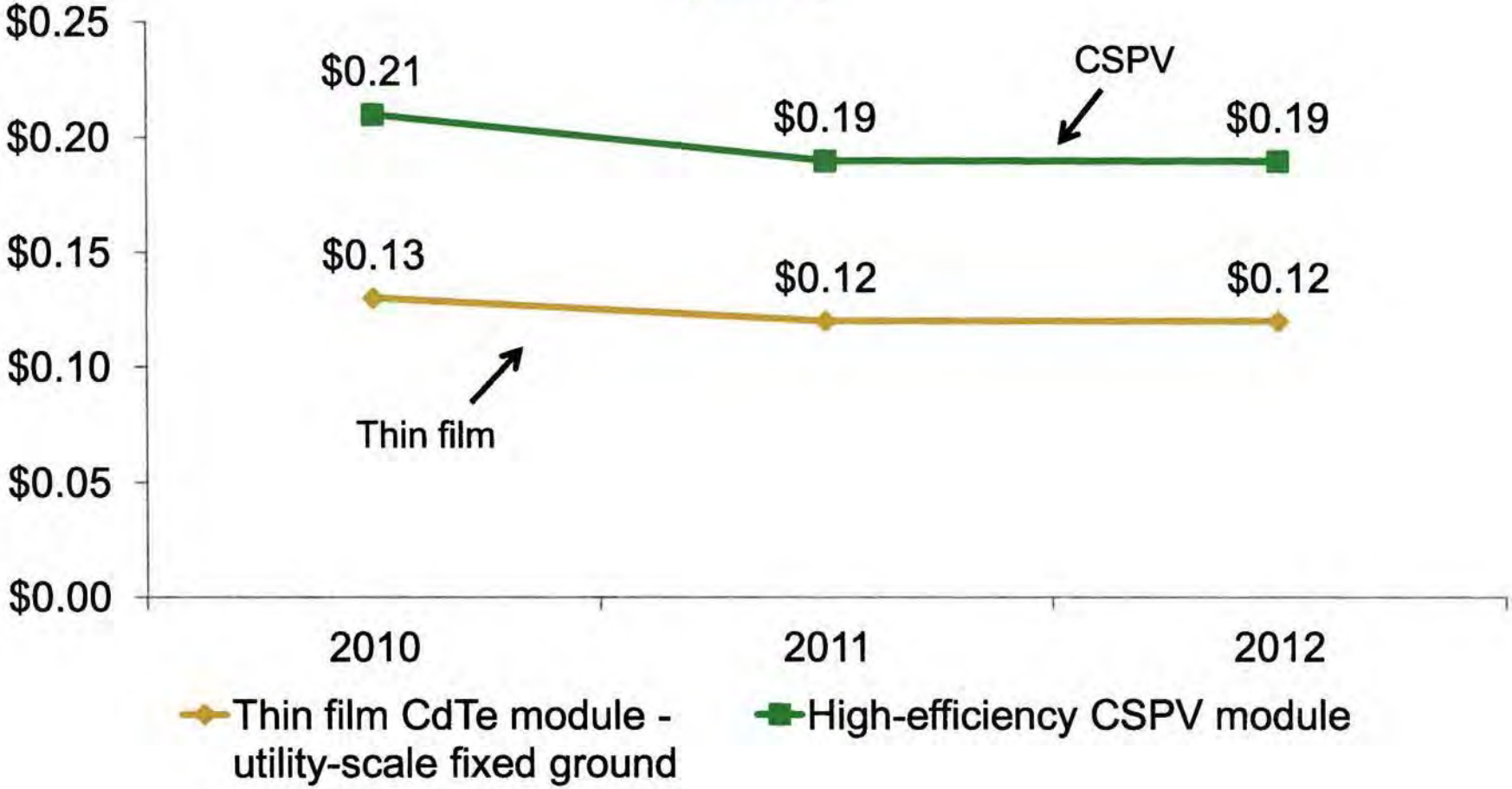
Source: First Solar SEC Form 10-K for 2010 and 2012, Financial Results for Q3, 2013.

Production Costs: Global CSPV vs. First Solar Thin Film Modules



Source: Photon Consulting, "The True Cost of Solar Power: Temple of Doom," at 4

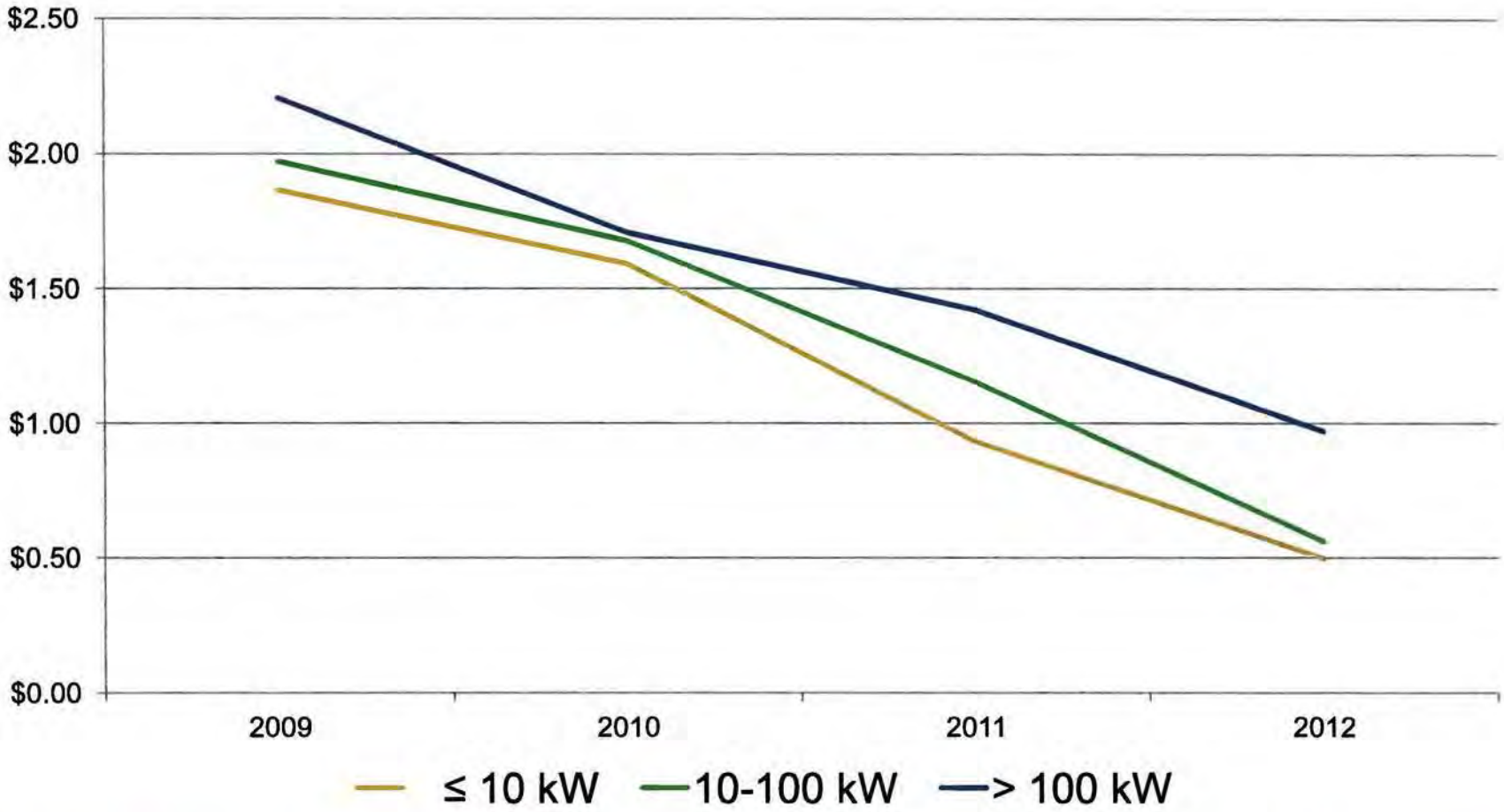
Thin Film vs. CSPV Technology, 2010-12
Levelized Cost of Electricity
($/kWh)



Source: Photon Consulting, "Solar Annual 2012: The Next Wave" at 108.

First Solar Exhibit 2010, Page 84 of 223
JinkoSolar v. First Solar - IPR2025-01130

Reduction in Incentives/Subsidies: Pre-Tax Rebate for Residential and Commercial PV Systems by System Size (median values in 2012$/W)



Source: Tracking the Sun VI: An Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012, July 2013, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory at 17.

First Solar Exhibit 2010, Page 85 of 223
JinkoSolar v. First Solar - IPR2025-01130

U.S. Department of Energy:

"Systems with Chinese-Brand Modules Generally Have Lower Installed Prices than Other Systems, But Not If Comparing Among Similar Module Efficiencies"

"Focusing more narrowly on systems with module efficiencies of 14-16% - the range within which most Chinese-brand modules fall – the installed price differential between systems with Chinese and non-Chinese modules has generally be{en} negligible (and of inconsistent direction). In other words, among systems employing standard-efficiency polycrystalline modules, there is no clear difference in installed prices between those with Chinese-brand modules and those with non-Chinese modules."

Source: Tracking the Sun VI: An Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012, July 2013, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory at 32.

First Solar Exhibit 2010, Page 86 of 223
JinkoSolar v. First Solar - IPR2025-01130

First Solar.

Key Quarterly Financial Data

($ in millions, except gross profit % and net income per share data)
(Unaudited)

	Q3'12	Q4'12	Q1'13	Q2'13	Q3'13	Q3'13 Y/Y	Q3'13 Q/Q
Net sales	$ 839.1	$ 1,075.0	$ 755.2	$ 519.8	$ 1,265.6	51%	143%
Gross profit %	28.4%	27.3%	22.4%	27.0%	28.8%	0.4 ppt	1.8 ppt
Research and development	32.4	31.6	29.9	31.0	35.0	8%	13%
Selling, general and administrative	73.5	63.4	74.5	66.3	63.9	-13%	-4%
Production start-up	1.6	1.6	1.4	1.4	-	-100%	-100%
Restructuring	24.2	24.8	2.3	2.4	57.3	137%	NMF*
Operating income (loss)	107.0	172.0	61.2	39.1	207.9	$ 100.9	$ 168.8
Income tax expense (benefit)	22.8	16.4	7.0	7.5	13.7	$ (9.1)	$ 6.2
Net income (loss)	$ 87.9	$ 154.2	$ 59.1	$ 33.6	$ 195.0	$ 107.1	$ 161.4
Share count - Diluted	87.8	88.5	89.4	91.1	100.4	14%	10%
Net income (loss) per share - Diluted	$ 1.00	$ 1.74	$ 0.66	$ 0.37	$ 1.94	$ 0.94	$ 1.57
Share-based compensation expense	14.0	16.0	16.5	7.4	14.3	2%	93%
Capital expenditures	57.2	40.0	71.7	85.2	69.5	22%	-18%
Cash, cash equivalents, and marketable securities	$ 717.0	$ 1,003.9	$ 1,011.7	$ 1,285.3	$ 1,531.9	114%	19%

See also Notes to our Consolidated Financial Statements

Supplemental Data

(Unaudited)

Net cash provided by (used in) operating activities	$ 22.3	$ 327.6	$ 66.5	$ 222.4	$ 375.1	$ 352.8	$ 152.7
+ Excess tax benefits from share-based compensation arrangements	(5.3)	(34.2)	24.9	30.8	(21.7)	$ (16.4)	$ (52.5)
- Purchases of solar module collection and recycling restricted investment	-	-	-	-	-	$ -	$ -
- Purchases of property, plant and equipment	(57.2)	(40.0)	(71.7)	(85.2)	(69.5)	$ (12.3)	$ 15.7
= Free cash flow	$ (40.2)	$ 253.3	$ 19.7	$ 167.9	$ 283.9	$ 324.1	$ 116.0
MW Produced	489.8	512.1	369.6	388.9	426.0	-13%	10%
Average conversion efficiency	12.7%	12.9%	12.9%	13.0%	13.3%	60 bps	30 bps
Core cost per watt produced (1)	$ 0.64	$ 0.66	$ 0.64	$ 0.63	$ 0.57	$ (0.07)	$ (0.06)
Underutilization / Upgrade (2)	$ 0.03	$ 0.02	$ 0.05	$ 0.04	$ 0.02	$ (0.01)	$ (0.02)
Total cost per watt produced (4)	$ 0.67	$ 0.68	$ 0.69	$ 0.67	$ 0.59	$ (0.08)	$ (0.08)

(1) Beginning in Q1'13 Core cost per watt produced includes share-based compensation expense associated with factory labor.
(2) Underutilization and Upgrades include the costs of underutilizing plant capacity and the down time associated with plant upgrades.
(4) Beginning in Q2'12 Total cost per watt produced excludes German plant operations due to commencement of wind down activities.

A Thought...

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THEME

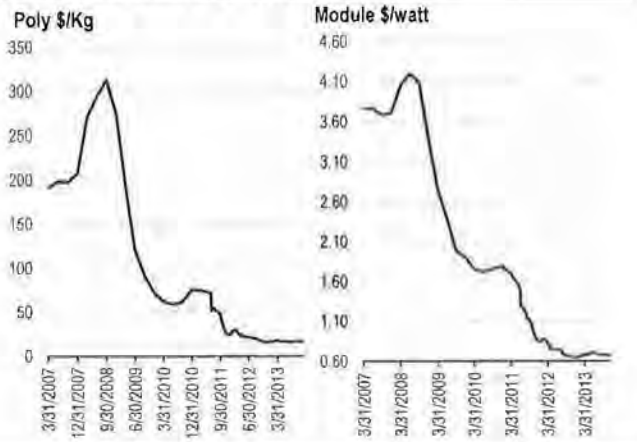
The Transformational Impact of Renewables

Our take: We see an opportunity for renewable energy to take an increasing share of total US power generation, coming in response to state Renewable Portfolio Standards (RPS) and propelled by more competitive costs against conventional generation. We can see the growth in renewables being transformative against conventional expectations with renewables meeting the vast majority of future power demand growth, weighing on market clearing power prices in competitive power markets, appreciably slowing the rate of demand growth for natural gas from the power sector, and requiring significant investment in new renewables.

- **Renewables will meet most of US demand growth.** We estimate that ~85% of future demand growth for power through 2025 (including the impact of coal plant retirements) could be met by renewable generation with compliance to the existing 30 mandatory and 8 voluntary RPS programs. From this we would see over 100 GW of new renewable capacity additions with wind and solar market share more than doubling from 2012 to 2025.
- **Renewables are cost competitive to even cheap against conventional generation.** The clearing price for new wind and solar continues to fall with improvements in utilization and falling capital costs. For wind we are seeing utilization rates 15-20 percentage points higher than 2007 vintage turbines, regularly supporting PPA pricing at or below $30/MWh that effectively 'creates' long-term equivalent natural gas at <$3/MMBtu. Lower capital costs for solar have dropped PPA pricing to $65-80/MWh from well over $100/MWh, making solar competitive with newbuild gas peaking generation.
- **More pressure on power markets and earnings risk for generators.** Using our bottom-up model we see ~$1-2/MWh or 5% price risk or basically capping the power market recovery in the deregulated markets relative to a scenario without significant renewables growth, creating earnings risk for competitive generators with FE and EXC as the Integrateds most at risk with 5-7% EPS exposure in the out years.
- **Further mutes the rate of natural gas demand growth from power.** We estimate renewables slowing the rate of natural gas demand growth from power generation to <0.5 bcf/d through 2020 versus our prior estimate of 1.0-1.2 bcf/d even when taking into account planned coal plant shutdowns and assumed nuclear plant retirements. Looking out through 2020 we estimate cumulative demand for natural gas with RPS compliance will be 5-6 bcf/d lower vs a steady state outlook, or the equivalent of half of all expected LNG exports from the US.

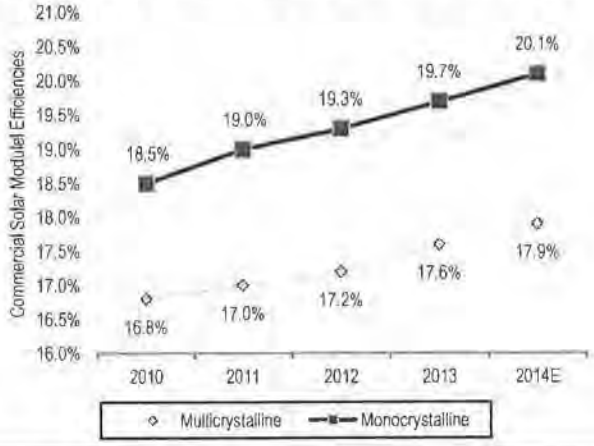
DISCLOSURE APPENDIX AT THE BACK OF THIS REPORT CONTAINS IMPORTANT DISCLOSURES, ANALYST CERTIFICATIONS, AND THE STATUS OF NON-US ANALYSTS. US Disclosure: Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Exhibit 20: Polysilicon pricing has been the primary driver of cost reduction, with poly pricing falling from >$300/kg ($2/watt) to $17-18/kg ($0.09/watt) today



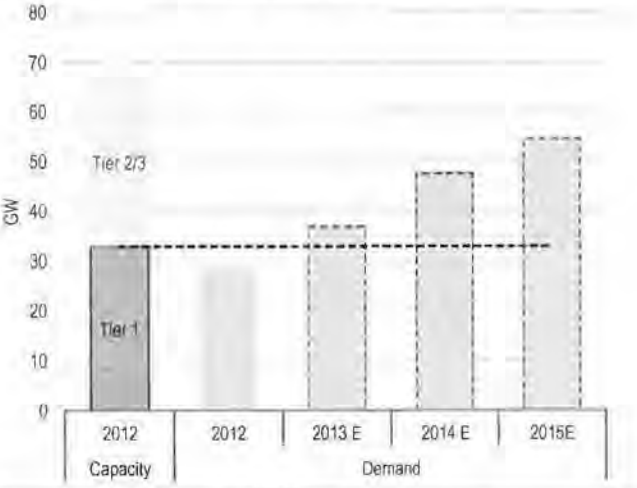
Source: CS Estimates, PV Insights, Energy Trend

Exhibit 21: Solar Cell Efficiency Has Improved ~1.1% over 4 years; contributing modestly to price declines (lower polysilicon usage/watt & higher panel wattage ratings)



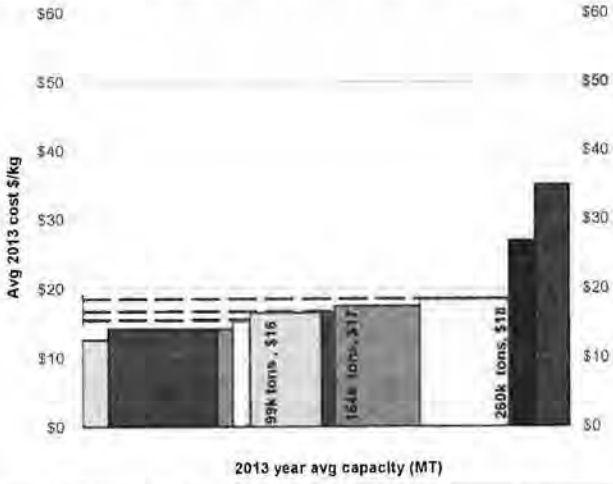
Source: Yingli Green Energy presentations

Exhibit 22: Photovoltaic Cell Supply/Demand



Source: Company data, Credit Suisse estimates

Exhibit 23: Poly Supply/Demand and Cost Stack



Source: Company data, Credit Suisse estimates

The price of distributed generation (rooftop) systems, particularly in the residential market, has also declined significantly with the emergence of rail-free racking systems which can increase the productivity of installation crews (~$0.20/watt savings).

A reduction in the cost of financing solar assets, both utility scale and distributed generation, is also leading to the reduction in solar pricing and increasing its cost-competitiveness. Further reduction in the cost of financing is likely the biggest driver of price declines over the next twelve months. SolarCity, a distributed generation leasing company recently issued $54m in an Asset Backed Securitization (ABS) at a 4.8% coupon with a BBB+ rating. Solar developers are also targeting launching captive publically traded Yield Co structures, including SunEdison along with First Solar and SunPower over time. Tax equity funds, which are often required to monetize the ITC and accelerated depreciation, remain a relatively high cost of capital (~8-9%).

First Solar Exhibit 2010, Page 89 of 223
JinkoSolar v. First Solar - IPR2025-01130

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

Form 10-K

(Mark one)

[x] **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2010

or

[ ] **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-33156

First Solar, Inc .

(Exact name of registrant as specified in its charter)

Delaware	**20-4623678**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

350 West Washington Street, Suite 600
Tempe, Arizona 85281
(Address of principal executive offices, including zip code)
(602) 414-9300
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock, $0.001 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [x] No [ ]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes [ ] No [x]

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes [x] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes [x] No [ ]

to lower FiT levels, which may negatively affect long-term demand and price levels for PV products in Germany. See Item 1: "Business - Support Programs" for a summary of recent developments in the major government subsidy programs in our core and target markets. In light of continually evolving FiT structures in our core European markets, it is uncertain whether there will be sufficient market demand to absorb industry-wide module supply without significant inventory build-up or price reductions. We plan to mitigate this uncertainty in part by continuing to use our North American utility-scale systems pipeline as a buffer against demand fluctuations in Europe and elsewhere.

During 2010, we continued to expand into certain key transition markets, such as the United States, within which affordable solar electricity solutions could be developed and which could ultimately evolve into economically sustainable markets. In January 2010, we completed the acquisition of certain assets from Edison Mission Group's solar project development pipeline consisting of utility-scale solar projects located primarily on private land in California and the southwestern United States. In July 2010, we completed the acquisition of NextLight Renewable Power, LLC, another leading developer of utility-scale solar projects in the southwestern United States. This transaction expanded our pipeline of solar power projects in the southwestern United States and supports our expansion in the U.S. utility-scale market. For instance, in the fourth quarter of 2010, we entered into an agreement to sell to NRG Energy, Inc. the 290 MW AC Agua Caliente solar project, which was part of the Next Light pipeline of projects. Upon its completion, Agua Caliente is expected to be the largest operational PV solar plant in the world.

In the PV module segment, we continue to face intense competition from manufacturers of crystalline silicon solar modules and other types of solar modules and PV systems. Solar module manufacturers compete with one another in several product performance attributes, including reliability and module cost per watt, and, with respect to solar power systems, return on equity (ROE) and levelized cost of electricity (LCOE), meaning the net present value of total life cycle costs of the solar power project divided by the quantity of energy which is expected to be produced over the system's life. The ability to expand manufacturing capacity quickly is another source of differentiation among solar module manufacturers, and certain of our competitors may have a faster response time to capacity expansion than we do and/or an ability to expand capacity in finer increments than we can. We are the lowest cost PV module manufacturer in the solar industry, based on publicly available information, as evidenced by the further reduction in our average manufacturing cost per watt from $0.87 during 2009 to $0.77 during 2010 . This cost advantage is reflected in the price at which we sell our modules or fully integrated systems and enables our systems to compete favorably in respect of their ROE or LCOE. Our cost competitiveness is based in large part on our proprietary technology (which enables conversion efficiency improvements and enables us to produce a module in less than 2.5 hours using a continuous and highly automated industrial manufacturing process, as opposed to a batch process), our scale, and our operational excellence. In addition, our modules use approximately 1-2% of the amount of semiconductor material that is used to manufacture traditional crystalline silicon solar modules. The cost of polysilicon is a significant driver of the manufacturing cost of crystalline silicon solar modules. The timing and rate of change in the cost of silicon feedstock could lead to changes in solar module pricing levels. Although we are not a crystalline silicon module manufacturer, we estimate, based on industry research and public disclosures of our competitors, that a $10 per Kg increase or decrease in the price of polysilicon could increase or decrease, respectively, our competitors' manufacturing cost per watt by approximately $0.06 to $0.07 over time. Given the lower conversion efficiency of our modules compared to crystalline silicon modules, there may be higher BoS costs associated with systems using our modules. Thus, to compete effectively on the basis of LCOE, our modules may need to maintain a certain cost advantage per watt compared to crystalline silicon-based modules. During 2010 , we reduced our manufacturing cost per watt by 11% from our cost per watt in 2009 and continued to reduce BoS costs associated with systems using our modules.

While our modules currently enjoy competitive advantages in these product performance attributes, there can be no guarantee that these advantages will continue to exist in the future to the same extent or at all. Any declines in the competitiveness of our products could result in margin compression, a decline in the average selling prices of our solar modules, erosion in our market share for modules, a decrease in the rate of revenue growth, and/or a decline in overall revenues. We have taken, and continue to take, several actions to mitigate the potential impact resulting from competitive pressures, including adjusting our pricing policies as necessary in core market segments to drive module volumes, continuously making progress along our cost reduction roadmap, and focusing our research and development on increasing the conversion efficiency of our solar modules.

As we expand our systems business into transition and sustainable markets, we can offer value beyond the PV module, reduce our exposure to module-only competition, and provide comprehensive utility-scale PV systems solutions that significantly reduce solar electricity costs. Thus, our systems business allows us to play a more active role than many of our competitors in managing the demand for and manufacturing throughput of our solar modules. Finally, we seek to form and develop strong partner relationships with our customers and continue to develop our range of offerings, including EPC capabilities and O&M services, in order to enhance the competitiveness of systems using our solar modules.

Financial Operations Overview

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

Form 10-K

(Mark one)

[x] **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2012

or

[ ] **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-33156

First Solar, Inc .

(Exact name of registrant as specified in its charter)

Delaware	**20-4623678**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

350 West Washington Street, Suite 600
Tempe, Arizona 85281
(Address of principal executive offices, including zip code)
(602) 414-9300
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock, $0.001 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [x] No [ ]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes [ ] No [x]

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes [x] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes [x] No [ ]

(Dollars in thousands)	2012	2011	2010
Solar module revenue	$ 325,427	$ 1,523,695	$ 1,986,746
Solar power system revenue	3,043,118	1,242,512	576,769
Net sales	$ 3,368,545	$ 2,766,207	$ 2,563,515

Fiscal Years Ended December 31, 2012 and December 31, 2011

Net Sales

(Dollars in thousands)	Years Ended 2012	Years Ended 2011	Year Over Year Change	
Net Sales (Segment Profile)				
Components	$ 1,185,958	$ 1,941,583	$ (755,625)	(39)%
Systems	2,182,587	824,624	1,357,963	165 %
Total	$ 3,368,545	$ 2,766,207	$ 602,338	22 %

The 22% increase in net sales for 2012 compared to 2011 was primarily due to a 165% increase in net sales by our systems segment, which was partially offset by a 39% decrease in net sales from our components segment.

Net sales from our systems segment, which excludes solar modules used in our systems projects, increased by $1,358 million , primarily due to increases in net sales from our AV Solar Ranch One, Topaz, Copper Mountain 2, St. Clair, Silver State North, Alpine, Imperial Energy Center South, and Avra Valley projects, partially offset by decreases in net sales from our Agua Caliente, Amherstburg 2, Santa Teresa and Paloma projects. The increase in net sales is due to the number and size of projects under construction between the periods as well as the timing of when all revenue recognition criteria have been met.

Net sales from our components segment decreased $756 million primarily due to a 33% decrease in module average selling prices, including modules used in our systems projects, and an 8% decrease in the volume of watts sold.

Cost of Sales

(Dollars in thousands)	Years Ended 2012	Years Ended 2011	Year Over Year Change	
Cost of Sales				
Components	$ 1,130,196	$ 1,275,439	$ (145,243)	(11)%
Systems	$ 1,385,600	$ 519,017	$ 866,583	167 %
Cost of sales	$ 2,515,796	$ 1,794,456	$ 721,340	40 %
% of net sales	74.7%	64.9%		

The 40% increase in cost of sales during the year ended December 31, 2012 compared with the year ended December 31, 2011 was primarily due to an $867 million increase in our systems segment primarily for BoS and other construction costs related to an increase in the number and size of various utility-scale solar power systems under construction between the periods.

These increases were partially offset by a decrease in cost of sales for our components segment of $145 million including decreases of $168.3 million due to a reduction in the volume of solar modules sold and continuous cost reductions in our manufacturing process and a $80.1 million reduction in expense for costs associated with voluntary remediation efforts related to our June 2008 - June 2009 manufacturing excursion. These component segment decreases were partially offset by a $44.3 million increase related to the underutilization of our manufacturing capacity primarily related to the idling of manufacturing lines in Perrysburg, Malaysia and Germany during portions of 2012, a $25.3 million increase for certain lower of cost or market inventory write-downs primarily as a result of declines in market pricing, a $18.3 million increase related to accelerated deprecation for certain manufacturing equipment that will be replaced as part of our planned equipment upgrade programs, and a $15.8 million increase in expense for costs associated with voluntary remediation efforts for a workmanship issue affecting a limited number of solar modules manufactured between October 2008 and June 2009.

Our average manufacturing cost per watt declined by $0.02 per watt, or 3% , from $0.75 in 2011 to $0.73 in 2012 and included $0.01 of non-cash stock based compensation. The decrease is the result of increased module conversion efficiencies realized, partially offset by increased underutilization during the year ended December 31, 2012.

First Solar Exhibit 2010, Page 93 of 223
JinkoSolar v. First Solar - IPR2025-01130

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TO PUBLIC SUMMARY

Tracking the Sun VI

An Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012

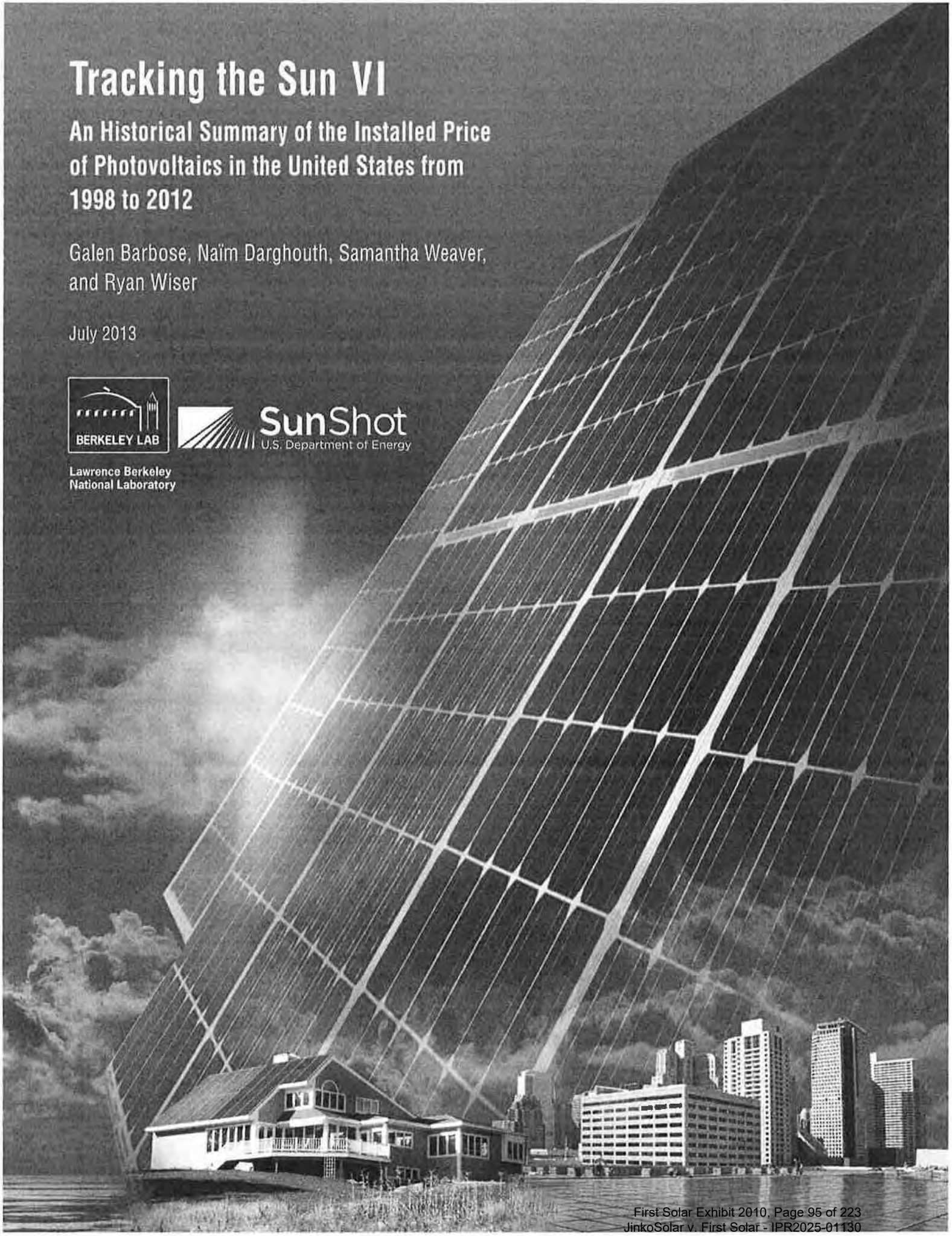
Galen Barbose, Naïm Darghouth, Samantha Weaver, and Ryan Wiser

July 2013

BERKELEY LAB

Lawrence Berkeley National Laboratory

SunShot
U.S. Department of Energy



First Solar Exhibit 2010, Page 95 of 223
JinkoSolar v. First Solar - IPR2025-01130

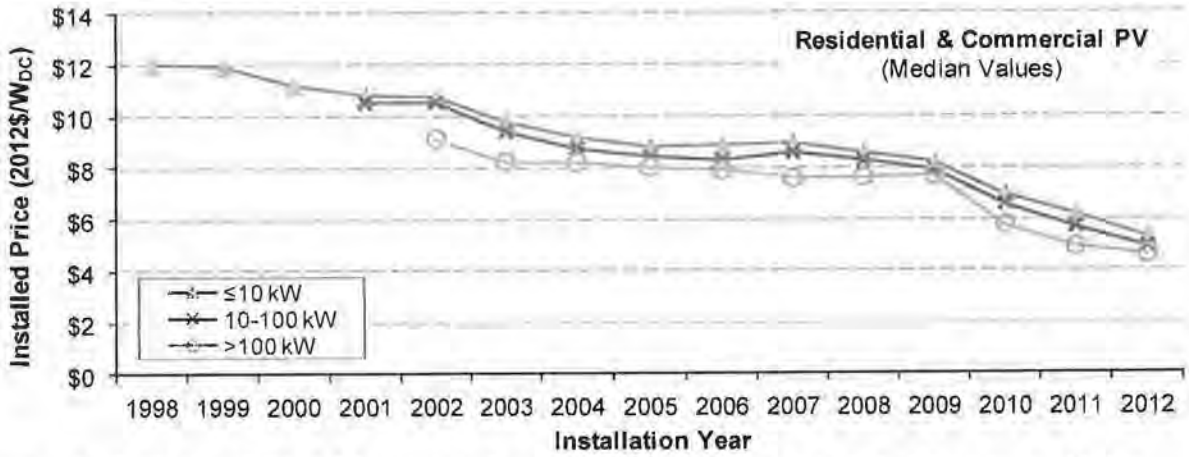
3. Installed Price Trends: Residential and Commercial PV

This section describes trends in the installed price of grid-connected, *residential and commercial* PV systems, based on the data sample and cleaning methods described in Section 2. The installed price data represent reported installed prices, prior to receipt of any financial incentives (e.g., rebates, tax credits, etc.). As indicated previously, the data sample excludes systems for which the reported price was deemed likely to represent an appraised value, rather than a purchase price paid to an installer (see Appendix A for further details).

The present section begins by describing trends in installed price over time, decomposing those trends into underlying module and non-module costs, and presenting temporal trends related to cash incentives provided through state and utility programs. The section then compares installed prices between the United States and other international markets, with some focus on Germany. It then examines the wide variability in installed prices across projects, describing trends by system size, among individual states, between third party-owned and customer-owned systems, across host customer sectors, and between various types of applications and technologies, including: microinverters vs. central inverters, systems with varying module efficiencies, Chinese-brand vs. non-Chinese-brand modules, residential new construction vs. residential retrofit, BIPV vs. rack-mounted systems, rooftop vs. ground-mounted systems, and tracking vs. fixed-tilt systems.

Installed Prices Continued Their Precipitous Decline in 2012

Figure 7 presents the median installed price of all residential and commercial projects within the sample, segmented into three system size groupings, from 1998 through 2012. Among the roughly 50,000 residential and commercial PV systems in the sample installed in 2012, the median installed price was \$5.3/W for systems ≤10 kW, \$4.9/W for systems 10-100 kW in size, and \$4.6/W for systems >100 kW. Importantly, though, these median values represent central tendencies, and considerable spread exists among the data, as will be summarized in subsequent figures. Also of particular note is that the national price trends in Figure 7 are dominated by trends within California, which constitutes a large fraction of the total U.S. market and, as will be shown later, has relatively high PV prices compared to other states.



Notes: See Table 1 and Table B-2 for residential and commercial PV sample sizes by installation year. Median installed prices are shown only if 15 or more observations are available for the individual size range.

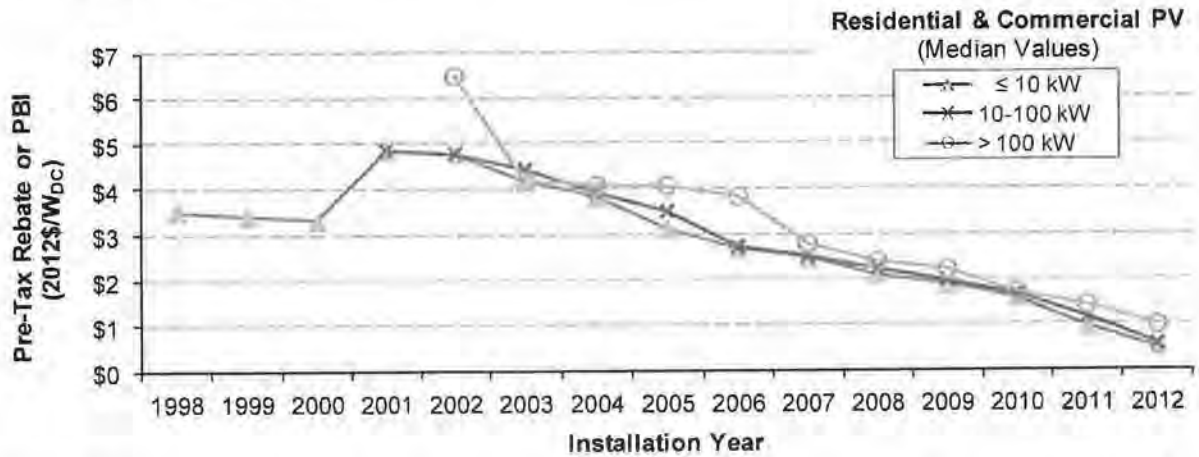
Figure 7. Installed Price of Residential & Commercial PV over Time

First Solar Exhibit 2010, Page 96 of 223
JinkoSolar v. First Solar - IPR2025-01130

As shown in Figure 10, cash incentives have declined steadily and significantly over the past decade (on a per-kW basis). Among systems installed in 2012, median cash incentives ranged from \$0.5/W to \$1.0/W across the three system size categories shown, having fallen by more than \$4.0/W (roughly 85% to 90%) from their historical peak in 2001/2002. Within just the last year of the analysis period, median cash incentives fell by \$0.4/W to \$0.6/W across the size ranges shown. Although the incentive levels depicted in Figure 10 are, to some extent, dominated by trends within California's programs, which comprise a large portion of the data sample, incentives within nearly all of the PV incentive programs in the sample have declined over time (see Table B-4 in the Appendix for incentive trends over time for each individual program).

From the perspective of the customer-economics of PV, the steady decline in cash incentives has offset reductions in installed prices, to varying degrees. Over the course of the past decade, the median pre-tax value of cash incentives provided through state and utility programs has declined by an amount equivalent to 82% to 88% of the corresponding drop in installed prices, depending on system size. Within the last year of the analysis period, the reduction in cash incentives equaled 50% of the installed price decline for ≤10 kW systems and 150% for >100 kW systems.

The continued ratcheting down of cash incentives provided through state and utility PV incentive programs reflects a combination of drivers. In part, program administrators have reduced these incentives as other sources of financial support for PV projects – most notably, increases in the federal ITC and the emergence of SREC markets in a number of states (see Text Box 3) – have become more widely available or lucrative. PV incentive program administrators have also reduced incentives over time both in response to installed price declines and to encourage further declines. The premise behind the latter is that regular and scheduled incentive reductions can provide a long-term signal to the industry to reduce costs and improve installation efficiencies. In addition, to the extent that value-based pricing exists – where installers are able to price their systems based on the value provided to the customer rather than on the underlying cost borne by the installer – incentive reductions may force installers to reduce installed prices, in order to maintain the targeted level of returns for system owners.



Notes: The figure depicts the pre-tax value of rebates and PBI payments provided through state/utility PV incentive programs, excluding systems that received incentives solely in the form of ongoing SREC payments over time. The high median incentive for >100 kW systems in 2002 reflects the large percentage of systems that received an incentive through LADWP's PV incentive program, which provided especially lucrative incentives in that year. Results are excluded if fewer than 15 observations are available.

Figure 10. State/Utility Cash Incentives for Residential & Commercial PV

First Solar Exhibit 2010, Page 97 of 223
JinkoSolar v. First Solar - IPR2025-01130

Systems with Chinese-Brand Modules Generally Have Lower Installed Prices than Other Systems, But Not If Comparing Among Similar Module Efficiencies

The rapid expansion of the Chinese photovoltaic industry has transformed the global PV market and had significant impacts on installed price trends. These impacts are, in part, associated with the large over-supply of PV manufacturing capacity that has persisted over recent years, contributing to steep reductions in global module selling prices. In addition, Chinese-brand modules are generally somewhat lower-priced than modules manufactured in Europe, the United States, or Japan. Module spot market price indices published by UBS, for example, peg recent prices for Chinese modules at roughly $0.2/W to $0.3/W below those for EU/US/Japanese brands (Meymandi and Chin 2013). One might therefore suppose that some portion of the recent reduction in the installed price of PV in the United States is attributable directly to the increasing market share of Chinese modules (in addition to the *indirect* effect via downward pressure on the price of non-Chinese modules).

To examine this supposition, Figure 26 compares the installed price of systems with Chinese and Non-Chinese modules installed in 2012, and Table 6 presents the corresponding time series data. As shown, the relationships differ critically depending on whether one controls for module efficiency. Across all module efficiencies, installed prices are modestly lower for systems with Chinese-brand modules, with an installed price differential of $0.3/W to $0.4/W among 2012 systems, depending on system size, and somewhat larger differences in prior years. This gap in system installed prices is roughly on par with the differential in spot market prices for Chinese and non-Chinese modules, and it largely mirrors the installed price differential noted previously between systems with standard-efficiency and premium-efficiency modules.

Focusing more narrowly on systems with module efficiencies of 14-16% – the range within which most Chinese-brand modules fall – the installed price differential between systems with Chinese and non-Chinese modules has generally be negligible (and of inconsistent direction). In other words, among systems employing standard-efficiency polycrystalline modules, there is no clear difference in installed prices between those with Chinese-brand modules and those with non-Chinese modules. Collectively, these results suggest that the increasing prevalence of Chinese-brand modules may have contributed modestly to installed price reductions in the United States, but only to the extent that Chinese-brand modules displaced higher efficiency non-Chinese brands.

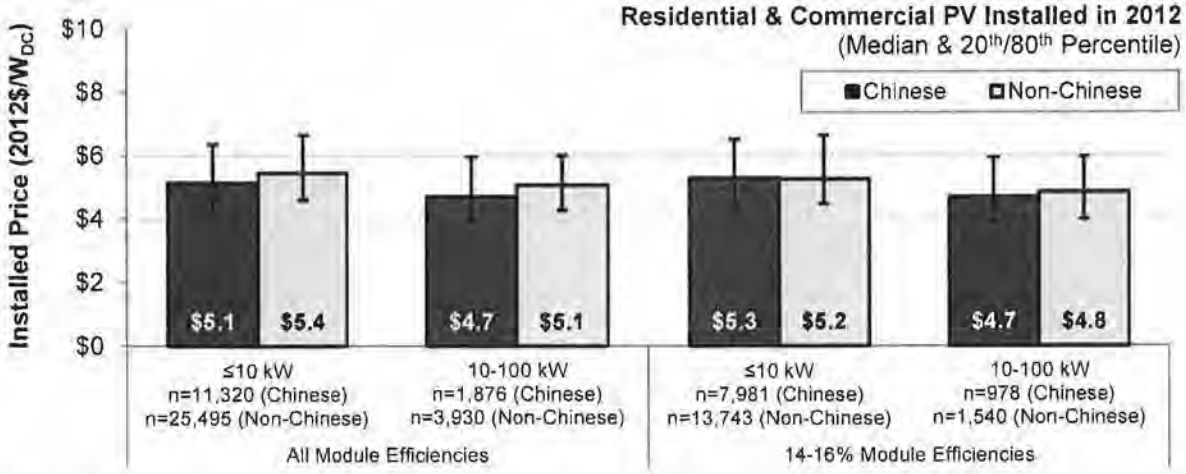


Figure 26. Installed Price of PV Systems with Chinese vs. Non-Chinese Modules

First Solar Exhibit 2010, Page 98 of 223
JinkoSolar v. First Solar - IPR2025-01130

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Exhibit 4

Statement of John M. Stanton

U.S. INTERNATIONAL TRADE COMMISSION

In The Matter Of: Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan	Investigation Nos. 701-TA-511 & 731-TA-1186-1187 (Preliminary)

STATEMENT OF JOHN M. STANTON UNDER 28 U.S.C. § 1746

I, John M. Stanton, state the following:

1. I currently serve as Vice President of Policy and Electricity Markets, SolarCity Corporation ("SolarCity"). I joined SolarCity in March 2010. Prior to that time, I served as Executive Vice President and General Counsel at the Solar Energy Industries Association ("SEIA"), the national trade association for the solar industry, and have worked on energy and environmental issues throughout my career.

2. Founded in July 2006, SolarCity is a leading provider of residential solar power systems. It also installs solar power systems for utilities, such as KIUC in Hawaii, for commercial entities, such as Walmart, eBay and Intel, and for military housing.

3. As of December 31, 2009, at the start of the period of investigation ("POI"), SolarCity had installed solar systems in just four (4) states: Arizona, California, Oregon, and Washington.

4. The company's geographic footprint has expanded rapidly over the past four years, and as of December 31, 2013, it has now installed solar systems in twenty-three (23) states and the District of Columbia:

   Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Texas, Vermont, Virginia, Washington, and the District of Columbia.

5. SolarCity is by far the largest installer of solar systems in the residential segment of the market and as of Q3 2013, accounted for approximately 32% of the solar system installations in that market segment. This is a larger market share than the next thirteen (13) largest residential installers <u>combined</u>. SolarCity currently has more than 80,000

customers in the United States and employs more than 4,000 workers. These numbers are growing every day.

6. This statement addresses three points discussed during the Staff Conference in the captioned investigations, which was held on January 22, 2014, specifically: (A) the importance of the Zep-compatible mounting system in the residential segment of the solar market, particularly toward the end of POI; (B) the head-to head competition between crystalline silicon photovoltaic ("CSPV") modules and thin film modules in the residential market segment; and (C) price competition with delivered energy costs.

A. The Zep-Compatible Mounting System

7. Zep Solar, Inc. has developed a specialized mounting system that provides numerous advantages to installers and consumers. In particular, it provides important installation efficiencies and a superior aesthetic appearance.

8. Although the Zep patent was filed in 2004, the product was first launched in late 2009 and the first installation occurred in the U.S. in the spring of 2010. A document entitled, "Zep Solar TimeLine" is provided in Attachment 1.

9. The Zep Solar website may be found at www.zepsolar.com. The website contains a detailed discussion of the various components of the Zep system. Simple installation instructions and illustrations are included in the attached Zep "Quick Start Guide." *See* Attachment 2.

10. In order to use the Zep system, frames for modules must include a unique proprietary roof fastening system. In order to produce Zep-compatible frames, there must be a slight retooling of the frame bending machinery. No changes to the other elements of a module are needed.

11. In addition, one must enter into a License Agreement with Zep Solar. The primary purpose of the license is to protect Zep's intellectual property. Thus, no royalties are due until after a module producer has sold at least five (5) MW of Zep-compatible modules. Even then, the total royalty is only $10,000 per year (assuming the producer continues to sell at least five (5) MW of Zep-compatible modules in the year in question). A copy of the Zep License Agreement is set out in Attachment 3.

12. These financial costs are far from onerous, and given the many advantages of the Zep system, a number of module producers are Zep Licensees, including (but not limited to) Suniva (a U.S. producer), Sharp Electronics, Trina Solar, Yingli Solar, Canadian Solar, BenQ Solar (AUO), Renesola, Hanwha SolarOne, JA Solar, ET Solar, Ming Hwei Energy, Upsolar, Sonali Solar, DMEGC, Centrosolar, and NESL.

13. As previously stated, the first U.S. installations of Zep-compatible solar modules occurred in the spring of 2010. Using GTM's "U.S. Solar Market Insight Report" for Q3 2013, Zep Solar has calculated that Zep-compatible systems represented approximately:

    1% of total residential installations in 2010;

    3% of total residential installations in 2011;

    13% of total residential installations in 2012; and

    43% of total residential installations in 2013.

14. Indeed, looking at only the final six months of 2013, Zep Solar estimates that Zep-compatible modules were used in approximately 57% of all residential installations (with an installation share of approximately 69% in the final quarter of the year).

15. This extraordinary explosive growth is attributable in large part to the fact that SolarCity began testing the Zep system in 2012. The company was delighted with the results and greatly expanded its use of the system in 2013, so that by mid-2013 SolarCity was moving toward using the Zep system on 100% of its residential installations.

16. During 2013, the system was also in widespread use by other residential installers in the United States.

17. Although a number of suppliers produce solar modules with Zep-compatible frames (including Suniva, a major U.S. module producer), SolarWorld has never manufactured Zep-compatible solar modules.

18. SolarCity understands that SolarWorld expressed some initial interest in the system to Zep Solar and that the two parties entered into a mutual non-disclosure agreement ("MNDA"). However, for reasons unknown to Zep Solar, SolarWorld decided not to apply for a license to produce Zep-compatible modules.

19. The drawings and other design materials needed to fabricate Zep-compatible frames are provided to interested parties after they enter into licensing agreements with Zep Solar.

20. Contrary to SolarWorld's testimony at the Staff Conference, Zep Solar did not "deny" SolarWorld the "opportunity… of [receiving] the actual drawings for [the Zep] frame." *Contra* Tr. 255: 14-16. SolarWorld itself declined to pursue the matter for reasons unknown.

21. As of mid-2013, SolarCity has required all of its suppliers for the residential market to furnish Zep-compatible solar modules. SolarWorld has not been in a position to supply any of these modules.

B. Head-To-Head Competition Between CSPV and Thin Film Modules

22. SolarCity is "agnostic" as to the particular solar technology employed. Over the years, the company has installed monocrystalline, polycrystalline, and thin film solar panels and considers all three technologies to be part of the same market. The importance of the panels in the company's solar systems is the cost per kilowatt-hour of electricity, and these different technologies are substitutes as long as they lead to the same financial bottom line.

23. Thin film modules have definitely been a potential option in designing roof mounted solar systems for residential and commercial customers.

24. During the POI, SolarCity installed a total of 1,065 thin film solar systems. Of this total, 1,011 thin film systems were installed on residential rooftops (including military housing).

25. The vast majority of the thin film panels were acquired from First Solar, the largest U.S. manufacturer of thin film panels. The remainder of the panels were acquired from MiaSolé, a thin film manufacturer based in Santa Clara, California.

26. There are attached photographs of thin film panels installed by SolarCity on homes at the Davis-Monthan Air Force Base near Tucson, Arizona. *See* Attachment 4.

C. Price Competition with Delivered Energy Costs

27. In the residential and commercial market segments, SolarCity and other solar panel installers must compete with existing electricity providers and fuel sources. Potential customers are generally unwilling to switch to solar, unless they achieve meaningful cost savings compared to their existing electricity bills.

28. As a general proposition, it has been SolarCity's experience that potential customers need to realize electricity cost savings of 10-15% in the first year after installation in order to be willing to switch to solar.

29. Furthermore, SolarCity's standard contract with its customers contains an inflation adjustor that is below the prevailing long-term inflation rate for electricity in the market concerned.

30. Modules represent approximately 30-40% of SolarCity's total installation costs.

31. If modules are too expensive, SolarCity is not able to offer its potential customers sufficient energy cost savings, and those potential customers will not be enticed to switch from their traditional energy suppliers.

32. In the summer of 2013, SolarCity paid an average module price of 70¢ per watt.

33. The company estimates that if module prices had been 8¢ higher (a total of 78¢ per watt), the resulting solar systems would not have been cost competitive with delivered electricity prices (utility bill rates) in Arizona.

34. Similarly, the company estimates that if module prices had been 15¢ higher (a total of 85¢ per watt), the resulting solar systems would not have been cost competitive with delivered electricity prices (utility bill rates) in California.

35. Arizona and California are large traditional markets for solar that have relatively high delivered electricity prices. During the POI, SolarCity was able to expand into states with lower delivered electricity prices, such as Colorado. The company estimates that if module prices had been 4¢ higher (a total of 74¢ per watt), the resulting solar systems would not have been cost competitive with delivered electricity prices (utility bill rates) in Colorado.

36. To the extent that SolarWorld was offering solar modules for sale at price points higher than those levels, the SolarWorld modules were uncompetitive with installed energy prices in three of SolarCity's largest markets. It is SolarCity's belief that it could not have structured viable transactions using such SolarWorld modules.

37. It should be noted that in any event, SolarCity could not have used the SolarWorld modules for residential installations because none of the SolarWorld modules were Zep-compatible. *See* ¶¶ 17-21. Furthermore, as stated at the Staff Conference, there were other nonprice factors preventing SolarCity from purchasing SolarWorld modules, such as SolarWorld's refusal to purchase warranty insurance, their refusal to set aside inventory (as opposed to promising to produce modules at an unspecified future date), and their requirement that 50% of contract amounts be paid to SolarWorld in advance of any production. *See* Tr. 180:19 through 181:13; 213:12-25.

I declare under penalty of perjury that the foregoing is true and correct.

John M. Stanton
Vice President, Policy and Electricity Markets
SolarCity Corporation
505 9th Street NW, Suite 800
Washington DC 20004

Executed on this 27th day of January, 2014

Attachment 1

ZEP SOLAR TIMELINE

February 2004

Jack West files patent application for core Zep Solar technology.

February 2009

Zep Solar is incorporated in the State of California and, soon after, company founded by Jack West, Christina Manansala, and Daniel Flanigan.

groSolar

August 2009

Zep Solar signs first distribution agreement with groSolar with plans to partner with a PV module manufacturer and introduce Zep products to the U.S. market.

October 2009

Zep Solar introduces the first Zep System with live demonstrations at groSolar's booth at the Solar Power International trade show in Anaheim, CA.

CanadianSolar

November 2009

Zep Solar signs first licensing agreement with Canadian Solar with plans to launch the first Zep Compatible PV module in the U.S.

April 2010

Zep Solar ships first pallet of mounting hardware from its warehouse in San Rafael, CA.

March 2011

Trina Solar launches its Trinamount Zep Compatible product line worldwide.

April 2011

ESA Renewables installs the largest (1.26MW) Zep System III commercial rooftop system to date with Canadian Solar's Zep Compatible NewEdge modules.

May 2011

First ET Solar Zep Compatible (Zero-rack) system installed in Italy.

July 2011

SolarEdge announces the first Zep Compatible DC optimizer for the U.S. market.

October 2011

U.S. Department of Energy awards grant to Zep Solar to develop utility scale mounting products with radically reduced labor and material costs.

October 2011

Enphase Energy signs agreement to license Zep Compatible technology and develop the first Zep Compatible microinverter.

October 2011

Sharp Solar introduces its SunSnap™ Zep Compatible residential product in the U.S.

December 2011

Sundog Energy installs Cumbria UK's largest commercial PV system with a Trinamount Zep Compatible rooftop PV system.

May 2012

Zep Solar wins landmark patent dispute, firmly establishing the solidity of the intellectual property rights of Zep Solar and its Zep Compatible partners.

August 2012

Sharp Solar sets world record for fastest PV installation with its Zep Compatible SunSnap residential product.

What does Zep Solar have in a store for tomorrow?

We'll continue to build our ecosystem of product solutions, services, and global partners with an eye on the ever-changing needs of our customers. With our proven ability to innovate, and with a sharp focus on reducing the installed cost of PV, we'll continue our drive to bring solar to the masses.

Attachment 2

11 Need Help?

US Technical Support

+1 (415) 230-2096
support@zepsolar.com

www.zepsolar.com

Support Manuals
Videos Training

www.zepulator.com

Zepulator online design tool

Notice

This Quick Start Guide is intended to provide a quick introduction to the standard installation procedure for the Zep Solar® rooftop mounting solution ZS Comp™.

Please visit the Zep Solar web site at **www.zepsolar.com** for further resources, including installation videos, full-length installation guides, the Zepulator™ online design tool, component-level installation videos, Engineering Certification Letters with Span Tables and training classes.

For technical support questions, or to schedule a training class, please contact Zep Solar Support.

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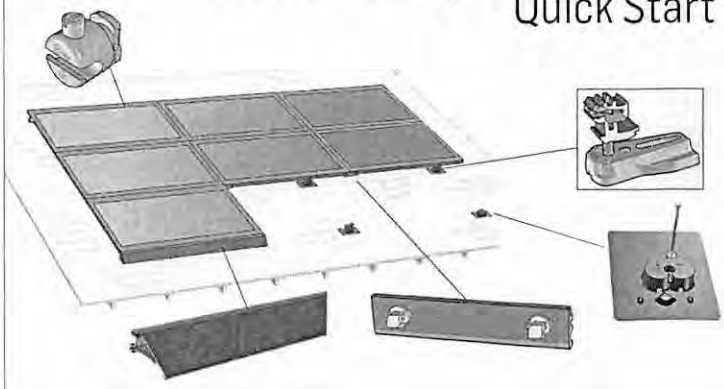
Zep Solar

ZS Comp™ Quick Start



1 Components

Core Components

Comp Mount, Type C

Interlock

Leveling Foot

Ground Zep

Tools and Accessories

Array Skirt

Zep Tool

Wire Clip

#30 Torx Bit

End Caps

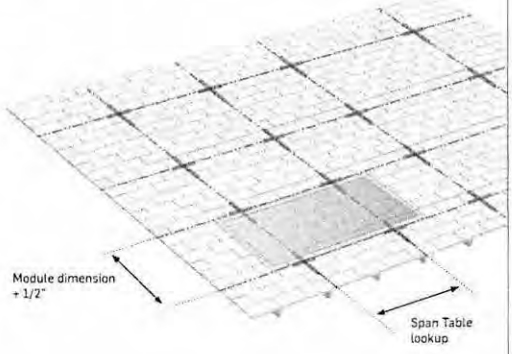
Grip

2 Layout

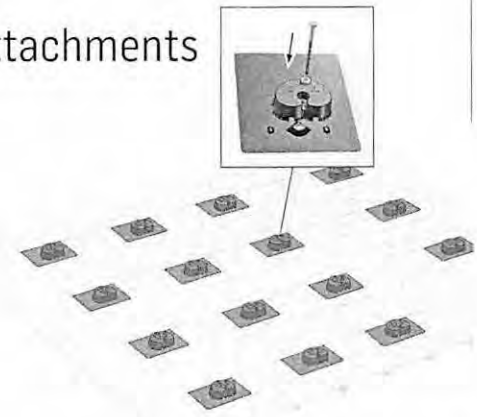
www.zepulator.com

Bill of Materials

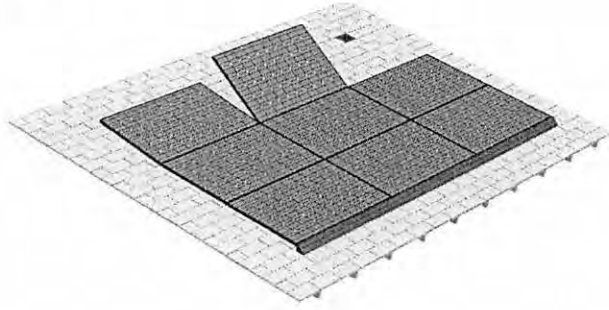
PV Module (Model)	9
Leveling Foot	15
Interlock	6



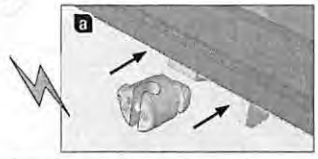
3 Roof Attachments



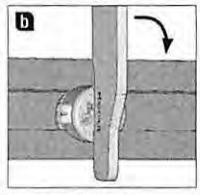
9 Remaining Rows

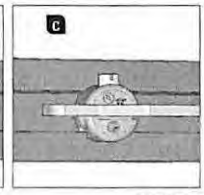


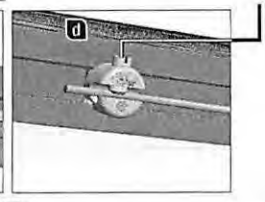
10 Ground the Array



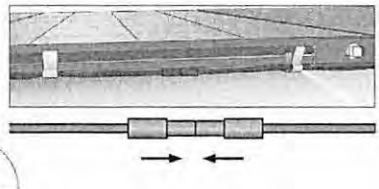
14-10 AWG	40 inch-lbs
8 AWG	45 inch-lbs
6 AWG	50 inch-lbs



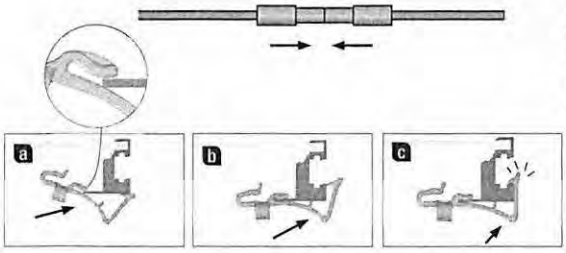




8b Manage Wires

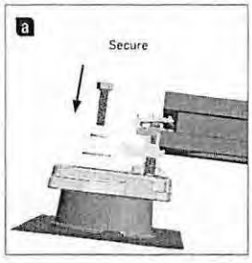


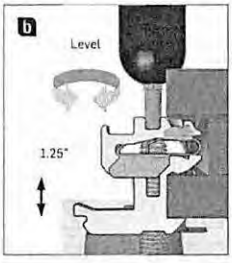
The DC Wire Clip holds wires in two orientations.



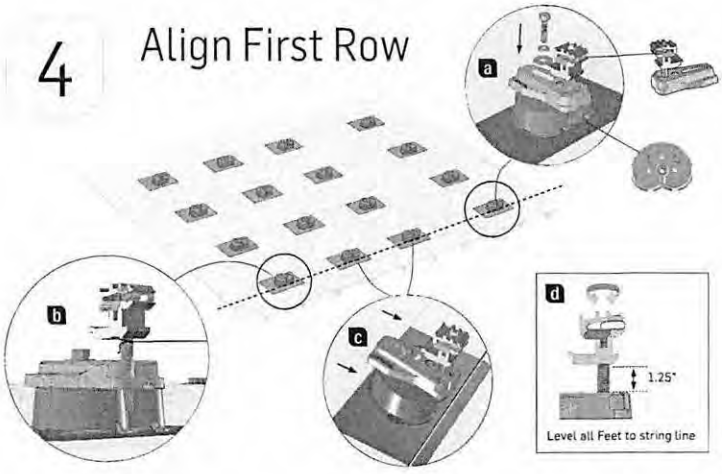
8c Secure Leveling Feet

Complete first module row.

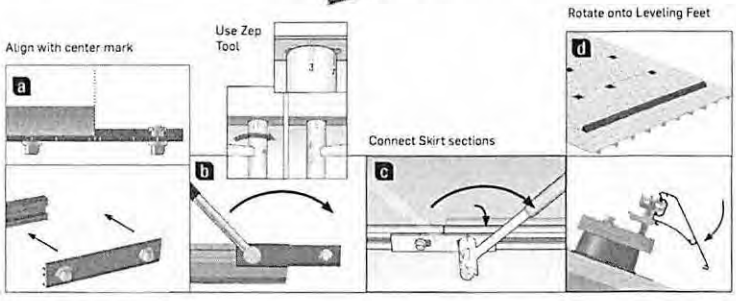




4 Align First Row

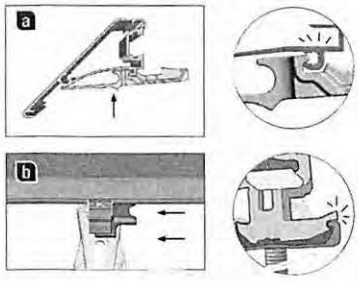


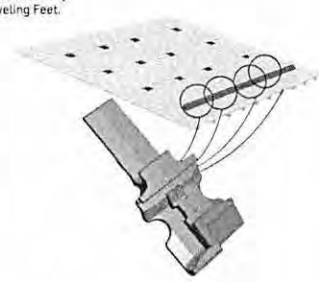
5 Array Skirt



6 Grip

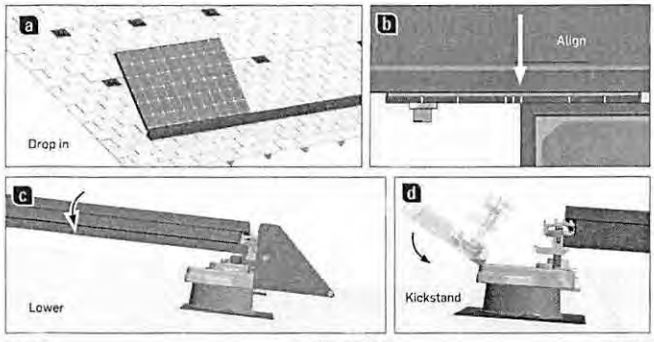
The Grip secures the Array Skirt to the Leveling Feet.



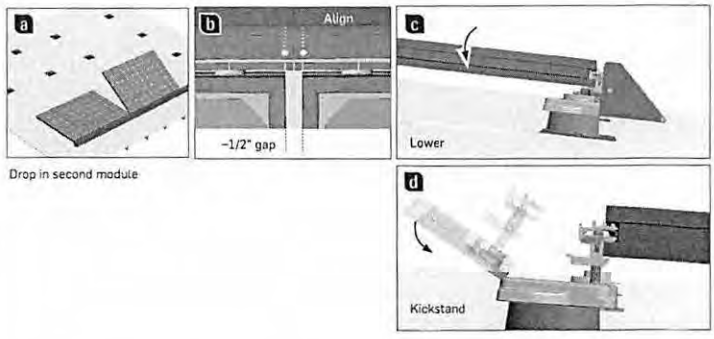


One Grip for each front-row Leveling Foot

7 First Module

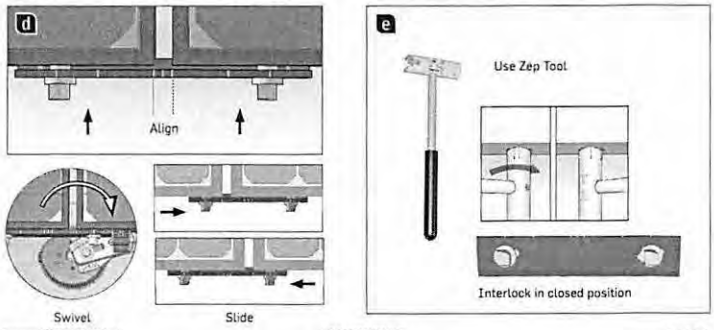


8 First Row



Drop in second module

8a Interlock Modules



Swivel

Slide

Attachment 3

ZEP SOLAR, INC.

ZEP COMPATIBLE LICENSE AGREEMENT FOR PV MODULE FRAMES

THIS IS A Zep Compatible License Agreement for PV Module Frames (called the "Agreement") between ZEP SOLAR, INC., a corporation organized and operating under the laws of California having its principal business office at 161 Mitchell Blvd., Suite 104, San Rafael, CA 94903 (called "Zep Solar") and _____, a _____, with its principal place of business located at _____ (called "Licensee") with either being a party and both being parties to this Agreement.

BACKGROUND RECITALS

A. Zep Solar has developed and manufactures a range of proprietary interlocking, mounting, grounding, and accessory devices (the "Installation Hardware") for use in the field installation of photovoltaic modules (called "PV modules").

B. One aspect of Zep Solar's proprietary Installation Hardware is that it mates with a proprietary groove on the outside surface of a PV module frame (a "Zep Groove"). A PV module manufacturer must incorporate the proprietary Zep Groove into the PV module design if the PV modules are to be installed using Zep Solar's proprietary Installation Hardware.

C. Only solar modules manufactured with frames that incorporate a groove that conforms to Zep Solar's proprietary Zep Groove specifications may be mounted and connected to each other using Zep Solar proprietary Installation Hardware at the time the PV modules are installed at the ultimate customer's installation site.

D. Licensee wishes to license the right to make and use PV modules with frames that incorporate a groove that conforms to Zep Solar's proprietary Zep Groove specifications, and to sell Licensee's PV modules as being compatible with Zep Solar's proprietary Installation Hardware.

E. Zep Solar is willing assist Licensee in the design and certification of frames conforming to Zep Solar's proprietary specifications for use by Licensee in the manufacture of Licensee's PV modules.

F. Zep Solar is also willing to grant Licensee a nonexclusive license to use Zep Solar's proprietary Zep Groove in Licensee's PV modules and to sell Licensee's PV modules as being compatible with Zep Solar's proprietary Installation Hardware under the terms and conditions set forth in this Agreement.

G. Licensee is required to use Zep Solar's Zep Compatible Marks in connection with the promotion and sale of Licensee's PV modules that are manufactured using frames that comprise a groove that conforms to Zep Solar's proprietary Zep Groove Specifications.

H. Licensee desires to contract with Zep Solar for the services and licenses described under the terms and conditions of this Agreement.

PARTIES AGREE AS FOLLOWS:

1. DEFINITIONS

1.0 **"Agreement"** means this Zep Compatible License Agreement for PV Module Frames.

1.1 **"Compliance"** means Licensee is not producing Non-Conforming PV Modules and is materially in compliance with the Agreement.

1.2 **"Confidential Information"** means (i) the terms, but not the existence, of this Agreement and (ii) all information of Zep Solar or Licensee, which is disclosed by either party to the other, and which is non-public, proprietary or confidential and which is marked as "confidential" or "proprietary," or due to its character and nature, would otherwise be deemed confidential, whether or not marked. Confidential Information also includes the amounts ordered and prices paid under this Agreement.

1.3 **"Contact Person"** means the individual employee designated by each party from time to time in writing to represent it in their day-to-day contacts regarding the design, certification, and testing of frames conforming to Zep Solar's proprietary frame specifications and PV modules compatible with Zep Solar's proprietary Installation Hardware.

1.4 **"Effective Date"** has the meaning given such term in Section 17 of this Agreement.

1.5 **"Guidelines"** means Zep Solar's "Zep Compatible Trademark Use and Labeling Guidelines" document which explains the requirements for use of the Zep Compatible Marks, the Zep Compatible Label, and the Zep Warranty Warnings as may be amended or replaced, subject to prior written direct notice to Licensee. A copy of these Guidelines is attached to this document as Exhibit B.

1.6 **"Improvement"**, or its plural form, means any design or method of using or manufacturing products employing the Licensed Technology which affects the manufacture of Licensed Products in one or more of the following ways: (1) reduces production cost, (2) improves performance, (3) increases service life, (4) broadens applicability, or (5) increases marketability.

1.7 **"Initial Term"** has the meaning given such term in Section 17 of this Agreement.

1.8 **"Installation Hardware"** means Zep Solar proprietary interlocking, mounting, grounding, and accessory devices that are interoperable with a Zep Groove.

1.9 **"Inventory Clearing Period"** has the meaning given such term in Section 19 of this Agreement.

1.10 **"Listed Patents"** means that portion of all valid and existing U.S. and international patents that relate to the Zep Groove together with any Improvements, and shall further include any related pending, provisional, divisional, continuation, reissue, or granted U.S. or foreign patent rights owned by Zep Solar during the term of this Agreement.

1.11 **"Licensed Product"** means each individual PV module with a specific part number manufactured by or on behalf of Licensee that includes a groove that conforms to Zep

Solar's proprietary Zep Groove Specifications and is certified by Zep Solar as complying with the Specifications and being compatible with Zep Solar's proprietary Installation Hardware.

1.12 **"Licensed Product Family"** means a family of Licensed Products that all comprise a frame with the exact same dimensions. Licensed Products within a Licensed Product Family may have varying nameplate ratings and other features.

1.13 **"Licensed Technology"** means the Specifications and any additional documentation, drawings, components, systems, devices, know-how, instructions, requirements, or other technology provided by Zep Solar for use by Licensee in connection with the design and manufacture of a Licensed Product.

1.14 **"Marketing Materials"** means any marketing materials including but not limited to advertisements, product data sheets, and installation manuals, in or upon which the Zep Compatible Marks are to be used pursuant to the Guidelines.

1.15 **"Non-Conforming PV Module"** means a PV module which materially incorporates the Zep Groove and/or the Licensed Technology but does not meet the requirements contained in this Agreement to be deemed a Licensed Product.

1.16 **"Product Packaging"** means any packaging materials used to hold, bind, or contain the Licensed Products.

1.17 **"Proposed Products"** means a set of representative samples corresponding to one and only one proposed but not yet certified Licensed Product.

1.18 **"Renewal Term"** has the meaning given such term in Section 17 of this Agreement.

1.19 **"Specifications"** means the current issued production version of the Zep Groove Specification and Drawing set forth in Exhibit A, the current issued version of the Guidelines, and any additional specifications that may be required to build a PV module that is compatible with Zep Solar's proprietary Installation Hardware. The Specifications are subject to prospective revision by Zep Solar from time to time as evolving technology and market conditions may require.

1.20 **"STC"** means Standard Test Conditions and refers to the test conditions utilized to determine the nameplate power rating (in Watts) of each PV module manufactured with frames that comprise a groove that conforms to Zep Solar's proprietary Zep Groove Specifications.

1.21 **"Submitted Materials"** has the meaning given such term in Section 8 of this Agreement.

1.22 **"Term"** has the meaning given such term in Section 17 of this Agreement.

1.23 **"Zep Certified Hardware"** means Installation Hardware that is interoperable and compatible with PV modules manufactured in accordance with the Specifications and is made (a) by or on behalf of Zep Solar or (b) by a third party so long as the Installation Hardware is certified by Zep Solar and made pursuant to the terms and conditions of a Zep Compatible Adopter Agreement.

1.24 **"Zep Compatible Adopter Agreement"** means an agreement between Zep Solar, Inc. and any third party entity that manufacturers, assembles, distributes, brands, or sells components of a Licensed Product, Installation Hardware, or components of Installation Hardware.

1.25 **"Zep Compatible Certificate"** means a certificate that certifies that a set of sample PV modules corresponding to a specific part number conform to the Specifications and are compatible with Zep Certified Hardware.

1.26 **"Zep Compatible Label"** means the label containing the Zep Compatible Marks that Licensee is authorized and required to affix to each Licensed Product that it manufactures and sells in conformity with the Specifications and the terms of this Agreement.

1.27 **"Zep Compatible Marks"** means the ZEP COMPATIBLE designation and/or logo which are to be used on Licensed Products, Product Packaging, and Marketing Materials, as currently set forth in the Guidelines.

1.28 **"Zep Groove"** means a specially shaped proprietary groove on the outside surface of a PV module frame as detailed in the Zep Groove Specification and Drawing set forth in Exhibit A.

1.29 **"Zep Trademarks"** means the ZEP SOLAR trademark and all other Zep Solar trademarks including but not limited to the Zep Compatible Marks.

1.30 **"Zep Warranty Warnings"** means the notifications to be affixed to Licensed Products and Marketing Materials, as currently set forth in the Guidelines.

2. DEVELOPMENT OF LICENSEE FRAME DESIGN

2.1 Promptly following the signing of this Agreement, the Zep Solar Contact Person and the Licensee Contact Person shall arrange a mutually convenient time to meet and confer together about the development of a formal PV module frame design that incorporates the Licensed Technology, conforms to the Specifications, conforms to at least one industry standard such as UL 1703, IEC 61215, or IEC 61730, and satisfies Licensee's other manufacturing requirements for use in the manufacture of a Licensed Product by Licensee. The resulting licensee frame design shall incorporate a Zep Groove on the outside surface of the frame along with other frame features as mutually agreed upon by the parties.

3. PRODUCTION AND TESTING OF INITIAL SAMPLE FRAME

3.1 Once the parties' Contact Persons have jointly agreed to, and Zep Solar has approved in writing, a formal frame design incorporating the requirements of Zep Solar's proprietary frame technology and meeting Licensee's other manufacturing requirements, Licensee shall have prototype frames manufactured for evaluation and testing by Zep Solar to verify that the frame and material comply with the Specifications. Licensee shall provide to Zep Solar either: (a) enough frame material for ten (10) PV modules of the same dimensions as the Proposed Product plus ten (10) PV laminates for the Proposed Product (electrical functionality is not required) and adequate frame tape or sealant (whichever is appropriate) so that Zep Solar can assemble the modules or (b) ten (10) fully assembled Proposed Products (electrical functionality is not required). Licensee is responsible for all costs, including taxes and shipping, associated with manufacturing the prototype frames. For example, if the frame is to be made of extruded aluminum, Licensee shall be responsible for manufacturing a conforming die, producing initial sample frames, and shipping samples to Zep Solar, as required by this Section 3.1.

3.2 Following the delivery of the prototype frame material to the Zep Solar Contact Person for evaluation, Zep Solar shall test and evaluate the sample for conformity to the Specifications.

3.3 At the conclusion of Zep Solar's testing, Zep Solar shall promptly inform Licensee in writing if the samples conform to the Specifications or fail to comply with the Specifications.

3.4 If the samples fail to conform to the Specifications, Zep Solar shall provide Licensee with a detailed description of the deficiencies and the Zep Solar Contact Person and the Licensee Contact Person shall work together to refine the design to enable the production of conforming frames. The parties shall repeat the prototype production and testing process described above until a consistent run of frame samples conforming to the Specifications is produced.

3.5 Once Zep Solar has determined that the frame samples provided to Zep Solar by Licensee conform to the Specifications, Zep Solar shall promptly notify Licensee in writing that the sample frames conform to the Specifications.

4. PRODUCTION AND TESTING OF SAMPLE PV MODULES

4.1 After Zep Solar notifies Licensee in writing that sample frames conform to the Specifications, Licensee shall proceed with the production of four (4) Proposed Products manufactured with the approved frames for testing and evaluation by Zep Solar. If Licensee plans to utilize more than one manufacturing site for the approved frames, then Licensee shall produce four (4) Proposed Products for each frame manufacturing site for testing and evaluation by Zep. Each set of samples submitted shall be representative of typical PV modules of the part number corresponding to the Proposed Product.

4.2 Upon receipt of the Proposed Products manufactured with the approved frames, Zep Solar shall test the Proposed Products for conformity with the Specifications, and overall compatibility with Zep Certified Hardware.

4.3 Once Zep Solar has concluded testing the Proposed Products, Zep Solar shall promptly inform Licensee in writing if the samples conform to the Specifications and are compatible with Zep Certified Hardware or fail to comply with the Specifications and are not compatible with Zep Certified Hardware when used in the field installation of Licensee's PV modules.

4.4 If the Proposed Products fail to conform to the Specifications or are otherwise not compatible with Zep Certified Hardware, Zep Solar shall provide Licensee with a detailed description of the deficiencies, and the Zep Solar Contact Person and the Licensee Contact Person shall work together to correct the deficiencies and enable Licensee to produce conforming PV modules.

4.5 The parties shall repeat the Proposed Product production and testing process described above until submitted Proposed Products conform to the Specifications and Zep Solar has determined that the submitted Proposed Products are compatible with Zep Certified Hardware when used in the field installation of Licensee's PV modules.

4.6 Once Zep Solar has determined that the Proposed Products provided to Zep Solar by Licensee conform to the Specifications and are compatible with Zep Certified Hardware when used in the field installation of Licensee's PV modules, Zep Solar shall promptly notify Licensee in writing and shall provide a Zep Compatible Certificate that certifies that the Proposed Products conform to the Specifications and are compatible with Zep Certified Hardware.

4.7 Once a Licensed Product has been certified by Zep Solar as Zep Compatible, it is now eligible for third party certification and listing. Licensee shall engage a third party testing laboratory and remain responsible for all fees associated with certification and listing of the Licensed Product by the third party certification laboratory. Zep Solar shall assist Licensee during the certification and listing process.

5. LICENSE TO MANUFACTURE, USE, AND SELL LICENSED PRODUCT

5.1 Subject to terms of this Agreement and once Zep Solar has notified Licensee in writing that the Proposed Products corresponding to a specific part number provided to Zep Solar for testing under the provisions of Section 4 above conform to the Specifications and are compatible with Zep Certified Hardware, Zep Solar grants Licensee a

worldwide, nonexclusive, non-sublicensable, non-transferable license to (1) make Licensed Products corresponding to such part number and employing the Licensed Technology for the term of this Agreement; (2) have Licensed Products corresponding to such part number and employing the Licensed Technology made by third parties who have been authorized by Zep Solar to manufacture Licensed Products pursuant to a Zep Compatible Adopter Agreement for the term of this Agreement; (3) use Licensed Products corresponding to such part number and employing the Licensed Technology for the term of this Agreement; and (4) sell, lease, or otherwise distribute Licensed Products corresponding to such part number and employing the Licensed Technology during the term of this Agreement.

5.2 Notwithstanding the provisions of this Section 5, the licenses to make, have made, use, and sell Licensed Products shall only continue as long as the PV modules manufactured by or for Licensee are and remain consistent in all material respects with the approved Proposed Products under the provisions of this Agreement, and Licensee continues to comply with the all the material terms and conditions of this Agreement.

5.3 Licensee shall make commercially reasonable efforts to notify all subcontractors, assemblers, and other entities materially involved in the production of Licensed Products and components thereof that Zep Solar requires all such entities, except Licensee, to execute a Zep Compatible Adopter Agreement.

5.4 For the avoidance of doubt, during and after the Term of this Agreement, Zep Solar shall not assert or maintain any legal or administrative action for infringement of any of the Listed Patents against Licensee, or Licensee's distributors or customers, for the sale, manufacture, importation, marketing or use of any Licensed Product made and sold by Licensee during the Term of this Agreement (or sold under Section 19.2) that is correctly marked and for which there is no past due royalty invoice under this Agreement.

6. FOLLOW UP CONFORMITY AND COMPATIBILITY TESTING

6.1 From time to time and at reasonable intervals following Licensee's commencement of Licensed Product production, Zep Solar may request that Licensee provide Zep Solar with two (2) samples of its production Licensed Products for quality control testing and verification of Licensee's continued compliance with the Specifications and the ongoing compatibility of the Licensed Products with Zep Certified Hardware. If Licensee utilizes more than one manufacturing site for the Licensed Product's frames, then Licensee shall provide two (2) Licensed Products for each frame manufacturing site for testing and evaluation by Zep Solar.

6.2 In addition to testing products provided directly by Licensee, Zep Solar may from time to time purchase Licensed Products from Licensee's authorized distributor for the purpose of conducting the testing as described in this Section 6 of this Agreement.

6.3 Once Zep Solar has concluded its testing of the Licensed Products acquired per Section 6.1 or 6.2 of this Agreement, Zep Solar shall promptly inform Licensee in writing if the Licensed Products still conform to the Specifications and remain compatible with Zep Certified Hardware or if they fail to comply with the Specifications and are not

compatible with Zep Certified Hardware and thus become reclassified as Non-Conforming PV Modules.

6.4 Zep Solar shall provide Licensee with a detailed description of the deficiencies for all Non-Conforming PV Modules, and the Zep Solar Contact Person and the Licensee Contact Person shall work together to correct the deficiencies and enable Licensee to produce conforming PV modules.

6.5 If Zep Solar notifies Licensee in writing that the Licensed Product samples fail to conform to the Specifications or are otherwise not compatible with Zep Certified Hardware, all Licensed Products with the same part number as the failed samples, including Licensed Products in inventory and future Licensed Products to be produced, shall immediately lose their designation as Licensed Products and shall become reclassified as Non-Conforming PV Modules; and Licensee shall make best efforts to immediately cease all sales of all such Non-Conforming PV Modules, except as permitted by Section 6.6, (and recall Non-Conforming PV Modules if directed by Zep Solar) until Licensee and Zep Solar agree in writing that the deficiencies have been remedied, all Non-Conforming PV Modules have been formally reclassified as Licensed Products, and the Licensed Products may again be released to the market. Zep Solar and Licensee agree to meet within two business days of written notice to discuss and agree upon an action plan to address the non-conformance with the goals of mitigating negative impact on Licensee while implementing measures that assure product safety and reasonable levels of end-user satisfaction.

6.6 Licensee may sell Non-Conforming PV Modules if the Non-Conforming PV Modules are accompanied by a legally sufficient notice to the buyer that there shall be no module warranty if the PV modules are installed with Zep Solar mounting hardware. The notice must state that the PV modules being sold are non-conforming to the Zep Compatible specification.

7. LABELING AND USE OF THE ZEP COMPATIBLE MARKS

7.1 Zep Solar grants Licensee a limited, personal, non-exclusive, non-sublicensable, and non-transferable license to use the Zep Compatible Marks subject to the terms and conditions of this License.

7.2 All Licensed Products manufactured and sold by Licensee under the license granted in Section 5 shall be marked with the Zep Compatible Marks and the Zep Warranty Warnings on the PV Module. No PV modules may be marked with the Zep Compatible Marks unless they are consistent in all material respects with the samples approved by Zep Solar under the provisions of Section 4.

7.3 All Product Packaging shall bear the Zep Compatible Marks in accordance with the Guidelines, with the exception that Product Packaging for modules being sold in accordance with Section 6.6 shall not be required to bear the Zep Compatible Marks.

7.4 All installation manuals for Licensed Products shall include appropriate Zep Warranty Warnings and the Zep Compatible Marks in accordance with the Guidelines.

7.5 All product data sheets for Licensed Products shall include appropriate Zep Compatible Marks in accordance with the Guidelines.

7.6 All Marketing Materials in which Licensee chooses to make reference to Zep Solar, or the Licensed Products, shall conform to the Guidelines.

7.7 Zep Solar may modify its Guidelines from time to time by changing the Guidelines as published on Zep Solar's website subject to prior written notice to Licensee. Any such new Guidelines shall govern Licensee's use of Zep Trademarks, the Zep Compatible Marks, the Zep Compatible Label, and the Zep Warranty Warnings on products and Marketing Materials manufactured 90 or more days after such publication.

8. MARKETING MATERIAL AND LICENSED PRODUCT PROOFS

8.1 At least two weeks before Licensee begins manufacturing or producing the Licensed Products (in final form with all labeling), Product Packaging, or any Marketing Materials, Licensee must submit a sample to Zep Solar so that Zep Solar may verify compliance with the Guidelines. Licensee shall submit via email or ftp: (a) photographs of Licensed Products showing all Zep Compatible Marks, Zep Warranty Warnings, and Zep Compatible Labels; and (b) proofs of Marketing Materials and Packaging Materials as PDF, multimedia or image files (collectively the "Submitted Materials"). Emailed files shall be sent to: compatible@zepsolar.com.

8.2 Zep Solar shall review the Submitted Materials for compliance with the terms of this Agreement and the Guidelines and shall use commercially reasonable efforts to respond to Licensee's requests for approval within two weeks from Zep Solar's receipt of the Submitted Materials from Licensee.

8.3 Licensee shall not publish Marketing Materials, use the Product Packaging, nor label any PV Module as a Licensed Product until it receives written approval from Zep Solar that the Submitted Materials are compliant with the terms of this Agreement and the Guidelines.

8.4 If Zep Solar at any time determines in its reasonable discretion that Licensee's use of the Zep Compatible Marks does not meet the requirements of this License at any time, then Licensee shall cease using the Zep Compatible Marks until Zep Solar notifies Licensee in writing that Licensee has fully complied with the requirements of this License. Licensee must use all reasonable efforts to cure any such deficiency within a reasonable period of time.

8.5 Zep Solar's response or failure to respond to Licensee's request for approval shall not waive Zep Solar's right to object to any use of Zep Trademarks that does not comply with this License.

9. TRADEMARK OWNERSHIP

9.1 The Zep Trademarks are proprietary marks owned by Zep Solar. Licensee acknowledges the value of the goodwill associated with the Zep Trademarks and agrees that any goodwill from Licensee's use of the Zep Trademarks shall exclusively inure to the benefit of and belong to Zep Solar.

9.2 Licensee has no rights of any kind in the Zep Trademarks except to the extent granted in this Agreement.

9.3 Licensee agrees that it will not do anything inconsistent with Zep Solar's ownership of the Zep Trademarks, such as filing any trademark application for an identical or confusingly similar logo or mark anywhere in the world, now or in the future. Licensee shall not register any internet domain names containing the word ZEP or which are confusingly similar to the Zep Trademarks.

9.4 Licensee shall not use the Zep Trademarks in any manner that suggests Zep Solar's endorsement or recommendation of a Licensed Product or otherwise creates a false association between Licensee and Zep Solar. Licensee shall not use the Zep Trademarks on or in connection with anything that is unlawful or encourages unlawful conduct or in any manner that may be deemed in poor taste or quality as determined by Zep Solar.

9.5 Zep Solar reserves all rights to control, commence, prosecute, or defend any action or claim concerning the Zep Trademarks.

9.6 Licensee shall cooperate with Zep Solar to maintain Zep Solar's ownership of the Zep Trademarks, and Licensee agrees to promptly provide notice of any claims relating to Zep Solar's marks.

10. CHANGES TO SPECIFICATIONS AND ZEP COMPATIBILITY REQUIREMENTS

10.1 From time to time, Zep Solar may make changes to the Specifications or the specifications for Zep Certified Hardware on a going forward basis.

10.2 If Zep Solar makes any revisions to its Specifications during the term of this Agreement, Zep Solar shall notify Licensee as soon as possible that a change in Specifications is coming and what the nature of the change will be.

10.3 If material changes in the Specifications occur during the term of this Agreement, Zep Solar shall work with Licensee to help Licensee adapt its PV module frame designs to the updated Specifications following the same procedures outlined for the initial Licensed Product design and certification in Sections 2, 3, and 4 as well as follow-up conformity and compatibility testing per Section 6.

10.4 Unless otherwise agreed upon by both parties, Licensee shall implement all changes to the Specifications in no more than 6 months from the date of notice of such changes.

11. ROYALTIES

11.1 Licensee shall pay an annual royalty fee of ten thousand dollars ($10,000) due on the initial due date ("Initial Due Date"). The Initial Due Date shall be thirty (30) days after the end of the first quarter within which five (5) MW (STC) of Licensed Products have been sold or otherwise distributed in aggregate since the date of the first sale or distribution of Licensed Products.

11.2 Subsequent royalty payments of ten thousand dollars ($10,000) shall be paid on each anniversary of the Initial Due Date for each royalty period ("Royalty Period") within which a minimum of five (5) MW (STC) of Licensed Products have been sold or otherwise distributed. The Royalty Period shall be each consecutive twelve (12) month period following the Initial Due Date. For the avoidance of doubt, Licensee will not be obligated to pay a royalty fee for any Royalty Period within which fewer than five (5) MW (SCT) of Licensed Products have been sold.

12. PAYMENT OF FEES, CHARGES, TAXES, AND DUTIES

12.1 All payments shall be made by wire transfer to the bank account designated by Zep Solar from time to time in U.S. dollars.

12.2 Payments for royalties shall take place under the terms of Section 11.

12.3 All payments required by this Agreement are exclusive of taxes, and Licensee agrees to bear and be responsible for the payment of all taxes, on behalf of itself and its customers, including, but not limited to, all sales, use, VAT, GST, import, export, personal property or other taxes which may be levied or assessed in connection with the delivery or distribution of Licensed Products, or services under this Agreement, except for taxes based on Zep Solar's income that are assessed by the United States or one of its political subdivisions.

12.4 If withholding taxes are imposed by a foreign government on payments originating outside the United States, the fees provided for in this Agreement shall be increased by an amount sufficient to result in a net payment after withholding equal to the fees stated. For example if a fee of $100 is subject to a 10% withholding tax, the fee payable shall be increased from the $100 stated provided for in this Agreement to $111.12 and the net payment to Zep Solar shall equal $100 after withholding.

12.5 Any payment that is not received by Zep Solar before the due date shall be subject to a late payment charge of one and one-half percent (1.5%) per month from the original due date until the date it is paid or the highest amount permitted by law, whichever is less.

12.6 Licensee agrees to indemnify and hold Zep Solar harmless against any claims, causes of action, liabilities, damages, fines, costs, fees, and expenses (including attorney and other professional fees and expenses) arising out of Licensee's failure to pay or report any taxes, duties, levies, or charges imposed by any jurisdiction.

13. QUARTERLY REPORTS

13.1 Licensee must submit a quarterly sales report to Zep Solar within 30 days after the end of each calendar quarter, even if no Licensed Products were sold or otherwise distributed during such quarter.

13.2 Sales Reports shall quantify the quarterly volume of sales in megawatts (MW) for all Licensed Products sold by Licensee. Each Licensed Product sold shall be listed by Licensee's part number and factory of origin.

13.3 Reports shall be sent by email to: compatible@zepsolar.com.

Reports may also be sent (at Licensee's discretion) to:

Zep Compatible Licensing
Zep Solar, Inc.
161 Mitchell Blvd. Suite 104
San Rafael, CA 94903

14. BOOKS & RECORDS

14.1 Licensee must maintain all appropriate books and records reasonably required to verify quarterly reports and Compliance for a period of seven (7) years after the end of the relevant calendar quarter.

14.2 Zep Solar shall have the right, at its own expense, to inspect, or have an independent auditor selected by Zep Solar inspect, any and all records of Licensee that are reasonably required by such auditor to confirm or correct the information contained in the quarterly reports and/or the amounts due hereunder.

14.3 Any inspection of Licensee's records pursuant to this 14 shall be conducted at Licensee's premises only during regular business hours, and only in a manner that does not substantially interfere with Licensee's normal business operations.

14.4 If any such audit reveals that the royalties payable to Zep Solar for a particular period exceed the amount reported by Licensee as payable under this Section 14, Licensee shall immediately pay to Zep Solar the amount of the discrepancy; and if the discrepancy is more than five percent (5%) of the amount reported, Licensee shall also reimburse Zep Solar for its reasonable costs and expenses incurred in conduction of such audit.

14.5 Non-responsiveness to reasonable audit requests by Zep Solar shall be a material breach of the Agreement.

15. PATENT ENFORCEMENT

15.1 Zep Solar shall take commercially reasonable measures to prevent unlicensed third parties from infringing the Listed Patents by manufacturing and selling infringing products embodying Zep Solar's proprietary Zep Groove specifications that materially interfere with Licensee's efforts to market and sell its Licensed Products. Zep Solar may use such means of enforcement as it, in its reasonable discretion, deems appropriate under the circumstances including, but not limited to, bringing legal actions for infringement.

15.2 Licensee shall cooperate with Zep Solar and its other licensees in their enforcement efforts to the extent that Licensee's cooperation is necessary to bring an action for infringement provided that Zep Solar pays all external costs associated with Licensee participation and indemnifies and holds Licensee harmless for any liability that may result from its cooperation in the enforcement effort.

16. NON-ASSERTION AND NO CHALLENGE TO VALIDITY

16.1 In partial consideration of the licenses and rights granted in this Agreement, Licensee, represents, warrants, and covenants that neither Licensee, nor any of its representatives, agents, successors, or assigns shall at any time, during the term of this Agreement or thereafter, contest or challenge the validity of any patent, trademark, or other claim of intellectual property rights by Zep Solar or its representatives, agents, successors, or assigns that relate to or are embedded in the Licensed Technology, Licensed Product, Installation Hardware, or Zep Groove.

16.2 During the Term of this Agreement, Licensee shall not assert any PV module mounting system patents against Zep Solar.

17. TERM

17.1 This Agreement shall become effective on the date signed by the parties hereto (the "Effective Date"). Unless terminated sooner pursuant to its terms, this License shall have an initial term of 3 years from the Effective Date (the "Initial Term") and shall automatically renew for successive one-year terms (each, a "Renewal Term" and together with the Initial Term, the "Term") unless either party gives at least 90 days notice prior to the end of the then current term.

18. TERMINATION

18.1 This License shall terminate if either party provides written notice to the other at least 90 days before the end of the Initial Term or any Renewal Term, stating that it does not wish to renew.

18.2 This Agreement may be terminated by either party upon written notice to the other party if such other party breaches any material obligation under this Agreement and fails to cure such breach within 30 days after written notice for such breach.

18.3 Zep Solar may terminate this Agreement if Licensee manufactures or sells a PV module that incorporates technology that enables the interlocking of adjacent PV modules without Zep Solar proprietary Installation Hardware; provided that Zep Solar determines, in its sole discretion, that such technology competes with the Licensed Products or Zep Certified Hardware.

19. EFFECT OF TERMINATION

19.1 Upon the expiration of the initial or any renewal term of this Agreement or upon the termination of this Agreement by either party for cause in accordance with the provisions of this Agreement, all of the licenses granted to Licensee hereunder to make or have made and to mark and package Licensed Product for sale shall cease as of the effective date of the expiration or termination.

19.2 If Licensee has unsold, completed, marked, and packaged Licensed Product in inventory as of the effective date of the expiration or termination, Licensee shall have up to one hundred eighty (180) days after termination to sell such Licensed Product in the ordinary course of Licensee's business (the "Inventory Clearing Period") provided that this Agreement was not terminated for nonpayment of fees due to Zep Solar and

that Licensee provides Zep Solar reasonable assurance that the fees and reports due on the sales of Licensed Products under this Agreement shall continue to be paid and made on the timeframes specified in this Agreement during the Inventory Clearing Period.

19.3 If this Agreement was terminated for nonpayment of fees due to Zep Solar, Licensee shall not have the right to sell any unsold, completed, and packaged Licensed Product in its inventory after the effective date of the expiration or termination of this Agreement.

19.4 If Licensee has any Non-Conforming PV Modules in inventory as of the effective date of the expiration or termination, those Non-Conforming PV Modules may not be sold if they include a Zep Grove or otherwise infringe any Zep Solar proprietary technology unless the sale of such Non-Conforming PV Modules is accompanied by a notice to the buyer that there shall be no module warranty if the PV modules are installed with Zep Solar mounting hardware. The notice must state that the PV modules being sold are non-conforming to the Zep Compatible specification.

19.5 Licensee shall promptly return all copies of the Specifications to Zep Solar, destroy all extrusion dies utilized for the production of frames comprising a Zep Groove, certify the destruction of the dies to Zep Solar, and destroy all other Licensed Technology promptly after the effective date of any expiration or termination of this Agreement.

19.6 The expiration or termination of this Agreement shall not relieve Licensee of any obligation to pay fees or file reports due to Zep Solar that accrued prior to the expiration or termination of this Agreement or that accrue during the Inventory Clearing Period.

20. IMPROVEMENTS MADE TO ZEP TECHNOLOGY

20.1 Any and all Improvements made to the Licensed Technology resulting from the operation of this Agreement shall be the property of Zep Solar irrespective of whether such Improvements were made by Zep Solar, jointly, or by Licensee. Licensee shall cooperate in any of Zep Solar's attempts to improve or modify the intellectual property rights for such Improvements. Any such Improvements shall be considered part of the Licensed Technology when approved by Zep Solar and Licensee shall specifically assign such rights to Zep Solar at no cost to Zep Solar.

21. CONFIDENTIALITY

21.1 Within 30 days of the Effective Date, the parties shall issue a joint press release announcing the existence of this Agreement.

21.2 Each party agrees to hold the Confidential Information of the other in confidence and not to use, reproduce, distribute or disclose it except as authorized by the other party in writing in connection with the performance of this Agreement.

21.3 Confidential Information does not include any information which (i) was already known by, or in the possession of, the recipient at the time of disclosure, (ii) is or becomes generally known to the public without breach of this Agreement, (iii) is rightfully received from a third party without restriction on disclosure and not, to the

knowledge of recipient, in breach of any obligation of confidentiality, or (iv) is independently developed by the receiving party without use of the Confidential Information. In addition, the prohibitions on disclosure contained in this Section 21 shall not apply to the disclosure (A) of Confidential Information when required by law or legal process (*e.g.,* subpoena, deposition, injunction), or when requested by a government regulatory, self-regulatory, or supervisory authority in connection with any investigation (whether or not any party or any of its Affiliates is being investigated) or audit or information–seeking exercise, or (B) to any person of any information related to the U.S. federal income tax treatment or any fact that may be relevant to understanding the tax treatment (including tax opinions and analyses) of any transaction covered by this Agreement as required by applicable tax shelter regulations issued by the U.S. Internal Revenue Service.

21.4 The confidentiality obligations described herein shall commence on the date of disclosure of the Confidential Information and shall continue (i) for Confidential Information which qualifies as a trade secret under applicable law, at all times thereafter so long as such Confidential Information so qualifies as a trade secret; and (ii) for all other Confidential Information, for a period of three years following the expiration or earlier termination of this Agreement.

21.5 Upon the expiration or other termination of this Agreement for whatever reason, each party shall return or destroy all Confidential Information and copies thereof belonging to the other party, as such other party directs in writing; provided, however, that the receiving party may retain archival copies thereof, to be stored in a secure location in accordance with this Section 21, for the purposes of determining and enforcing any continuing confidentiality obligations, and this Section 21 shall not be construed to require destruction of electronic back-up records and data.

21.6 Any breach of the restrictions contained in this Section 21 is a breach of this Agreement that may cause irreparable harm to the non-breaching party. Any such breach shall entitle the non-breaching party to seek injunctive relief (without the need for a bond) in addition to all legal remedies otherwise available to it.

21.7 Licensee is specifically prohibited from sharing the Specifications with subcontractors or partners who manufacture components of Licensed Products, manufacture tooling required for manufacturing Licensed Products or components of Licensed Products, or assemble Licensed Products or components of Licensed Products, unless such subcontractor or partner has executed a Zep Compatible Adopter Agreement with Zep Solar.

22. WARRANTY, INDEMNITY, SUPPORT

22.1 The Licensed Technology may contain errors and may be incomplete or contain inaccuracies. Licensee expressly acknowledges and agrees that use of the documentation and Licensed Technology is at Licensee's sole and entire risk. THE LICENSED TECHNOLOGY AND ZEP CERTIFIED TRADEMARKS ARE LICENSED "AS IS" AND WITHOUT WARRANTY, UPGRADES, OR SUPPORT OF ANY KIND OTHER THAN AS PROVIDED IN THIS LICENSE. ZEP SOLAR EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, OF SATISFACTORY QUALITY, AND OF FITNESS

FOR A PARTICULAR PURPOSE. ZEP SOLAR DOES NOT WARRANT THAT THE LICENSED TECHNOLOGY OR ZEP COMPATIBLE PRODUCTS WILL MEET LICENSEE'S REQUIREMENTS, THAT THEIR OPERATION WILL BE UNINTERRUPTED OR ERROR- FREE, THAT DEFECTS IN THEM WILL BE CORRECTED, OR THAT THEY WILL BE COMPATIBLE WITH FUTURE ZEP SOLAR PRODUCTS OR SOFTWARE. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY ZEP SOLAR OR A ZEP SOLAR AUTHORIZED REPRESENTATIVE WILL CREATE A WARRANTY.

22.2 Subject to the terms and conditions of this Section 22, Zep Solar agrees to indemnify, defend and hold harmless Licensee from and against any demand, claim, action or cause of action, liability, damage and loss, including without limitation, interest, penalty and attorneys' fees and expenses, asserted against, relating to, imposed upon or incurred by Licensee by reason of or resulting from (i) a breach of any representation or warranty of Zep Solar contained in this License (ii) a breach of any covenant or agreement of Zep Solar contained in this License or any such document, other than a representation or warranty, (iii) the assertion against Licensee of any liability or obligation of Zep Solar not expressly assumed by Licensee, or (iv) the failure of Zep Solar to pay, discharge or perform any liability or obligation expressly assumed by Zep Solar, or (v) infringement or alleged infringement of any third party's intellectual property rights.

22.3 Subject to the terms and conditions of this Section 22, Licensee agrees to indemnify, defend and hold harmless Zep Solar from and against any demand, claim, action or cause of action, liability, damage and loss, including without limitation, interest, penalty and attorneys' fees and expenses, asserted against, relating to, imposed upon or incurred by Zep Solar by reason of or resulting from (i) a breach of any representation or warranty of Licensee contained in this License or in any document delivered pursuant to it, (ii) a breach of any covenant or agreement of Licensee contained in this License or any such document, other than a representation or warranty, (iii) any failure due to defects or negligence in the manufacture of Licensed Products, (iv) the assertion against Zep Solar of any liability or obligation of Licensee not expressly assumed by Zep Solar, or (v) the failure of Licensee to pay, discharge or perform any liability or obligation expressly assumed by Licensee.

23. LIMITATION OF LIABILITY

23.1 EXCEPT TO THE EXTENT SUCH A LIMITATION IS PROHIBITED BY LAW, IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY INCIDENTAL, SPECIAL, INDIRECT, CONSEQUENTIAL, OR PUNITIVE DAMAGES ARISING OUT OF OR RELATING TO THIS LICENSE, WHETHER UNDER A THEORY OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), PRODUCTS LIABILITY, OR OTHERWISE, EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY. IN NO EVENT WILL ZEP SOLAR'S TOTAL LIABILITY TO LICENSEE FOR ALL DAMAGES UNDER THIS LICENSE EXCEED AN AMOUNT EQUAL TO THE TOTAL AMOUNT OF ROYALTIES AND FEES RECEIVED BY ZEP SOLAR PURSUANT TO THIS AGREEMENT.

24. GENERAL

24.1 **Governing Law and Venue.** This License and any action related thereto shall be governed and interpreted by and under the laws of the State of California, without giving effect to any conflicts of laws principles that require the application of the law of a different state. Licensee hereby expressly consents to the personal jurisdiction and venue in the state and federal courts of the Northern District of California.

24.2 **Severability**. If any provision of this License is, for any reason, held to be invalid or unenforceable, the other provisions of this License shall remain enforceable and the invalid or unenforceable provision shall be deemed modified so that it is valid and enforceable to the maximum extent permitted by law.

24.3 **No Assignment**. This License, and Licensee's rights and obligations herein, may not be assigned, subcontracted, delegated, or otherwise transferred by Licensee without Zep Solar's prior written consent, and any attempted assignment, subcontract, delegation, or transfer in violation of the foregoing shall be null and void. The terms of this License shall be binding upon assignees.

24.4 **Notices**. Unless electronic notification is specifically allowed by this Section 24.4 for a notice, each party must deliver all notices or other communications required or permitted under this License in writing to the other party at the address listed on the first page of this Agreement, by courier, by certified or registered mail (postage prepaid and return receipt requested), or by a nationally-recognized express mail service. Notice shall be effective upon receipt or refusal of delivery. If delivered by certified or registered mail, any such notice shall be considered to have been given five (5) business days after it was mailed, as evidenced by the postmark. If delivered by courier or express mail service, any such notice shall be considered to have been given on the delivery date reflected by the courier or express mail service receipt. It is allowable to deliver notices per Sections 3, 4, 6, and 13 electronically. If delivered electronically, any such notice shall be considered to have been given on the date that the notice is received by the receiving party. Each party may change its address for receipt of notice by giving notice of such change to the other party.

24.5 **Injunctive Relief**. The parties agree that, because their services are personal and unique and because each party will have access to Confidential Information of the other party, any breach of this License would cause irreparable injury to the non-breaching party for which monetary damages would not be an adequate remedy and, therefore, shall entitle the non-breaching party to injunctive relief (including specific performance). The rights and remedies provided to each party in this License are cumulative and in addition to any other rights and remedies available to such party at law or in equity.

24.6 **Waiver**. Any waiver or failure to enforce any provision of this License on one occasion shall not be deemed a waiver of any other provision or of such provision on any other occasion.

24.7 **Counterfeit Reporting**. Licensee shall immediately notify Zep Solar as soon as Licensee becomes aware of any actual or potential infringement of Zep Solar's intellectual property rights that relate to Installation Hardware or the Licensed Technology, including but not limited to knowledge of counterfeit Installation

Hardware, counterfeit Zep Certified Hardware, counterfeit Zep Compatible Labels, Counterfeit Zep Trademarks, PV module frames comprising a counterfeit Zep Groove, any entity that manufacturers PV modules or frames comprising a Zep Groove without having signed a licensing agreement with Zep Solar, or any entity that manufacturers, assembles, distributes, brands, or sells components of a Licensed Product, Installation Hardware, or components of Installation Hardware without having signed a Zep Compatible Adopter Agreement.

24.8 **Copies.** Licensee must retain and reproduce in all copies of the Specifications the Zep Solar copyright and other proprietary notices and disclaimers of Zep Solar as they appear in the Specifications.

24.9 **No Other Permitted Uses.** Licensee agrees that it will use the Specifications and Licensed Technology only to create Licensed Products that interoperate with Zep Certified Hardware. Licensee may not add, delete, extend, or modify any of the design, mechanical, or electrical, characteristics of any Licensed Technology or use any Licensed Technology for any purpose not expressly permitted by this License. Licensee may not disassemble or otherwise reverse engineer any hardware supplied or specified by Zep Solar without Zep Solar's express prior written consent (except to the extent permitted by applicable law which cannot be waived by this subsection). All licenses not expressly granted in this License are reserved and no other licenses, immunity or rights, express or implied are granted, by implication, estoppel, or otherwise.

24.10 **Survival.** The provisions of Sections 9, 11, 12, 13, 14, 16, 19, 20, 21, 22, 23, and 24 shall survive any termination or expiration of this Agreement.

24.11 **No Sales or Supply.** This Agreement is not a sales or supply agreement and as such does not commit either party to manufacture or sell Licensed Products.

24.12 **Titles.** The titles of sections in this Agreement are inserted for convenience only and shall not be construed as limiting in any manner.

24.13 **Modification.** This Agreement may only be modified or amended by a written modification or amendment signed by an authorized agent from each party. Modifications may be in the form of additional exhibits or attachments to this Agreement.

24.14 **Nature of Relationship of Parties.** This Agreement does not create a joint venture, fiduciary, employment, agency or franchise relationship between the parties. No joint venture, fiduciary, employment, agency or franchise is created or intended from this Agreement. Except as otherwise specifically provided in this Agreement, attachments or modifications, a party shall have no right to bind the other party.

24.15 **Successors.** Notwithstanding any other term or section to the contrary, this Agreement shall be binding upon and shall inure to the benefit of any successors or assigns of a party.

24.16 **Consent of Parties.** The parties represent that in executing this Agreement they do so with full knowledge of any and all rights released or compromised by this Agreement, and that they have received independent legal advice from their respective counsel with regard to the facts involved and with regard to their rights and asserted rights arising

out of such facts. This Agreement has been the subject of negotiations between the parties. It has been and shall be construed to have been drafted by both parties, so that any rule of construing ambiguities against the drafter shall have no force or effect.

24.17 **Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same original Agreement. A signature to this Agreement by either of party tendered by facsimile or electronic mail to the other party shall be binding on the signing party as if it was an original signature.

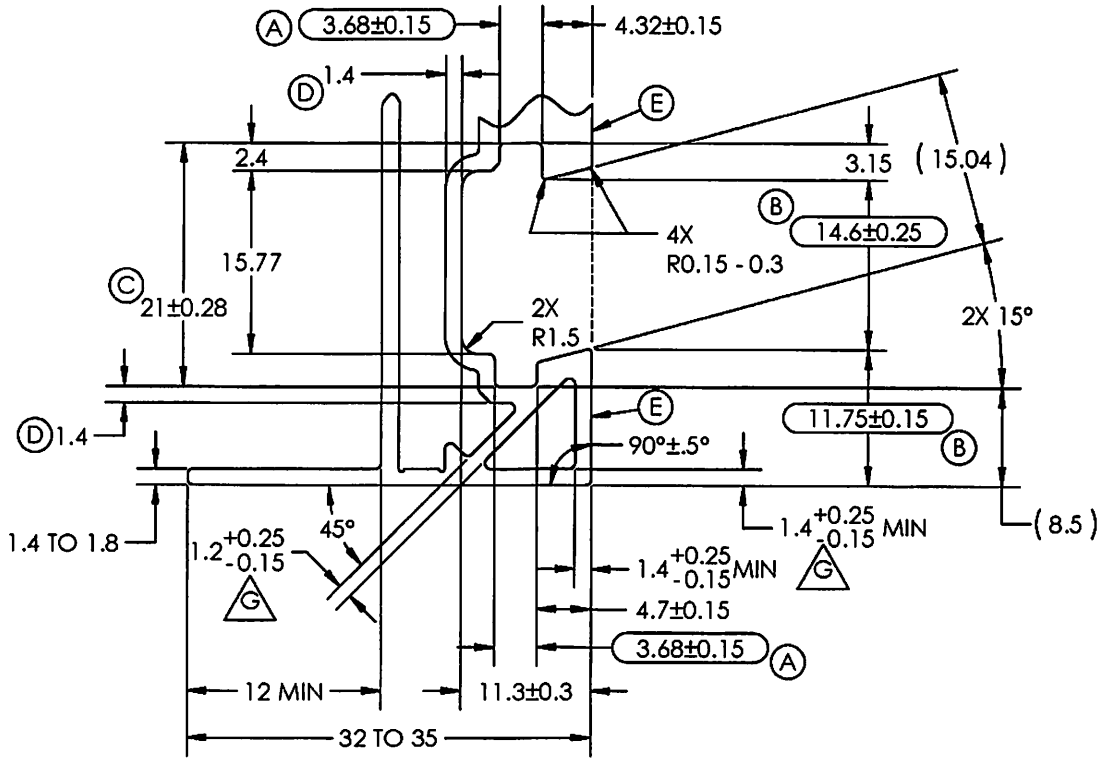
24.18 **Entire Agreement**. This License is the final, complete, and exclusive agreement of the parties with respect to the subject matter hereof and supersedes and merges all prior discussions between the parties with respect to such subject matter. No modification of or amendment to this Agreement, or any waiver of any rights under this Agreement, will be effective unless formalized in a writing that references this Agreement and is signed by an authorized officer of Licensee and an authorized officer of Zep Solar.

Accepted and agreed by their authorized representatives:

Zep Solar, Inc.	**Licensee**
By: _____	*By:* _____
Name: _____	*Name:* _____
Title: _____	*Title:* _____
Date: _____	*Date:* _____

EXHIBIT A: ZEP GROOVE SPECIFICATION AND DRAWING

REVISIONS				
REV	DESCRIPTION	ECO	DATE	BY
G	ADDED DIMS & TOL FOR TRIANGLE HOLLOW	NA	7/26/2013	PG



Dimension Tolerance Chart for Unspecified Dimensions					
Feature Dimension Range	0.5 to 3	>3 to 6	>6 to 30	>30 to 120	Angles
Tolerance	±0.15	±0.30	±0.40	±0.80	±0.50°

NOTES:
1. MATERIAL: ALUMINUM, 6063-T5 OR T6
2. TOLERANCES INCLUDING TWIST AND BOW: PER GB5237.1-2008 HIGH CLASS OR EQUIVALENT
3. ZEP GROOVE IS TO BE FACING TO THE OUTSIDE OF THE MODULE FRAME
A. FEATURE AND TOLERANCE REQUIRED FOR PROPER ZEP MECHANICAL LOCKING ANDELECTRICAL BONDING
B. CRITICAL DIMENSION AND TOLERANCE ALLOWING PROPER FUNCTION OF THE INTERLOCK AND OTHER ACCESSORIES
C. FEATURE AND TOLERANCE REQUIRED FOR PROPER ZEP ROTATIONAL STOP
D. MINIMUM WALL THICKNESS REQUIRED AT THE TOP, BOTTOM & BACK WALL OF THE ZEP GROOVE
E. UPPER AND LOWER FACES SHOWN TO BE COPLANAR WITHIN 0.3mm

US PATENT #7,592,537, #8,109,048 & #8,375,654 U.S. & INT'L PATENTS PENDING

MATERIAL: ALUMINUM 6063-T5 OR T6 MIN YIELD STRENGTH: 110MPa MIN ELONGATION: 8%

FINISH: ANODIZE PER CURRENT MODULE PRE ZEP FRAME CONDITION OR BETTER, LASTING 20 PLUS YEARS IN DIRECT SUN LIGHT AND WEATHER CONDITIONS

WEIGHT

©COPYRIGHT ZEP SOLAR, INC. ALL RIGHTS RESERVED. THE INFORMATION DISCLOSED HEREIN IS DEEMED TO BE CONFIDENTIAL, PROPRIETARY, AND A TRADE SECRET OF ZEP SOLAR, INC. THIS INFORMATION MAY NOT BE USED, REPRODUCED, OR DISCLOSED WITHOUT THE EXPRESSED PRIOR WRITTEN CONSENT OF ZEP SOLAR, INC.

INTERPRET DRAWING PER ASME Y14.5-2009

UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN MILLIMETERS BREAK ALL EDGES CORNER RADII

TOLERANCES DECIMAL ANGLES

SURFACE FINISH

THIRD ANGLE PROJECTION

ZEP SOLAR, INC.
161 MITCHELL BLVD
SAN RAFAEL, CA 94903

ENGINEER	CHECKED	DATE
P.GRUBER	P.GRUBER	08/29/11

DESCRIPTION: **ZEP GROOVE AND FRAME SPECIFICATION, CORNER KEY FRAME**

DRAWING NUMBER: **700-0147**

REV: **G**

SIZE	SCALE	SHEET
A	2:1	1 OF 1

EXHIBIT B – TRADEMARK USE AND LABELING GUIDELINES

Zep Compatible Trademark Use and Labeling Guidelines

For Parties to Zep Compatible License Agreements

INTRODUCTION

The following requirements and instructions are for use by Zep Solar Licensees pursuant to a signed written agreement with Zep Solar authorizing their use. Any unauthorized use of the information, specifications, trademarks, and copyrighted materials contained in these Zep Compatible Trademark Use and Labeling Guidelines (the "Guidelines") is strictly prohibited. In the event of any conflict between the written contract between Zep Solar and Zep Solar's Licensee (the "Contract") and these Guidelines, the Contract shall control.

ZEP COMPATIBLE MARKS

The Zep Compatible Marks (Marks) include the Zep Compatible Logo and the Zep Compatible Logo with Notices. This Section defines the Marks and certain requirements for their usage.

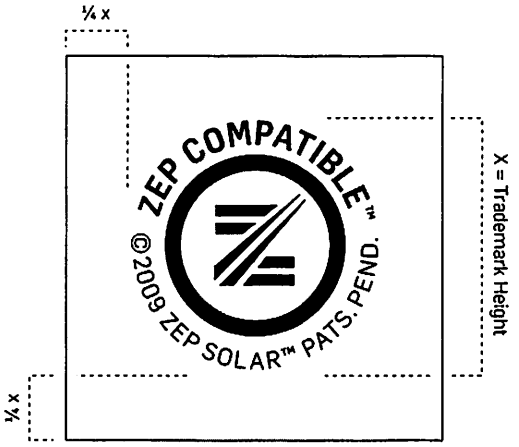
The Zep Compatible Logo

The following images represent the Zep Compatible Logo (Logo) and the specifications for clear space requirements.

Positive Applications

Reverse Applications

The Zep Compatible Logo with Notices
The following image represents the Zep Compatible Logo With Notices (Logo With Notices) and the specifications for clear space requirements.



General Provisions
All use of the Marks must meet the following criteria unless permitted in writing by Zep Solar:

1. When creating artwork using the Marks, Licensee must use digital vector files originally provided by Zep Solar.
2. The aspect ratio of the Marks may not be altered.
3. The Marks may only be used in color versions provided by Zep Solar.
4. The Marks may only be used on solid backgrounds.
5. The Marks must maintain a minimum of 50% contrast with their background.
6. Use of the Marks must adhere to clear space requirements as detailed above.
7. Rasterized images of the Logo must maintain a minimum of 72 pixels per inch for digital display mediums and a minimum of 300 pixels per inch for print mediums.
8. Rasterized images of the Logo With Notices must maintain a minimum of 300 pixels per inch.

USE OF THE ZEP COMPATIBLE MARKS

Product Packaging
Where product packaging contains images of Licensee trademarks, packaging shall also contain the Zep Compatible Logo.

For Module Frame Licensees
Module Frame Licensees must apply the Logo to packaging at a minimum height of 40mm (1.6").

For Component Licensees
Component Licensees must apply the Logo to packaging at a minimum height of 16mm (0.63").

Licensed Product
All Licensed Products must contain the Zep Compatible Logo With Notices (Logo With Notices). The Logo With Notices may be affixed to the back of the Licensed Product as an additional label or it may be integrated into the main label (nameplate) of the Licensed Product. The Logo With Notices must be applied to the Licensed Product with methods and materials that are capable of maintaining the integrity of the Mark for the life of the module warranty.

For Module Frame Licensees
If integrated into the nameplate of the Licensed Product, the Logo With Notices must be a minimum height of 16mm (0.63"). If applied as a separate label, the Logo with Notices must be a minimum height of 40mm (1.6").

For Component Licensees
When applied to the Licensed Product, the Logo With Notices must be a minimum height of 16mm (0.63").

Marketing Material
The Logo shall be applied where Licensed Product is promoted in print or digital media including but not limited to advertisements, product datasheets, manuals, brochures, demonstration units, web pages, published case studies, etc. The minimum Logo size for any application is 12mm high. For single page print advertisement layouts, the minimum Logo size is also 12mm. For two-page print advertisement layouts, the minimum Logo size is 16mm. For large format displays, the Logo shall be sized such that its relative proportion to other graphic elements is generally consistent with the corresponding proportions that would result from the guidelines applicable to print advertisements as detailed above. For digital mediums, the minimum Logo size is 65 pixels high.

Technical Documentation
All datasheets, installation manuals and other technical documentation (excluding internal documents) shall contain the Zep Compatible Logo at a minimum height of 16 mm.

Website & Digital Display Use
When using the Zep Compatible Logo for web or other digital display use, the Zep Logo must be at a minimum of 65 pixels high.

WARRANTY WARNINGS (MODULE FRAME LICENSEES)

A Zep Compatible Warranty Warning (Warranty Warning) shall be applied to Frame Licensees' Licensed Product and other documents as defined below. This Section applies only to Module Frame Licensees. The Warranty Warning shall read:

"WARRANTY VOID IF NON-ZEP-CERTIFIED HARDWARE IS ATTACHED TO GROOVE IN MODULE FRAME"

Licensed Product
All Licensed Products must contain the Warranty Warning. The Warranty Warning shall be applied to the Licensed Product in a font size not less than the font size of the Licensee's warranty language as printed on the Licensed Product's nameplate label.

Application of the Warranty Warning to the Licensed Product must be done with methods and materials that are capable of maintaining the integrity of the Warranty Warning mark for the life of the module warranty.

Warranty Documents
All Documents stating the warranty terms of the Licensed Product must contain the Warranty Warning. The Warranty Warning shall be in all caps and at a font size not less than the font size of the body text of the document.

Installation Instructions
All documents providing instructions for installation of Licensed Product must contain the Warranty Warning. The Warranty Warning shall be in all caps and at a font size not less than the font size of the body text of the document.

APPROVALS

All use of the Zep Compatible Marks and Warranty Warnings must be approved by Zep Solar prior to use. Licensee must send digital proofs to compatible@zepsolar.com such that Zep Solar and Licensee have a minimum of one week to review and revise artwork prior to the commitment of that artwork for use or publication. Zep Solar will respond to proof submissions within 24 hours of proof submittal.

MODIFICATION TO GUIDELINES

By Zep Solar
Zep Solar may from time to time modify these Guidelines. Any such new Guidelines shall govern Licensee's use of the Zep Compatible Marks and the Zep Compatible Warranty Warnings on products and other collateral manufactured or published 90 or more days after Licensee has been notified of such modifications.

By Zep Licensees
Exceptions to these Guidelines may not be made except by express written permission by Zep Solar. Zep Solar will make commercially reasonable efforts to grant certain exceptions when requested.

CONTACT INFORMATION

Zep Compatible Marketing
Zep Solar, Inc.
161 Mitchell Blvd. Suite 104
San Rafael, CA 94903
(415) 479-6900 ext. 203
compatible@zepsolar.com

Attachment 4

SolarCity
SolarCity Confidential Slide 16

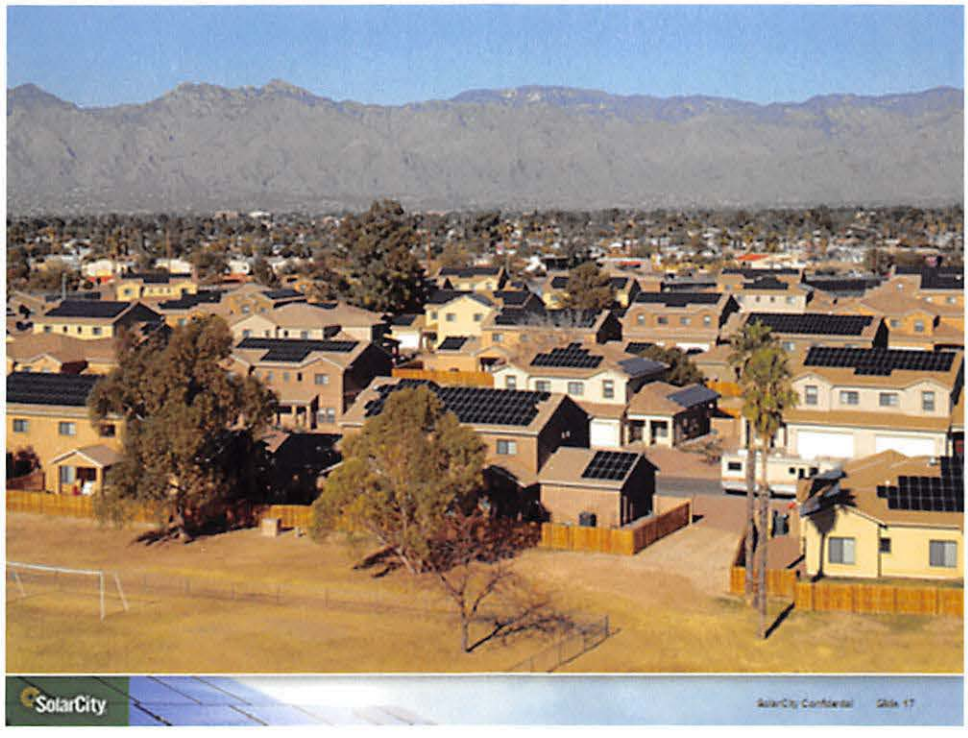

SolarCity
SolarCity Confidential Slide 17

Exhibit 5

Statement of Thomas Koerner

U.S. INTERNATIONAL TRADE COMMISSION

In The Matter Of:	Investigation Nos. 701-TA-511 & 731-TA-1186-1187 (Preliminary)
Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan	

STATEMENT OF THOMAS KOERNER
UNDER 28 U.S.C. § 1746

I, Thomas Koerner, state the following:

1. I currently serve as General Manager Americas at Canadian Solar (USA) Inc., a subsidiary of Canadian Solar Inc. ("CSI"). I joined Canadian Solar in December 2012 and have been involved in the solar energy industry for more than a decade. Prior to joining CSI, I served as General Manager, North America, for Astronergy Solar, the solar division of the Chint Group. Prior to that, I held several senior management positions with Schuco Solar, as for example Division Manager PV. I have a Masters degree in Electrical Engineering from the University of Applied Sciences in Regensburg, Germany and a Masters in Business Engineering from the Steinbeis University Berlinor. In addition, I have served as Director at the Solar Energy Industries Association ("SEIA"), the national trade association for the solar industry.

2. CSI is headquartered in Kitchener, Ontario, and has its principal production facilities in Canada (Guelph, Ontario and London, Ontario) as well as in China (Suzhou and Jiangsu). CSI is publicly listed on the NASDAQ, and is one of the world's largest solar companies. We are a vertically integrated provider of ingot, wafer, solar cell, solar module and other solar applications. We also design, manufacture and deliver solar products and solar system solutions for on-grid and off-grid use to customers worldwide.

3. This statement addresses three points discussed during the Staff Conference in the captioned investigations, which was held on January 22, 2014, specifically: (A) the differences between monocrystalline and polycrystalline photovoltaic modules, including considerations that must be taken into account in comparing prices for the two types of modules; (B) the basis for differences in module prices, including by market segment; and (C) allegations by SolarWorld that modules were offered by CSI at $0.60 per watt.

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A. Monocrystalline and Polycrystalline Modules Differ By Efficiency and Power

4. Crystalline silicon photovoltaic ("CSPV") modules most typically contain either 60 or 72 cells. The cells may be monocrystalline or multicrystalline (also referred to as polycrystalline), although monocrystalline is used very rarely in 72 cell modules.

5. The manufacturing process for monocrystalline is more time intense and more expensive than that for polycrystalline. Monocrystalline silicon is created by slowly pulling a monocrystalline silicon seed crystal out of melted monocrystalline silicon using the Czochralski method to form an ingot of silicon. While the seed crystal is being withdrawn, it is rotated slowly to form the cylindrical shape. Polycrystalline silicon is made through a simpler method. Instead of going through the time-consuming and more expensive process of creating a single crystal, molten silicon is simply placed in a cast and cooled. The casting method results in an ingot that is not uniform and branches into many, smaller crystals.

6. The efficiency of a module is defined by the incoming sunlight and how much of this sunlight can be converted into electricity. Monocrystalline can do this better than polycrystalline. Monocrystalline therefore is more expensive to produce and the price at which it is sold is higher. An analogy can be drawn to a pair of seemingly identical cars. Car #1 has a 4 cylinder engine with 150 horsepower while Car #2 has a six cylinder engine with 220 horsepower. Car #2 is more powerful and more expensive than Car #1.

7. Looking only at 60 cell PV modules, in the third quarter of 2013 the 60 cell polycrystalline PV modules offered in the market had an average efficiency of approximately 15.5 %, which is equivalent to a 250 watt output. Monocrystalline 60 cell modules produced in the same timeframe had an average efficiency of approximately 16.4 %, which is equivalent to a 265 watt output.

8. The efficiency and power difference between mono and poly crystalline modules has been largely constant over the last quarters and years. That differential is between 0.7 and 0.9 percent module efficiency and between 10 and 15 watts, when comparing the same size PV module (for example, a 60 cell module compared to a 60 cell module). The typical module power development over the period January 1, 2012 through the first quarter of 2014, for 60 cell modules and for 72 cell modules, is shown in Attachments A and B.

9. In the market, monocrystalline modules achieve a sales price of approximately five to ten cents higher per watt than polycrystalline modules. This assumes, for example, that a 270 watt monocrystalline module is produced and sold in the market at the same time as a comparable 255 watt polycrystalline module. Often, however, these modules may be in the market at different times. For example, if in the first quarter of 2012, a manufacturer produces and sells 245 watt monocrystalline modules to a distributor, that distributor may not sell all of the purchased modules during that period. If the distributor subsequently, in the first quarter of 2014, wants to clear its inventory of these modules, that distributor faces competition against, for example, 270 watt monocrystalline modules as well as 255 watt polycrystalline modules. The latest polycrystalline product – produced in the first

quarter of 2014 – causes the older monocrystalline module to be outdated. As a consequence, the old monocrystalline product has to be offered at a lower price in order to make the sale.

10. Based upon the example provided above, it is clear that when considering the pricing of modules, the variables include whether the module is mono or polycrystalline, the wattage, the time of the production of the module as well as the time of the sale of the module, and whether the module is 60 or 72 cells.

B. Module Prices Vary by Market Segment For More Reasons Than Volume

11. At the Staff Conference on January 22, 2014, the Staff asked if the pricing for CSPV modules is based upon utility, commercial or residential market segment or if it is based upon volume. Tr. 244:3-16 (Mr. David). The answer is that pricing of modules is not based solely on volume. A variety of factors determine the price at which CSPV modules are sold. While volume is one factor, other factors include, but are not limited to, the credit of the purchaser, delivery constraints (such as how many trucks a client is able to accept per day or per week), the mix of product (because a purchaser who demands a single module efficiency may not receive as favorable a price as a purchaser who will accept a mix of module efficiencies, thereby allowing the supplier more flexibility, and warranty insurance (because a lower price may be offered where insurance is not required by the purchaser).

12. Speaking specifically for CSI, the following factors also affect the price at which modules are offered. First, [ ]. See Attachment C, which provides [ ]. Second, [ ]. Third, [ ]. See Attachment D. Fourth, [ ], and [ ].

C. Allegations by SolarWorld That Canadian Solar Offered 250 Watt Modules at $0.60 Per Watt Are False

13. During its presentation at the Staff Conference on January 22, 2014, SolarWorld presented an exhibit that asserted, at page 16, that SolarWorld received in January 2014 a quote of $0.60 per watt for a Canadian Solar 250 watt module. Tr. 25:9-14 (Mr. Brightbill). Canadian Solar has not offered a polycrystalline module at that price. The price may come from a distributor. Distributors purchase from manufacturers and hope to be able to sell the product in the market at a profit. In a very few cases, distributors may seek to clear inventory in order to make space for new products or may have a significant cash problem. It is also possible that the module being offered was a very old monocrystalline product that is outdated in terms of watts per module, as explained above in paragraph 9 of this statement.

14. For example, the Solar Express USA document that is shown as page 17 of SolarWorld's conference exhibit lists Jinko 235Wp modules which I know to be one and a half to two

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years old, which is very outdated in terms of efficiency for a 60 cell polycrystalline module; today's polycrystalline efficiencies for a 60 cell module are around 250-255 watts. (It is also notable that the offered volume of the Jinko 235 watt module is only 181 modules. A one megawatt PV project requires approximately 4,000 modules.) The same issue of outdated modules is raised by page 18 of the Petitioner's Staff Conference exhibit.

I declare under penalty of perjury that the foregoing is true and correct.

Thomas Koerner
General Manager
Canadian Solar (USA) Inc.
2420 Camino Ramon, Suite 125
San Ramon, CA, USA 94583-4385

Executed on this 27th day of January, 2014

ATTACHMENTS
NOT SUSCEPTIBLE
TO PUBLIC SUMMARY

Exhibit 6

Statement of John Morrison

U.S. INTERNATIONAL TRADE COMMISSION

In The Matter Of: Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan	Investigation Nos. 701-TA-511 & 731-TA-1186-1187 (Preliminary)

STATEMENT OF JOHN MORRISON
UNDER 28 U.S.C. § 1746

I, John Morrison, state the following:

1. I currently serve as Chief Operating Officer at Strata Solar LLC, a solar development and construction company headquartered in North Carolina, which I joined in 2010. Prior to joining Strata Solar, I served as Assistant Secretary for Energy at the North Carolina Department of Commerce, where my primary responsibility was the development of North Carolina's green economy. I hold degrees in engineering from Yale and Stanford Universities and an MBA from Harvard University. I also have served on the Advisory Council of the Electric Power Research Institute.

2. Strata Solar provides complete solar energy systems and installations for utility, government, and commercial purposes. Strata Solar is one of the leading end-to-end utility scale solar farm developers in the United States and the sixth largest overall solar energy system contractor in the country. In 2010, when I joined Strata Solar, the company installed a total of 2 megawatts (MW) of solar. In 2013, Strata Solar installed 170 MW.

3. This statement addresses three points discussed during the Staff Conference on January 22, 2014, in the captioned investigations. These are: (A) the availability and necessity of 1000 volt 72 cell photovoltaic (PV) modules for utility scale projects; (B) the overall decline in incentives at the state level since 2010; and (C) the module price necessary to justify implementing a solar project.

A. **1000 Volt 72 Cell Modules Are Now the Standard in the U.S. Utility Sector, But Were Not Available From SolarWorld in 2013.**

4. Since the 2nd quarter of 2013 Strata Solar has been designing and building solar farms using UL certified 1000 volt 72 cell photovoltaic modules. 1000 volt PV modules have replaced 600 volt PV modules as the norm for utility scale markets in the United States.

5. 1000 volt PV modules offer considerable financial benefits that Strata Solar values in designing solar farms. In particular, 1000 volt PV modules permit more modules and power per source circuit, require fewer source circuits for the same array capacity, require fewer balance of system (BOS) components (including overcurrent protection devices, combiners and disconnects), reduce labor costs, require less copper in the DC (direct current) collection system, require fewer inverters, and lower the overall cost per watt. In addition, 1000 volt PV modules provide long-term benefits such as reduced wire losses because doubling voltage reduces conduction losses to one-quarter for the same power level.

6. Naturally, a 1000 volt PV module commands a higher price than a 600 volt PV module, but the lower overall system cost enabled by the 1000 volt PV modules justifies the price differential.

7. To my knowledge, SolarWorld does not offer a 72 cell 1000 volt UL certified module, although SolarWorld's website indicates that the company does offer a 60 cell 1000 volt UL certified module. A 60 cell module does not meet Strata Solar's design requirements and therefore would not be considered by Strata Solar.

8. In addition, the 72 cell 1000 volt PV modules required by Strata Solar have wattages of at least 300 watts. To my knowledge, SolarWorld does not offer a 72 cell 1000 volt UL certified module with that wattage.

9. The trend is also moving toward 1500 volt UL certified modules. I expect 1500 volt UL certified 72 cell modules to begin reaching the market in late 2014 and will quickly become standard in the utility scale market due to the same system cost factors which drove the change to 1000 volt modules.

B. Incentives at the State Level Have Declined Overall.

10. During the Staff Conference, SolarWorld asserted that, overall, incentives in the United States have not declined, or are at best mixed. Tr. 60:24-61:9 (Mr. Brightbill). That is not my experience. While it may be correct that some states are increasing the incentives that they offer, the incentives offered by the two biggest state markets for solar energy, namely California and North Carolina, have declined.

11. The California Solar Initiative (CSI) rebates step down as the volume of installed solar systems rises (http://www.gosolarcalifornia.ca.gov/csi/rebates.php). In the Pacific Gas and Electric (PGE) territory those rebates have fallen to zero. In the rest of California, the rebates are in the final steps at a small fraction of the original rebate value.

12. In North Carolina, the solar renewable energy certificate (SREC) prices have declined from greater than $0.15 per kWh in 2010 to $0.005 per kWh in 2013. The SREC is a premium received by solar generators which is added to the "avoided cost" for the electricity it produces. The avoided cost is set every two years by the NC Utilities Commission and is expected to decrease in an upcoming ruling by approximately 20% due to the fall in natural gas prices. In 2015, the NC state tax credit for solar is due to

expire, putting additional pressure on solar developers and builders to reduce the cost of their solar arrays.

B. The Module Price Necessary to Justify Implementing a Solar Project.

13. During 2013, the average CSPV module price for Strata utility scale projects in North Carolina was approximately [ ] per watt. Strata estimates that if its module price had been [ ] per watt higher (i.e., a total of [ ] per watt for the module), the resulting solar systems would not have been cost-competitive with delivered electricity prices from competing energy sources, including natural gas, in North Carolina, and the solar projects could not have been implemented.

14. The calculation described immediately above for utility scale projects is also true for the commercial scale projects developed by Strata Solar. [

].

I declare under penalty of perjury that the foregoing is true and correct.

John E. P. Morrison
Chief Operating Officer
Strata Solar, LLC
50101 Governors Drive, Suite 280
Chapel Hill, N.C. 27517

Executed on this 27th day of January, 2014

First Solar Exhibit 2010, Page 150 of 223
JinkoSolar v. First Solar - IPR2025-01130

Exhibit 7

Statement of George W. Hershman

U.S. INTERNATIONAL TRADE COMMISSION

In The Matter Of:	Investigation Nos. 701-TA-511 & 731-TA-1186-1187 (Preliminary)
Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan	

STATEMENT OF GEORGE W. HERSHMAN
UNDER 28 U.S.C. § 1746

I, George W. Hershman, state the following:

1. I currently serve as the Vice President, Division Manager at Swinerton Renewable Energy, in San Diego, California, which was established in 2008 as the solar division of Swinerton Inc. Swinerton is one of the largest and oldest contractors in the U.S., proudly celebrating its 126th year in operation. I have been with Swinerton since 1997. Prior to starting the Solar Division at Swinerton, I managed the Construction Management Division is San Diego. I have been in the general construction business for 30 years.

2. Swinerton Renewable Energy is an EPC – engineering, procurement, and construction – firm that offers turnkey utility-scale solar power solutions. With a photovoltaic project portfolio totaling over 270 MW and an additional 400 MW under design and construction, the company proudly partners with major utilities and solar developers across North America to generate reliable clean power for many years to come. Our distinct cradle-to-cradle perspective helps eliminate waste, reduces cost, and enhances power production with improved certainty. Swinerton is the second largest California solar contractor, the third largest utility contractor in the United States, and the fourth largest overall solar contractor.

3. This statement addresses three points raised during the January 22, 2014 Staff Conference in the captioned investigations. These are: (A) Swinerton requires 72 cell modules and 1000 volt systems for its utility scale projects; (B) SolarWorld did not offer a 1000 volt UL certified module for use in the utility sector in 2013; and (C) Swinerton's experience with SolarWorld.

A. **For the Utility Sector, Swinerton Requires 72 Cell, 1000 Volt UL Certified Modules.**

4. For each project it undertakes, Swinerton receives a request for proposals (RFP) that specifies module size and/or approved manufactures specified by the project developer or utility. [ ]. *See* Attachment A. The reason that

developers specify the panel requirement is that they have done their due diligence on manufacturers and technology and trust the quality and bankability of the selected product. We are required to use one of the specified products. As indicated in Attachment A, [ ].

5. The [

].

6. 1000 volt, 72 cell, PV modules offer considerable financial benefits that Swinerton and the project developers value in designing and building utility scale projects. Specifically, these benefits are fewer modules, less shipping/trucking, less labor, less racking material and less electrical equipment. In total, this results in a significantly lower cost of installation.

B. SolarWorld Did Not Offer a 1000 Volt UL Certified Module Suitable for the Utility Sector in 2013.

7. To my knowledge, SolarWorld does not offer a 72 cell 1000 volt UL certified module, although SolarWorld's website indicates that the company does offer a 60 cell 1000 volt UL certified module. A 60 cell module does not meet Swinerton's design requirements for utility scale projects, due to its added installation costs, and therefore would not be considered by Swinerton.

8. [

]. *See* Attachment B.

C. SolarWorld Has Sought to Sell [Low Cost] CSPV Modules to Swinerton.

9. Our experience with SolarWorld is limited, but because we have installed utility scale projects in Oregon, we have been approached many times to consider implementing SolarWorld modules into our projects. In each instance, the lack of 72 cell modules has prevented us from using SolarWorld. [

].

10. In 2013, SolarWorld offered its modules to Swinerton. In [

]. *See* Attachment C. [

]."

11. Swinerton [

].

I declare under penalty of perjury that the foregoing is true and correct.

George W. Hershman
V.P., Division Manager
Swinerton Renewable Energy
16798 West Bernardo Drive
San Diego, CA 92127

Executed on this 27 day of January, 2014

ATTACHMENTS
NOT SUSCEPTIBLE
TO PUBLIC SUMMARY

Exhibit 8

Statement of Evan Dube

U.S. INTERNATIONAL TRADE COMMISSION

In The Matter Of: CERTAIN CRYSTALLINE SILICON PHOTOVOLTAIC PRODUCTS FROM THE PEOPLE'S REPUBLIC OF CHINA AND TAIWAN	Investigation Nos. 701-TA-511 & 731-TA-1186-1187 (Preliminary)

AFFIDAVIT OF EVAN DUBE UNDER 28 U.S.C. § 1746

I, Evan Dube, state the following:

1. I am currently employed as the Director of Public Policy for Sunrun Inc. ("Sunrun"). I have been employed by Sunrun for three years. Prior to joining Sunrun, I served as the Assistant Commissioner to the Massachusetts Department of Energy Resources and the Deputy Director of the Massachusetts Renewable Energy Trust Fund. I have also served as General Counsel to the Joint Committee on Telecommunications, Utilities and Energy of the Massachusetts legislature. I have more than 10 years of experience with energy policy and with federal and state regulatory and legislative matters. I hold a Juris Doctor from the Villanova School of Law.

2. My responsibilities at Sunrun encompass the full range of federal and state policy programs affecting demand for solar power, including the tax treatment of, and incentives for, solar power generation. These programs include the federal Investment Tax Credit ("ITC"), rebates offered by some states, and renewable energy credit trading systems. These programs vary considerably from state to state, and are in a constant state of flux. Because the financial viability of solar power generation is premised on its ability to compete with other sources of electricity generation, it is crucial for Sunrun to fully understand the impact and direction of these programs in all the jurisdictions where the company operates.

3. Founded in 2007, Sunrun is a leading provider of solar power systems for residential rooftops. Sunrun does not participate in the commercial or utility segments of the solar power market. Sunrun is present in the following eleven states: Arizona, California, Colorado, Connecticut, Hawaii, Maryland, Massachusetts, New Jersey, New York, Oregon, and Pennsylvania. Through its local installation partners, Sunrun has provided more than 35,000 residential rooftop solar systems in these states. To date, these systems have produced more than 334 gigawatt hours of electricity.

4. Sunrun provides most of its residential rooftop solar systems through power purchase agreements ("PPA") or leasing arrangements in which homeowners agree to pay a fixed price per kilowatt hour, over 20 years, for the solar power generated by their rooftop systems. While Sunrun always owns the systems, we enter into contracts with our local partners for installation and, depending on the market, ongoing maintenance and related services. Our local partners determine which modules to purchase for any given system. Sunrun provides the financing for the PPAs.

5. The cost of electricity is often significant for homeowners, who normally have no choice but to "take" the retail price dictated by the local utility. While some states, through partial deregulation of utilities, offer retail choice in the sense that customers may choose an alternative energy provider to the utility, few residential consumers use this option. At bottom, Sunrun's business model is premised on the ability to beat the retail price of electricity with solar power generated by the homeowner's rooftop system. If Sunrun cannot beat the retail price of electricity, there is no financial incentive for the homeowner to enter into a Sunrun PPA or lease.

6. While this fundamental aspect of Sunrun's business model is identical in all states where it operates, the price required to beat the retail price of electricity varies considerably from state to state due to different market and regulatory conditions. The key point, however, is that a Sunrun solar power system must allow the homeowner cost savings over the retail price of electricity; where Sunrun cannot offer this advantage on a sufficient scale, it cannot compete in a given market. In fact, Sunrun will not attempt to enter a market where our product cannot compete effectively with the cost of retail electricity.

7. The retail price of electricity delivered by utilities that Sunrun must beat in any given market, and at any given point in time, is known. To cite two of our most important markets, California and New York, the price of electricity during the summer of 2013 was, respectively, roughly $0.262 and $0.181 per kilowatt hour. Even within these markets and timeframes, however, there is some variance based on geography and tiered pricing.

8. In order to create a package that is financially attractive to a homeowner when measured against the retail price of utility-delivered electricity, Sunrun first determines how much electricity cost a homeowner can avoid by installing a solar power system. Sunrun uses a model to estimate how much less electricity purchased from the utility the homeowner will consume and how much the homeowner's utility bill will be reduced as a result of installing a solar power system. This is the "avoided cost of power" from the utility. Sunrun then offers a cost per kilowatt hour to its customer that is less than the utility's price, but which permits a margin for Sunrun after accounting for all variables affecting the project in the given jurisdiction. The extent to which Sunrun must beat the avoided cost of power to be competitive varies from market to market, and depends on contract features. However, in most markets the Sunrun system must be able to beat the avoided cost of power by at least 5% to be competitive.

9. As already noted, to make the sale, Sunrun must be able to offer an overall package that significantly beats the retail price of electricity, or avoided cost of power, for the given jurisdiction and timeframe. Based on certain assumptions, Sunrun can estimate the extent to which we would lose customers in individual markets if we had offered a lower level of cost savings over the retail price of electricity than in fact we did. For example, if Sunrun could have offered no more than a 10% savings level in California during the summer of 2013, we would have had at least [ ] fewer customers. In New York, which is more representative of solar markets outside of California, we estimate that we would have had at least [ ] fewer customers during the summer of 2013 if we could have offered no more than 10% savings over the retail price of electricity. In this way, the cost of solar modules – a major component of total system costs – is directly tied to Sunrun's ability to enter and serve a particular market.

10. One example of a market that Sunrun was recently able to enter as a direct consequence of sufficiently low module prices is Connecticut. Connecticut has relatively low retail electricity prices, making it all the more difficult to provide Sunrun systems absent competitively priced modules.

11. Sunrun maintains a list of module manufacturers approved for its residential rooftop solar system installations. SolarWorld is among the many approved manufacturers on this list. However, SolarWorld modules are significantly more expensive per watt than modules sold by foreign manufacturers, precluding their use in many cases because Sunrun's local installation partners cannot offer competitive pricing with systems incorporating these more expensive modules. In some cases, though, Sunrun's customers are willing to pay a premium for systems containing domestically manufactured modules, even if that means the solar system cannot "beat" the retail price of utility-delivered electricity. In other limited cases, "Buy America" requirements or, in the case of Oregon, incentives favoring domestically produced modules alter the financial calculus for the customer and make the use of domestically manufactured modules financially feasible when they otherwise would not be.

12. Further, modules manufactured by SolarWorld have a relatively small presence among Sunrun's more than 35,000 installed solar systems nationwide because of the manner in which SolarWorld distributes its modules. SolarWorld chooses to sell its modules directly to installation companies, and tends not to sell its modules to distributors. Sunrun's local installation partners, however, in most cases purchase modules from distributors. Our partners prefer to purchase modules from distributors primarily because distributors are able to offer attractive financing arrangements, but also because distributors offer warehousing and sell all materials other than modules required for system installation (e.g., racking, flashings, inverters, cables, and conduits). Distributors thus offer installers the compelling option of working with a single supplier. This significant factor also explains the relatively limited presence of SolarWorld modules in Sunrun's nationwide network of residential rooftop systems.

I declare under penalty of perjury that the foregoing is true and correct.

Evan Dube
Director of Public Policy
Sunrun Inc.
9 School Street
Marion, MA 02738

Executed on this 27th day of January, 2014

MASSACHUSETTS ALL-PURPOSE ACKNOWLEDGMENT

Gov. Exec. Ord. #455 (03-13), §5(d)

Commonwealth of Massachusetts
County of PLYMOUTH } ss.

On this the 27 (Day) day of January (Month), 2019 (Year), before me,

MELISSA L. CHASE (Name of Notary Public), the undersigned Notary Public,

personally appeared EVAN DUBE (Name(s) of Signer(s)),

proved to me through satisfactory evidence of identity, which was/were

PRIVATE LICENSE (Description of Evidence of Identity),

to be the person(s) whose name(s) is/are signed on the preceding or attached document, and acknowledged to me that he/she/they signed it voluntarily for its stated purpose(.)

☐ as partner(s) for _____ (Name of Partnership), _____, a partnership.

☐ as _____ (Title of Office) for _____ (Name of Corporation), a corporation.

☐ as attorney in fact for _____ (Name of Principal Signer), _____, the principal.

☐ as _____ (Type of Capacity) for _____ (Name of Person/Entity), a/the _____ (Type of Entity).

MELISSA L. CHASE
MY COMMISSION EXPIRES FEB 27 2020
COMMONWEALTH OF MASSACHUSETTS
NOTARY PUBLIC

_____
Signature of Notary Public

MELISSA CHASE
Printed Name of Notary

Place Notary Seal and/or Any Stamp Above

My Commission Expires FEBRUARY 27, 2020

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Exhibit 9

U.S. Department of Commerce, Scope Clarification Memorandum, March 19, 2012

Barcode:3064751-01 A-570-979 INV - Investigation -

UNITED STATES DEPARTMENT OF COMMERCE
International Trade Administration
Washington, D.C. 20230

A-570-979
C-570-980
~~Proprietary Document~~
AD/CVD O4: JDP
Public Version

March 19, 2012

MEMORANDUM TO: Gary Taverman
Acting Deputy Assistant Secretary
for Antidumping and Countervailing Duty Operations

THROUGH: Abdelali Elouaradia
Director, Office 4
AD/CVD Operations

Howard Smith
Program Manager, Office 4
AD/CVD Operations

FROM: Jeff Pedersen
Case Analyst
AD/CVD Operations, Office 4

SUBJECT: Scope Clarification: Antidumping and Countervailing Duty Investigations of Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China

Summary

One day prior to the initiation of the above-referenced investigations, Petitioner[1] submitted proposed scope language stating that the scope covers modules/panels produced in the People's Republic of China ("PRC") regardless of where the cells in the modules/panels were manufactured and covers modules/panels produced in a third-country from cells manufactured in the PRC. The Department did not include this proposed language in the scope because it did not have sufficient time to evaluate the language prior to initiation. Since that time we have evaluated Petitioner's proposed language and, for the reasons noted below, recommend clarifying the scope of these investigations to state that modules/panels produced in a third-country from cells produced in the PRC are covered by the scope; however, modules/panels produced in the PRC from cells produced in a third-country are not covered by the scope.

Background

On November 8, 2011, the Department of Commerce (the "Department") initiated antidumping duty ("AD") and countervailing duty ("CVD") investigations of crystalline silicon photovoltaic

[1] The petitioner is SolarWorld Industries America Inc. ("Petitioner").

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cells ("solar cells"), whether or not assembled into solar modules, from the PRC.[2] In the AD and CVD Initiation Notices the Department noted that Petitioner submitted revised scope language one day before initiation. The revised language included, among other things, the following substantive provision:

> These proceedings cover … crystalline silicon PV modules/panels produced in the PRC, regardless of country of manufacture of the cells used to produce the modules or panels, … and crystalline silicon PV modules or panels produced in a third country from crystalline silicon PV cells manufactured in the PRC … .

See AD Initiation Notice, 76 FR at 70960; CVD Initiation Notice, 76 FR at 70967; see also Standing Analysis and Revised Scope Language: Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled into Modules, from the People's Republic of China dated November 7, 2011 at Attachment 2.

The Department stated in the AD and CVD Initiation Notices that it has not adopted this specific revision recommended by Petitioner for the purposes of initiation. The Department explained that because the recommendation was filed one day prior to the statutory deadline for initiation the Department did not have sufficient time nor the administrative resources to evaluate Petitioner's proposed language regarding merchandise produced using inputs from third-country markets, or merchandise processed in third-country markets.[3]

The AD and CVD Initiation Notices set aside a period for interested parties to raise issues regarding product coverage. On November 28, 2011, we received comments from Petitioner, and the following interested parties: SolarOne Solutions; Yingli Green Energy Holding Company Limited and Yingli Green Energy Americas, Inc. (collectively, "Yingli"); Canadian Solar Inc. ("Canadian Solar"); Wuxi Suntech Power Co., Ltd., Suntech America, Inc. and Suntech Arizona, Inc. (collectively, "Suntech"); Changzhou Trina Solar Energy Co. Ltd. ("Trina Solar"); DelSolar Co. Ltd. and DelSolar (Wujiang) Ltd. (collectively, "DelSolar"); tenKsolar (Shanghai) Co., Ltd. ("tenK"); Jiangsu Green Power PV Co., Ltd. ("Jiangsu Green"); Transform Solar; Suniva; Q-Cells North America; Hanwha SolarOne ("Qidong") Co., Ltd. ("SolarOne"); Shanghai BYD Company Limited ("Shanghai BYD"); and Konca Solar Cell Co., Ltd. On December 1, 2011, SunPower Corporation submitted rebuttal comments, as did Yingli, Canadian Solar, Suntech, and Trina Solar on December 5, 2011, and Petitioner on December 13, 2011.[4]

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[2] See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Initiation of Antidumping Duty Investigation, 76 FR 70960 (November 16, 2011) ("AD Initiation Notice"); Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Initiation of Countervailing Duty Investigation, 76 FR 70966 (November 16, 2011) ("CVD Initiation Notice") (collectively "AD and CVD Initiation Notices").

[3] See AD Initiation Notice, 76 FR at 70960; CVD Initiation Notice, 76 FR at 70967.

[4] SolarOne, Shanghai BYD, tenK, Jiangsu Green, Zamp Solar, LLC, and Petitioner also submitted additional comments on the scope of this investigation but they were not applicable to the issue covered in this memorandum, country-of-origin.

Scope

The scope from the AD and CVD Initiation Notices is as follows:

The merchandise covered by this investigation are crystalline silicon photovoltaic cells, and modules, laminates, and panels, consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including, but not limited to, modules, laminates, panels and building integrated materials.

This investigation covers crystalline silicon photovoltaic cells of thickness equal to or greater than 20 micrometers, having a p/n junction formed by any means, whether or not the cell has undergone other processing, including, but not limited to, cleaning, etching, coating, and/or addition of materials (including, but not limited to, metallization and conductor patterns) to collect and forward the electricity that is generated by the cell.

Subject merchandise may be described at the time of importation as parts for final finished products that are assembled after importation, including, but not limited to, modules, laminates, panels, building-integrated modules, building-integrated panels, or other finished goods kits. Such parts that otherwise meet the definition of subject merchandise are included in the scope of this investigation.

Excluded from the scope of this investigation are thin film photovoltaic products produced from amorphous silicon (a-Si), cadmium telluride (CdTe), or copper indium gallium selenide (CIGS).

Also excluded from the scope of this investigation are crystalline silicon photovoltaic cells, not exceeding 10,000mm^2 in surface area, that are permanently integrated into a consumer good whose function is other than power generation and that consumes the electricity generated by the integrated crystalline silicon photovoltaic cell. Where more than one cell is permanently integrated into a consumer good, the surface area for purposes of this exclusion shall be the total combined surface area of all cells that are integrated into the consumer good.

Merchandise covered by this investigation is currently classified in the Harmonized Tariff System of the United States ("HTSUS") under subheadings 8501.61.0000, 8507.20.80, 8541.40.6020 and 8541.40.6030. These HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope of this investigation is dispositive.

Parties' Comments

Petitioner:

- The only way to address the material injury caused by Chinese cells and modules/panels is to include both modules/panels produced in the PRC regardless of

cell origin and Chinese cells incorporated into modules/panels produced in third-countries in the scope of the investigations.

- Not including language specifically covering third-country solar modules/panels made from PRC solar cells and PRC solar modules/panels made from third-country solar cells creates an unenforceable scope that can be easily circumvented.
- Solar cell production and solar module assembly are equally import steps in producing a finished solar module.
- Nearly all solar cell production is dedicated to producing solar modules/panels and all solar module/panel assembly relies on solar cells.
- Some countervailable subsidies are specific to the production of solar modules/panels and other subsidies are available to production of both solar cells and solar modules/panels. Both types of subsidies demonstrate that module assembly, in addition to cell production, is an important stage of production.

Other Interested Parties:

- The Department should reject Petitioner's attempt to expand the scope and not accept actions that would serve to evade the statutory standing requirements and the possibility of polling.
- Petitioner has asked the Department to adopt two conflicting country-of-origin tests for purposes of these investigations.
- The scope should be limited to solar cells made in the PRC or at most products containing solar cells made in the PRC.
- The scope should not include solar modules/panels made from cells not manufactured in the PRC because a substantial transformation analysis indicates that assembling solar cells into solar modules/panels does not change the country-of-origin.
- Solar module/panel assembly does not constitute substantial transformation because:
  - Solar cells represent the majority of the total cost of solar modules/panels.
  - The manufacture of solar cells is the technologically-critical portion of the production of solar modules/panels. Solar module/panel assembly is a low-tech final assembly requiring relatively unskilled labor.
  - Solar module power output is determined by the solar cells in the solar module/panel and not solar module/panel assembly.
  - Solar cells and solar modules/panels have the same end-use.
- Including scope language to capture solar modules assembled in the PRC, regardless of where the cells were manufactured and solar modules assembled in third countries from cells manufactured in the PRC, would ignore judicial precedent stating that the scope of an antidumping duty order is "defined by the type of merchandise and the country-of-origin."[5]

[5] See Notice of Final Determination of Sales at Less Than Fair Value: Certain Cold-Rolled Carbon Steel Flat Products from Argentina, 58 FR 37062, 37065 (July 9, 1993) ("Cold-Rolled from Argentina") and noting that this statement was quoted by the Court of International Trade ("CIT") twice in Advanced Tech & Materials Co., Ltd. v. United States, No. 09-511, 2011 Ct. Intl. Trade LEXIS 136, *11 (CIT Oct. 12, 2011) ("Advanced Tech.") and Ugine and ALZ Belgium, N.V. v. United States, 517 F. Supp. 2d 1333, 1345 (CIT 2007) ("Ugine").

On March 7, 2012, and March 14, 2012, Petitioner and tenK, respectively submitted further comments concerning product coverage. Due to the timing of the submissions, we have been unable to consider these comments in this decision. We will consider these comments at a later date.

Legal Framework

The scope of these investigations and the International Trade Commission final determination will determine the scope of any resulting AD and CVD orders. Because AD and CVD orders apply to merchandise from particular countries, determining the country where the merchandise is produced is fundamental to proper administration and enforcement of the AD and CVD statute. The scope of an AD or CVD order is limited to merchandise that originates in the country covered by the order.[6] The Department has explicitly stated that the scope of an antidumping duty order is "defined by the type of merchandise and the country-of-origin."[7]

In determining the country-of-origin of a product, the Department's practice has been to conduct a substantial transformation analysis.[8] The CIT has upheld the Department's "substantial transformation" analysis as a means to carry out its country-of-origin analysis.[9] The CIT stated that "{t}he 'substantial transformation' rule provides a yardstick for determining whether the processes performed on merchandise in a country are of such significance as to require that the resulting merchandise be considered the product of the country in which the transformation occurred."[10] Because the Petitioner's proposed scope language addresses modules/panels assembled, and cells produced, in a third country we have used a substantial transformation analysis to determine whether one or both of the scenarios described by Petitioner should be covered by the scope of these investigations.

Analysis

The Department has applied, as appropriate, the following analyses in determining whether substantial transformation occurs, thereby changing a product's country-of-origin. These have

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[6] See Stainless Steel Plate in Coils from Belgium: Final Results of Antidumping Duty Administrative Review, 69 FR 74495 (December 14, 2004) and the accompanying Issues and Decision Memorandum at Comment 4 ("SSPC Belgium").

[7] In Cold-Rolled from Argentina, 58 FR at 37065, the Department stated that "{t}he scope of an antidumping or countervailing duty order is defined by the type of merchandise and by the country of origin (e.g., widgets from Ruritania). For merchandise to be subject to an order it must meet both parameters, *i.e.*, product type and country of origin. In determining country of origin for scope purposes, the Department applies a 'substantial transformation' rule." As noted above, this language was quoted by the CIT twice in Advanced Tech. at *11 and Ugine, 517 F. Supp. 2d at 1345.

[8] See, e.g., Notice of Final Determination of Sales at Less Than Fair Value: Glycine from India, 73 FR 16640 (March 28, 2008), and accompanying Issues and Decision Memorandum at Comment 5; see also SSPC Belgium, and accompanying Issues and Decision Memorandum at Comment 4.

[9] See E.I. DuPont De Nemours & Company. v. United States, 8 F. Supp. 2d 854, 858 (CIT 1998) ("Dupont").

[10] See Dupont (referencing Smith Corona Corp. v. United States, 811 F. Supp. 692, 695 (CIT 1993) as "noting that in determining if merchandise exported from an intermediate country is covered by an antidumping order, Commerce identified the country of origin by considering whether the essential component is substantially transformed in the country of exportation").

included: 1) whether the processed downstream product falls into a different class or kind of product when compared to the upstream product; 2) whether the essential component of the merchandise is substantially transformed in the country of exportation; or 3) the extent of processing.[11] We have examined these criteria in conducting our substantial transformation analysis:

Class or Kind

The Department "has generally found that substantial transformation has taken place when the upstream and downstream products fall within two different 'classes or kinds' of merchandise.... Conversely, the Department almost invariably determines substantial transformation has not taken place when both products are within the same 'class or kind' of merchandise."[12] The merchandise subject to an investigation, i.e., the class or kind of merchandise to be investigated, is described in the scope. The scope of these investigations covers both solar cells and solar modules/panels.[13] Thus solar cells and solar modules/panels are within the same "class or kind" of product. We further note that the International Trade Commission ("ITC") in its companion preliminary determination defined solar cells and solar modules/panels as one domestic like product.[14]

Essential Component

In examining whether the essential component of the merchandise is substantially transformed in the country of exportation, the Department considers whether processing in the exporting country changes the important qualities or use of the component.[15] The essential component of solar modules/panels is the solar cell since the purpose of solar modules/panels is to convert sunlight into electricity and this process occurs in the solar cells.[16] Thus, in this case, the Department is considering whether the processing of solar cells into solar modules/panels changes the nature or use of the solar cells.

Module/panel assembly does not change the important qualities, i.e., the physical or chemical characteristics, of the solar cell itself. As stated in the original petition, solar cells are made from crystalline silicon wafers. A dopant, which is a trace impurity element diffused into a thin layer of the wafers' surface to impart an opposite electrical orientation to the cell surface, creates the positive/negative junction that is needed for the conversion of sunlight into electricity, which is the purpose of solar cells. Solar cells are normally coated with silicon nitride to increase light

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[11] See, e.g., Notice of Final Determination of Sales at Less Than Fair Value: Glycine from India, 73 FR 16640 (March 28, 2008), and accompanying Issues and Decision Memorandum at Comment 5.
[12] See Notice of Final Determination of Sales at Less Than Fair Value: Wax and Wax/Resin Thermal Transfer Ribbons from France, 69 FR 10674, 10675-10676 (March 8, 2004).
[13] See AD Initiation Notice, 76 FR at 70965 and CVD Initiation Notice, 76 FR at 70970.
[14] See Crystalline Silicon Photovoltaic Cells and Modules from China: Investigation Nos. 701-TA-481 and 731-TA-1190 (Preliminary), USITC Publication 4295 (December 2011) ("ITC Solar Cells and Modules Prelim") at 11.
[15] See also Erasable Programmable Read Only Memories (EPROMs) From Japan; Final Determination of Sales at Less Than Fair Value, 51 FR 39680, 39691-39692 (October 30, 1986) ("EPROMs").
[16] See Petition at Exhibit II-19 at 3.

absorption (this results in a blue-purple color) and undergo a screening process where conductive metal is printed into the cell. Metal conduits or busbars channel electricity generated by the cell into electricity collection points.[17] None of these characteristics are changed during module/panel assembly. Petitioner, Trina Solar, a mandatory respondent, and the ITC all describe module assembly as stringing together 60 or 72 solar cells, laminating them, and fitting them in a glass-covered aluminum frame.[18] These processes do not change the basic nature of a solar cell. Moreover, the function of a solar cell is not changed when assembled into modules/panels; the cell still functions to convert sunlight into electricity. The ITC also noted that "the physical characteristics and functions of cells and solar modules essentially are the same."[19] The purpose of both solar cells and solar modules/panels is to convert sunlight into electricity. Thus, neither the physical qualities nor the function of solar cells are changed when they are assembled into modules/panels.

The instant case is similar to EPROMs.[20] In EPROMs, the scope of the investigation included processed wafers and dice. In that case, the issue was whether processed wafers and dice that were produced in Japan, yet encapsulated in a third country, became a product of the country where the encapsulation occurred. The Department determined that the processed wafers or dice were not just a major component of the finished device, rather they were "the essential active component{s} which define{d} the merchandise under investigation."[21] The Department further found that the assembly process in the third country was not a sophisticated process.[22] Accordingly, the encapsulation of processed wafers or dice in a third country did not qualify as substantial transformation for purposes of determining country-of-origin. Similarly, solar module assembly connects cells into their final end-use form but does not change the "essential active component," the solar cell, which defines the module/panel.

Extent of Processing

When considering the extent of processing, we examine whether the processing was substantial and/or sophisticated.[23] As noted above, module/panel assembly consists of stringing together solar cells, laminating them, and fitting them in a glass-covered aluminum frame for protection. Thus, this stage of production is principally an assembly process. Numerous interested parties, aside from Petitioner, argued that solar module/panel assembly is relatively insubstantial in terms of number of steps, inputs, research and development required, and time.[24] Consistent with these arguments, Trina Solar identified six stages of production when manufacturing solar

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[17] See Petition for the Imposition of Antidumping and Countervailing Duties: Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled into Modules, from the People's Republic of China, dated October 19, 2011 ("Petition") at Exhibit II-19 at 3.
[18] See Petition at Exhibit A-26. See also ITC Solar Cells and Modules Prelim at 6 and 10.
[19] See ITC Solar Cells and Modules Prelim at 10.
[20] See EPROMs.
[21] See EPROMs, 51 FR at 39692.
[22] See id.
[23] See, e.g., Notice of Final Determination of Sales at Not Less Than Fair Value: Wax and Wax/Resin Thermal Transfer Ribbon from the Republic of Korea, 69 FR 17645, 17647 (April 5, 2004).
[24] See November 28, 2011 scope comments submitted by tenK, Transform Solar, Suniva, and Q-Cells North America.

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modules/panels, five of which were dedicated to solar cell production and only one pertained to solar module/panel assembly.[25] Petitioner and the ITC also indicated that solar module assembly is one stage of production.[26] Petitioner and Trina Solar also reported consuming many more types of inputs in cell production compared with module assembly.[27] Further, Trina Solar reported a production time for solar cells that is [ ] of module assembly.[28] Accordingly, the assembly of solar cells into solar modules does not rise to the level of changing the country-of-origin of the subject merchandise.

Based on our analysis of the foregoing factors we find that solar module assembly does not substantially transform solar cells such that it changes the country-of-origin. Solar cells and solar modules/panels are within the same class of merchandise. Further, module assembly does not substantially alter the essential nature of solar cells nor does it constitute significant processing such that it changes the country-of-origin of the cell, as it is an assembly process that only strings cells together, adding a protective covering and an aluminum base. Therefore, we believe the scope should be clarified to state that modules/panels produced in a third-country from solar cells produced in the PRC are covered by the scope; however, modules/panels produced in the PRC from solar cells produced in a third-country are not covered by the scope.

While we understand the intent of Petitioner's argument that the scope should cover solar modules/panels produced in the PRC, regardless of the origin of the solar cells, this is not tenable because doing so would either necessitate making inconsistent country-of-origin determinations for a single product,[29] or require ignoring the country-of-origin when considering whether merchandise entering the United States is covered by the scope of these investigations. A product can only have one country-of-origin for AD/CVD purposes, and AD and CVD investigations only cover products with a country-of-origin that is the country under investigation.[30] Petitioner has not cited any example where the Department has found that a product could have two countries-of-origin. Thus, while the Department is not excluding solar modules/panels from the scope of these investigations, in conjunction with the above described substantial transformation analysis, we are clarifying that where solar cell production occurs in a different country from solar module assembly, the country-of-origin of the solar modules/panels is the country in which the solar cell was produced.

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[25] See also Trina Solar's January 10, 2012 Section A response at Exhibit A-26.

[26] See Petition at Exhibit A-26. See also ITC Solar Cells and Modules Prelim at 11 where the ITC noted in its preliminary determination that the "{p}roduction of the finished product, modules, involves four primary steps – crystallization, wafer production, cell conversion, and module assembly – along with packing and inspection of the final product. {Solar} cells undergo only one additional production step, the assembly into modules, before transformation into the finished product."

[27] See Trina Solar's February 6, 2012 Section D response at Exhibit D-4. See also Petition at Exhibits II-19 and II-20.

[28] See Trina Solar's February 6, 2012 Section D response at Exhibit D-4.

[29] Namely, finding that module assembly in the PRC using solar cells produced in a third-country constitutes substantial transformation and thus the country of origin of the module is the PRC while also finding that module assembly outside the PRC using PRC produced solar cells does not constitute substantial transformation and thus the country of origin of the module is the country where the solar cells were produced, the PRC.

[30] See Cold-Rolled from Argentina, 58 FR at 37065.

Petitioner's claim that not adopting their proposed language in the scope creates an unenforceable scope that can be easily circumvented. While we acknowledge that the Department has on occasion explicitly addressed the possibility of circumvention as a consideration in determining the country-of-origin of merchandise under investigation, circumvention is not the sole or controlling factor relied upon in making a country-of-origin determination.[31] Nonetheless, whether explicitly stated or not, the factors we consider for making country-of-origin determinations inherently reflect the agency's concern that the relief afforded by AD/CVD orders not be eviscerated by moving minor processing outside of the country covered by the order. Thus, circumvention concerns are reflected in the country-of-origin determination. As stated above, adopting the language proposed by Petitioner would result in two inconsistent country-of-origin determinations.

The Department routinely meets with U.S. Customs and Border Protection ("CBP") to ensure that our AD/CVD orders are enforced. Towards that end, and with respect to these cases in particular, the Department has begun an inter-agency dialogue with CBP that is designed to fulfill that goal. Specifically, Import Administration and CBP staff are meeting to develop procedures which will ensure that Chinese solar cells subject to any potential duties are properly identified at the border. Efforts to evade enforcement will be identified and thwarted. While the Department works closely with CBP, if an importer is declaring the wrong country-of-origin for imported merchandise, this is a matter appropriately dealt with by CBP. Lastly, Petitioner has the option of bringing additional petitions to address any dumping concerns it has regarding solar modules/panels assembled from solar cells produced in a third country.

[31] As demonstrated above, the Department considers various factors in a substantial transformation analysis.

Recommendation

We recommend that the Department find that solar module/panel assembly does not constitute substantial transformation of the solar cells included in the module. We further recommend clarifying the scope of these investigations to state that modules/panels produced in a third-country from cells produced in the PRC are covered by the scope; however, modules/panels produced in the PRC from cells produced in a third-country are not covered by the scope.[32]

✓

Agree Disagree

Gary Taverman
Acting Deputy Assistant Secretary
for Antidumping and Countervailing Duty Operations

3/19/12
Date

[32] See Attachment I.

Attachment I

Scope of the Investigation

The merchandise covered by this investigation are crystalline silicon photovoltaic cells, and modules, laminates, and panels, consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including, but not limited to, modules, laminates, panels and building integrated materials.

This investigation covers crystalline silicon photovoltaic cells of thickness equal to or greater than 20 micrometers, having a p/n junction formed by any means, whether or not the cell has undergone other processing, including, but not limited to, cleaning, etching, coating, and/or addition of materials (including, but not limited to, metallization and conductor patterns) to collect and forward the electricity that is generated by the cell.

Subject merchandise may be described at the time of importation as parts for final finished products that are assembled after importation, including, but not limited to, modules, laminates, panels, building-integrated modules, building-integrated panels, or other finished goods kits. Such parts that otherwise meet the definition of subject merchandise are included in the scope of this investigation.

Excluded from the scope of this investigation are thin film photovoltaic products produced from amorphous silicon (a-Si), cadmium telluride (CdTe), or copper indium gallium selenide (CIGS).

Also excluded from the scope of this investigation are crystalline silicon photovoltaic cells, not exceeding 10,000mm^2 in surface area, that are permanently integrated into a consumer good whose function is other than power generation and that consumes the electricity generated by the integrated crystalline silicon photovoltaic cell. Where more than one cell is permanently integrated into a consumer good, the surface area for purposes of this exclusion shall be the total combined surface area of all cells that are integrated into the consumer good.

Modules, laminates, and panels produced in a third-country from cells produced in the PRC are covered by this investigation; however, modules, laminates, and panels produced in the PRC from cells produced in a third-country are not covered by this investigation.

Merchandise covered by this investigation is currently classified in the Harmonized Tariff System of the United States ("HTSUS") under subheadings 8501.61.0000, 8507.20.80, 8541.40.6020 and 8541.40.6030. These HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope of this investigation is dispositive.

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Exhibit 10

U.S. Department of Commerce and U.S. Customs and Border Protection Decisions on Country of Origin

determination as to whether sales of brass sheet and strip from Italy have occurred at less than fair value until not later than January 5, 1987.

EFFECTIVE DATE: October 30, 1986.

FOR FURTHER INFORMATION CONTACT: Charles E. Wilson, (202-377-5288), Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230.

On March 31, 1986, we published a notice in the **Federal Register** (51 FR 11774) that we are initiating, under section 732(b) of the Act (19 U.S.C. 1673a(b)), an antidumping duty investigation to determine whether brass sheet and strip from Italy were being, or were likely to be, sold at less than fair value. On April 24, 1986, the International Trade Commission determined that there is a reasonable indication that imports of brass sheet and strip from Italy are materially injuring a U.S. industry. On August 22, 1986, we published a preliminary determination of sales at less than fair value with respect to this merchandise (51 FR 30097). The notice stated that if the investigation proceeded normally, we would make our final determination by November 3, 1986.

On October 17, 1986, La Metalli Industriale, repondent in this investigation, requested a postponement of the final determination until not later than the 135th day after publication of or preliminary determination, pursuant to section 735(a)(2)(A) of the Act. Respondent accounts for a significant proportion of exports of the merchandise to the United States. If exporters who account for a significant proportion of exports of the merchandise under investigation request an extension after an affirmative preliminary determination, we are required, absent compelling reasons to the contary, to grant the request.

We are postponing the date of the final determination until not later than January 5, 1987.

The United States International Trade Commission is being advised of this postponement, in accordance with section 735(d) of the Act.

This notice is published pursuant to section 735(d) of the Act.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

October 23, 1986.

[FR Doc. 86-24603 Filed 10-29-86; 8:45 am]

BILLING CODE 3510-DS-M

[A-588-504]

Erasable Programmable Read Only Memories (EPROMs) From Japan; Final Determination of Sales at Less than Fair Value

AGENCY: International Trade Administration, Import Administration Commerce.

ACTION: Notice.

SUMMARY: We have determined that EPROMs from Japan are being, or are likely to be, sold in the United States at less than fair value, and have notified the U.S. International Trade Commission (ITC) of our determination. The Department of Commerce and Japanese producers/exporters of substantially all of the known imports of the subject merchandise entered into a suspension agreement on July 30, 1986 pursuant to section 734 of the Act. The suspension agreement will remain in force and we will not issue an antidumping duty order as long as the conditions of the agreement are met. However, the investigation was continued at petitioners request under section 734.

EFFECTIVE DATE: October 30, 1986.

FOR FURTHER INFORMATION CONTACT: David Mueller, William Kane, or Raymond Busen, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230: telephone (202) 377-2923, 377-1766, or 377-3464.

Final Determination

We have determined that EPROMs from Japan are being, or are likely to be, sold in the United States at less than fair value, as provided in section 735(a) of the Tariff Act of 1930, as amended (19 U.S.C. 1673d(a)) (the Act). We made fair value comparisons on over 90 percent of sales of the class or kind of merchandise to the United States by the respondents during the period of investigation, April 1 through September 30, 1985. The weighted-average margins are shown in the "Results of Investigation" section of this notice.

Case History

On September 30, 1985, we received a petition from Intel Corporation, Advanced Micro Devices, Inc., and National Semiconductor Corporation on behalf of the domestic manufacturers of EPROMs. In compliance with the filing requirements of § 353.36 of the Commerce Regulations (19 CFR 353.36), the petition alleged that imports of EPROMs from Japan are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Act, and that these imports are materially injuring, or are threatening material injury to, a United States industry. The petition also alleged that sales of the subject merchandise were being made at less than the cost of production. After reviewing the peitition, we determined that it contained sufficient grounds upon which to initiate an antidumping duty investigation. We notified the ITC of our action and initiated such an investigation on October 21, 1985 (50 FR 43603, October 28, 1985). On November 14, 1985, the ITC determined that there is reasonable indication that imports of EPROMs from Japan are materially injuring, or are threatening material injury to, a U.S. industry (50 FR 47852, November 20, 1985).

On December 2, 1985, we presented antidumping duty questionnaires to Hitachi Ltd. (Hitachi), Fujitsu Limited (Fujitsu), Toshiba Corporation (Toshiba), and NEC Corporation (NEC). Respondents were requested to answer the questionnaire in 30 days. However, at the requests of Hitachi, Fujitsu, Toshiba, and the Japanese Ministry of International Trade and Industry (MITI), we granted an extention to January 17, 1986. On January 17, 1986, we received incomplete responses from Hitachi, Fujitsu, and Toshiba, and a letter from NEC stating that it would not respond to our questionnaire. In letters dated February 3, 1986, the Department requested supplemental information from Hitachi, Fujitsu, and Toshiba. Additional information was submitted by these respondents on February 18, 1986.

On March 17, 1986, we published a preliminary determination that EPROMs from Japan were being sold at less than fair value in the United States (51 FR 9087).

After the preliminary determination, Hitachi, Fujitsu, and Toshiba requested an extension of the final determination date. These respondents were qualified to make such a request since they accounted for more than 90 percent of exports of the merchandise to the United States. If exporters who account for a significant proportion of exports of the merchandise under investigation properly request an extension after an affirmative preliminary determination, we are required, absent compelling reasons to the contrary, to grant the request. Accordingly, we granted the requests and postponed our final determination until July 30, 1986 (51 FR 15519, April 24, 1986)

Between March 10 and April 18, 1986, and between June 10 and June 12, 1986 (for Hitachi), we conducted our verification procedures of the information provided by these respondents at their facilities in Japan and the United States. On May 27, 1986, we held a hearing to provide all interested parties with an opportunity to comment on the investigation.

On July 30, 1986, the Department of Commerce and Japanese poducers/exporters which account for substantially all exports for certain EPROMs to the United States subject to this investigation signed a suspension agreement as provided under section 734 of the Act.

Our notice of the suspension of the investigation of EPROMs from Japan (51 FR 28253, August 6, 1986) announced that, pursuant to the Agreement and section 734(f)(2)(A) of the Act, the suspension of liquidation of all entries, entered or withdrawn from warehouse for consumption, of EPROMs from Japan, effective March 19, 1986, as directed in our notice of "Antidumping Preliminary Determinations of Sales at Less than Fair Value, Erasable Programmable Read Only Memory Semiconductors from Japan," was terminated and any cash deposits on entries of EPROMs from Japan pursuant to that suspension of liquidation were refunded and bonds released.

On August 26, 1986, petitioners requested that the investigation be continued under section 734(g) of the Act. Therefore, we are required to issue a final determination in this investigation.

Products Under Investigation

The products covered by this investigation are erasable programmable read only memories (EPROMs), which are a type of memory integrated circuit that is manufactured using variations of Metal Oxide-Semiconductor (MOS) process technology, including both Complementary (CMOS) and N-Channel (NMOS). The products include processed wafers, dice and assembled EPROMs produced in Japan and imported into the United States from Japan.

Finished EPROMs are currently provided for in the Tariff Schedules of the United States Annotated (TSUSA) under item 687.7445. Unassembled EPROMs, including unmounted chips, wafers, and dice, are provided for under TSUSA item 687.7405.

In the notice of initiation in this case, we tentatively included in the scope of this investigation processed wafers and dice produced in Japan and assembled into finished EPROMs in another country prior to importation into the United States from the other country. Although none of the respondents reported sales during the period of investigation of EPROMs assembled in third countries from Japanese manufactured dice, we now have information from the United States Customs Service that imports of such merchandise are occurring. Based on the information available to us we have determined that EPROMs assembled in third countries using wafers or dice processed in Japan are included within the scope of the investigation. We have also determined that a variant of EPROMs, OTPs (One-Time-Programmable read only memories) are included in the scope of the investigation. In making the decision to include both third country assembled EPROMs and OTPs in the scope of the investigation we have been guided by the fact that the processed dice contain all the essential electronic properties which distinguished EPROMS as a separate class of goods from other semiconductors. See our responses to petitioners comments #27 and 28 for more detail.

Fair Value Comparisons

For the three responding firms, to determine whether sales of the subject merchandise in the United States were made at less than fair value, we compared the United States price with foreign market value as specified below. For NEC, we made our fair value comparison using the best information available for both United States price and foreign market value, since NEC did not respond to our questionnaire. The best information available was the United States price and foreign market value in the petition.

For purposes of this determination, with regard to exporter's sales price (ESP) sales for all companies, we used the date of shipment as the date of sale in both the U.S. and home markets because, in this industry, this date is customarily the first date on which a binding commitment to sell the subject merchandise can be said to have occurred, as explained more fully in the comment section of this notice. With regard to Toshiba's purchase price sales, the date of contract was used as the date of sale because we determined that this was the date at which all key elements for the contracts (i.e, binding commitment, irrevocable price, quantities to be purchased) are firm.

United States Price

For certain Toshiba sales we used the purchase price of the subject merchandise to represent United States price, as provided in section 772(b) of the Act, since the merchandise was sold to unrelated purchasers prior to its importation into the United States. For other Toshiba sales and sales by all other respondents, we used the exporter's sales price to represent United States price, in accordance with section 772(c) of the Act, as the merchandise was sold after the time of importation. A small number of Hitachi's sales were made to unrelated purchasers prior to importation, but no calculations were performed on these sales. For Fujitsu, we disregarded certain U.S. sales when the disparity between their prices and the prices of such or similar merchandise in the home market was considered too great to be accounted for by normal market value factors.

We calculated purchase price based on the packed, F.O.B. prices to unrelated purchasers in the United States. We made deductions for foreign inland freight and insurance. Exporter's sales prices were based on the packed, duty-paid, C.I.F. prices to unrelated purchasers in the United States. For ESP, where appropriate, we made deductions for brokerage charges in Japan and the United States, foreign inland freight and insurance, commissions to unrelated parties, indirect selling expenses incurred both in Japan and in the United States, credit expenses, warranties, technical services, advertising, discounts, and rebates. The cost of additional packing performed in the United States was deducted, For Fujitsu, the cost of further processing in the United States, including an amount for profit or loss associated with that processing, was also deducted.

Foreign Market Value

The petitioners alleged that sales in the home market by all the respondents were at prices below the cost of producing the merchandise.

In accordance with section 773(a) of the Act, we calculated foreign market value based on home market prices, where there were sufficient home market sales at or above the cost of production, to determine foreign market value. Home market sales were considered insufficient for this purpose when less than 10 percent of sales of a particular product (by density, process, package, and lead coating) over the six-month period of investigation were above cost. We used constructed value as the basis for calculating foreign market value where there were no sales of such or similar merchandise in the home market during the month of the

U.S. sale, or where there were not sufficient sales, as defined in section 773(b) of the Act, above the cost of production during the six-month period.

We calculated a foreign market value for each product for each month of the period of investigation, due to sharp declines in monthly prices.

Constructed Value

In accordance with section 773(e) of the Act, we calculated foreign market value based on constructed value for Hitachi and Fijitsu when there were not sufficient home market sales of such or similar merchandise for the purpose of comparison. For Toshiba, we calculated foreign market value based on constructed value for all sales because more than 90 percent of its sales of each product were found to be below the cost of production. In determining constructed value, we calculated the cost of materials, fabrication, general expenses, profit and the cost of packing. General methodologies, which were applicable to all of the respondents, followed by the specifics for each respondent, are described below.

The Department matched the sales prices with the cost of manufacturing occurring three months prior to the date of sale for the final determination. Because of the nature of the industry, which is characterized by technological advancements and rapid changes in the production process, significant increases/decreases in the costs of production occur within a short period of time. Therefore a period of time before the date of sale to allow for the actual manufacturing costs incurred for its production is necessary. From information obtained from the respondents and from the petitioners, the Department concluded that a three-month period was appropriate to account for the production time prior to the date of sale.

Financial expenses used for the cost of production by the Department in its final determination included the net interest expense and the credit expense. Interest expense was based on the interest expenses of the consolidated corporation during the fiscal year. Interest income related to the corporation's operation was netted against this expense. Because the full amount of the credit expense for home market sales was also included as part of the financial expense, an amount of interest expense was deducted from the total which represented interest expense related to the accounts receivable.

The Department applied its R&D methodology developed for products which require a significant research and development effort. The Department capitalized those R&D costs specifically associated with the product such as design and design improvements, pilot processing required by, and engineering efforts to produce, the necessary equipment. The criteria enumerated in International Accounting Standard #9 generally set forth the relevant guidelines. These costs are capitalized and amortized over the sales during the market life of the product. Current costs incurred for R&D related to the product-line, such as projects for improving materials or technology used for all or many of the products, are expensed and allocated to the relevant products sold during the period of review. R&D costs include all personnel costs, materials, services, depreciation of equipment and facilities, overhead and the other costs incurred for R&D. R&D incurred by the corporation for general purposes (unrelated to an existing product-line) are expensed and allocated to all of the products sold by the corporation during the period of review.

The Department included in the constructed value for the final determination, costs and adjustments related to start-up. The Department recognizes that certain costs may be incurred during start-up which may not occur during the later stages of production. Because start-up costs are ordinary costs incurred in the manufacture of the product, the Department capitalizes such costs prior to and during the early stages of production and amortizes such costs over the sales during the market life of the product. Start-up costs which are capitalized must be directly identified with start-up. Cost adjustments which reflect the effects of production quantities lower than anticipated capacity utilization are not necessarily attributable to start-up.

For Hitachi, the Department based its final determination on Hitachi's submission. However, for certain methods and valuation principles used by Hitachi and for certain costs which were not verified, the Department made adjustments or applied best information to determine the constructed values.

—The cost of manufacturing was based on the monthly costs incurred for each product for the months of January through June, 1985, thereby, accounting for a three month lag time prior to the dates of sale.

—Certain costs related to the retirement reserve, which had been omitted by Hitachi from the labor costs, were included.

—The overhead pools for the various plants, which were allocated by the Company for the submission to the products on the basis of standard labor hours, were reallocated by the Department. The method used by Hitachi, in some cases, significantly shifted the capital expenses for the semiconductor products to other unrelated products.

—The depreciation expense, which had been restated by Hitachi for its submission based on the residual value of the assets and an extension of their useful life by two years, was recalculated by the Department using best information.

—Certain expenses of the plants had been reclassified by the company for the submission as general expenses. These were reclassified by the Department as part of the cost of manufacturing.

—Best information was used for product-line and product-specific research and development expenses.

For the general expenses, the Department included the home market direct and indirect selling expenses, general research and development, financial expenses and general and administrative expense, adjusted to reflect certain expenses of a general nature which had been excluded by Hitachi. The actual general expenses did not exceed 10 percent of the sum of the materials and fabrication expenses. Therefore, for the constructed value the statutory minimum 10 percent for the general expenses was used. The statutory minimum of 8 percent profit was added to materials, fabrication and general expenses, because actual profit was less than that amount.

For Toshiba, the Department based its final determination on Toshiba's submission. However, for certain methods and valuation principles used by Toshiba and for certain costs which were not verified, the Department made adjustments or applied best information to determine the constructed value.

—The cost of manufacturing was based on the monthly costs incurred for each product for the months of January through June, 1985, therefore, accounting for the three month production time prior to the date of sale.

—The yields used by the respondent for the wafer fabrication cost calculation were adjusted to the actual yields. The wafer fabrication cost components were adjusted to reflect the fully yielded amount based on the actual yields.

—The depreciation expense, which was not verified, was derived by using "best information."

—The yields used by the respondent for the assembly and test costs calculation presented in the response were adjusted by using "best information," and the cost components

were adjusted to reflect the fully yielded amounts based on this "best information."

—The labor and overhead costs were adjusted for wafer fabrication and assembly/test by using the "best information," because these costs were not based on acceptable standards, and reflected omissions and misallocations.

—The product-line and product-specific research and development expenses submitted by Toshiba were used, adjusted for certain omitted costs.

—General expenses as provided by Toshiba could not be verified. Best information, based on Toshiba company data was used.

—Packing was adjusted to include packing materials and subcontract costs.

For general expenses, the Department included the home market direct and indirect selling expenses, general research and development, financial expenses and general and administrative expenses. The actual general expenses exceeded 10 percent of the sum of the materials and fabrication expenses. Therefore, for the constructed value, the actual general expenses were used. The statutory minimum of 8 percent profit was added to materials, fabrication and general expenses, because actual profit was less than that amount.

For Fujitsu, the Department based its final determination on the company's submission, in part, and on "best information" for the remainder. Throughout the verification, certain documents and analyses were requested by the Department which the company refused to provide. In addition, the company's apparent lack of preparation of basic worksheets supporting the submission and failure to provide those and other documents in a timely manner, if at all, prevented the verification team from conducting necessary procedures during the verification. Because of the lack of progress, the verification proceedings were suspended by the Department. Because the absence of certain documents severely limited the scope of the verification, the cost of manufacturing was not considered to be verified. The information requested, but not provided, for this area included:

—Worksheets documenting the reconciliation of the submission to the cost accounting records for a sufficient number of products and months so that the adequacy and completeness of the submission could be tested;

—Full reconciliation of the submission to the in-house product cost system for any one product;

—Equipment acquisition costs for all fixed assets involved in the production of EPROMs;

—Documentation related to the allocation of all indirect costs centers;

—Wafer fabrication yield data for completed lots;

—Documentation for production quantities;

—Profit/loss statement for the Semiconductor Operating Group.

The cost of manufacturing for Fujitsu was based on the monthly costs for January-June of the highest-cost producer of the other respondents, with the exception of research and development expenses.

For general expenses, the Department included the home market direct and indirect selling expenses, general research and development, financial expenses of this notice and general and administrative expense. Where the general expenses were lower than the statutory minimum of 10 percent, the statutory minimum was used. The statutory minimum of 8 percent profit was added to the cost of materials, fabrication and general expenses, because actual profit was less than this amount.

Price to Price Comparisons

For Hitachi and Fujitsu, we found sufficient sales above the cost of production for certain product groups to allow use of home market prices to determine foreign market value in accordance with section 773(a)(1)(A) of the Act. For Toshiba, since virtually all sales were found to be below the cost of production, we calculated foreign market value based on constructed value. For fair value comparisons we compared, where available, identical merchandise. Where comparisons were made between similar merchandise, the similar merchandise was selected based on criteria of density, process, month, package type, lead coating and speed, in that order of priority. Comparisons were made at the same levels of trade where sales at those levels existed. Otherwise, comparisons were made at the nearest comparable commercial level of trade. We calculated the home market price on the basis of the delivered price to unrelated purchasers. When we compared purchase price to foreign market value, we made deductions for foreign inland freight and insurance. We also made adjustments for differences in circumstances of sale for credit terms in accordance with § 353.15 of our regulations.

When we compared ESP with foreign market value, we made deductions, where appropriate, for foreign freight and insurance, discounts, rebates, and commissions to unrelated parties in the home market. We also made deductions, where appropriate, for differences in circumstances of sale for credit terms, technical services, and warranty, in accordance with § 353.15 of our regulations. Where appropriate, we offset commissions paid on U.S. sales with indirect selling expenses in the home market, in accordance with § 353.15(c) of our regulations. We also used indirect selling expenses to offset United States selling expenses, in accordance with § 353.15(c) of our regulations.

For both purchase price and ESP, in order to adjust for differences in packing between the two markets, we deducted home market packing costs and added U.S. packing costs to the home market prices.

Currency Conversion

In calculating foreign market value, we made currency conversions for Japanese yen to U.S. dollars in accordance with § 353.56(a) of our regulations, using the certified daily exchange rates for comparisons involving purchase price. For ESP comparisons, we used the official exchange rate for the date of sale, which we determined was the date of shipment, since the use of that exchange rate is consistent with section 615 of the Trade and Tariff Act of 1984 (1984 Act). We followed section 615 of the 1984 Act rather than § 353.56(a)(2) of our regulations because the later law supersedes that section of the regulations.

Verification

Where possible, we verified the submitted information used in making our final determination in accordance with section 776(a) of the Act. We used standard verification procedures, including examination of relevant sales and financial records of each company. Where information could not be verified, we used the best information available.

Respondents' Comments

Hitachi Comment No. 1: Hitachi states that its method for allocating factory overhead, based on the relative standard labor hours for memory and non-memory products should be used, because this was the method used by the company for its internal accounting.

DOC Position: We disagree. The Department analyzed the company's method of allocating overhead to determine if this method reasonably apportioned costs among the products being manufactured in each plant. This analysis revealed that this method

significantly shifted the depreciation expenses which could be directly identified with memory products to non-memory products. Therefore, since this allocation method caused distortions in costs, the Department reallocated overhead based on relative depreciation expenses of memory and non-memory products.

Hitachi Comment No. 2: Hitachi argues that its restatement of depreciation for the response was performed in accordance with generally accepted accounting principles and, therefore, should have been accepted by the Department.

DOC Position: We disagree. Hitachi restated its depreciation expense from a three-year to a five-year useful life by basing this depreciation expense on the residual value of the equipment, as of the time of the investigation, and extending the life of the assets for an additional two years. This restatement did not reflect depreciation based on a useful life of five years and substantially understated the depreciation expense, because (1) depreciation expenses for equipment three to five years old which had been fully depreciated, were not captured, and (2) the amount of depreciation, based on the residual value for equipment not fully depreciated which was extended for an additional two years, would be significantly less than the depreciation amount based on a useful of five years as of the date of acquisition.

Furthermore, this is not the type of situation where such restatement of depreciation would be justified. Generally accepted accounting principles which pertain to a change in the estimated useful life apply to situations where new events have occurred, additional experience has been acquired or additional information had been obtained, so as to make the original estimate inaccurate. Hitachi has not changed its accounting estimates for the useful life for this equipment for its financial reporting purposes.

Hitachi Comment No. 3: Hitachi states that the prices, as recorded in its books, of the equipment acquired from other Hitachi divisions reflected the cost of production for this equipment and should be used by the Department to determine the depreciation.

DOC Position: We agree. The Department reviewed the cost of equipment obtained from Hitachi's other divisions. The difference between actual cost of production and the price of such equipment recorded on the books would have a *de minimis* impact on the depreciation expense. Therefore, the record amount was used.

Hitachi Comment No. 4: Hitachi argues that the retirement costs reflected on its books should not be used because they exceed the amount which can be deducted for tax purposes.

DOC Position: We disagree. The Department used the cost incurred by the company for its retirement expense. The fact that these costs are not fully tax deductible is not relevant in determining the cost incured by the company for manufacturing the product.

Hitachi Comment No. 5: Hitachi argues that it is appropriate to net interest income against interest expense even though it results in a negative interest expense.

DOC Position: The Department applied its usual methodology and netted interest income related to the operations of the company against interest expense.

Hitachi Comment No. 6: Hitachi states that the Department should use the selling, general and administrative expenses presented in the submission, because they 1) include all relevant costs such as direct and indirect selling expenses, general and administrative expenses of the subsidiary, and 2) these costs are appropriately allocated to the product.

DOC Position: The Department used Hitachi's selling, general and administrative expenses, but adjusted such amounts by including actual direct and indirect selling expenses for the home market and certain other expenses which are general in nature and incurred by the corporation, but which were not included by Hitachi in its submitted cost.

Hitachi Comment No. 7: Hitachi claims that there are no records for wafer production time other than the "travellers" provided at the verification.

DOC Position: The Department reviewed "travellers" which accompanied the wafers through the production process. However, since the company's records did not contain production time information, and because a sufficient number of such travellers could not be tested to be considered a credible sample, the Department did not consider such data to be verified.

Hatachi Comment No. 8: Hitachi states that the wafer costs used in the submission, based on the purchase prices and the cost of production for wafers produced by related companies, are accurate and should be used.

DOC Position: We agree. The wafer costs as submitted in the response were verified and used by the Department for its final determination.

Hitachi Comment No. 9: Hitachi argues that the Department should use the statutory 8 percent profit, because the actual profit was lower for the product under investigation during the relevant period.

DOC Postion: We agree. The Department used the 8 percent statutory minimum profit.

Hitachi Comment No. 10: Hitachi contends that (1) there was no allocation of historic R&D at laboratories or at the Device Development Center associated with EPROMs, because there was no product-line or product-specific R&D needed for the product, and that the general laboratory expenses were allocated on a current basis, (2) product engineering department expenses were not included as product-specific or product-line, because they were not related directly to the product, and (3) the historic costs were allocated over total units to be sold in the past and future. Therefore, the Department should use the amount of R&D submitted in its response.

DOC Position: We disagree. The Department attempted to verify the R&D costs as submitted. However, sufficient documentation could not be reviewed or obtained to test adequately the company's claims. Therefore, best information was used for the product-line and product-specific R&D.

Hitachi Comment No. 11: Hitachi claims that the Department should not use Intel's cost model because (1) the model assumes a set of mechanical relationships derived largely from bits and pieces of public information, and (2) it is not in accordance with the constructed value methodology. Hitachi urges the Department to use the data it supplied.

DOC Position: The Department used the company's actual cost for the manufacturing and sales expenses of the merchandise under investigation. In those instances when such information was not appropriately identified, quantified, valued and/or verified, the Department used "best information." If, in the Department's judgment, publicly available data are the most appropriate information, then they may be used as the "best information."

Adjustments were made to Hitachi's costs, as outlined in the "constructed value" section of this notice.

Hitachi Comment No. 12: The Department should have converted currencies at the rate prevailing at a time prior to the date of sale in order to give the producer a reasonable time in which to adjust to sustained changes in exchange rates. Hitachi suggests that the previous quarter's exchange rate be used, arguing that this is consistent with the special rule in 19 CFR 353.56(b).

DOC Position: We do not agree with Hitachi's interpretation of the special rule. Since the change in relative values of the currencies was moderate and progressive, it is reasonable to expect that Hitachi, in setting prices in the United States, would have taken into account then current exchange rates. To interpret the general statement in 19 CFR 353.56(b) otherwise would render section (a) of this regulation meaningless, since no currency conversion would ever be made at the normal times called for in that section, unless there had been absolutely no change from quarter to quarter. This is not the intent of the regulation.

Hitachi Comment No. 13: Hitachi argues that no production lag should be applied for the purpose of determining sales below cost pursuant to 19 U.S.C. 1677b(b). Further, if a lag time is used in the computation of constructed value pursuant to 19 U.S.C. 1677b(e), it should only account for the time ordinarily required to produce the merchandise prior to the date of exportation, and should not take into account inventory time.

DOC Position: Section 1677b(b) of the Act directs the Department to determine whether sales are made at prices which represent less than the cost of producing "the merchandise in question." We have interpreted this language to mean that costs should be matched to the merchandise sold, just as it is done for constructed value determinations. This is particularly true, where as here, there was considerable volatility of both costs and prices in the period. We have not, however, applied a lag for inventory time in Japan, inasmuch as there is insufficient evidence to support such an adjustment.

Hitachi Comment No. 14: The Department should calculate separate margins for each different density and process EPROM. Each density and process EPROM is a unique product with numerous physical differences from other EPROMs.

DOC Position: We disagree. EPROMs are a distinct category of semiconductor. The fact that there are additional subdivisions of this category does not require that each subdivision have its own margin. Instead, the Department determines that the different densities and processes of EPROMs are all within the same class or kind of merchandise prescribed in section 731 of the statute, to which the Department generally applies a single rate. In determining whether products are within the same general class or kind of merchandise we assess, (1) the general physical characteristics of the merchandise, (2) the expectations of the ultimate purchasers, (3) the channels of trade in which the merchandise moves, and (4) the ultimate use of the merchandise. In this case, the different densities have the same general physical characteristics. While respondents argue that pin configurations can vary, this difference can be easily compensated for, for instance, by providing extra pin holes on the circuit board. Similarly, physical size differences are not a significant distinction. Instead, the similarities between each generation are far more important than the differences, since the basic function of an EPROM remains identical over successive generations of EPROMs regardless of the geometric increase in density. Further, the various generations of EPROMs are to a large extent interchangeable. For example, four 64K devices would perform the exact task of a single 256K chip. The only difference between densities is in the memory storage capacity of the chip. Thus, the expectations of the purchasers and ultimate intended use are substantially the same for the different densities, differing only with respect to the degree of memory storage required. Finally, because of the product substitutability, the different densities move in the same channels of trade, as was further supported by the use of similar advertising. With respect to CMOS and NMOS EPROMs, the Department finds that, while there are differences in speed, complexity and cost of the two devices, they are fundamentally similar in their design and purpose such as to make them substantially interchangeable and within the same class or kind of merchandise. Further, prices and costs rapidly change in this product as one generation succeeds another. An average rate based on several generations at different stages of development will probably be most representative, for estimated duty deposit purposes, of the rate of one generation over an extended time.

Hitachi Comment No. 15: EPROMs of 1 megabit and above should be excluded from the scope of the investigation due to their markedly different physical characteristics.

DOC Position: We disagree. One megabit EPROMs are simply the next generation of this type of device. The ultimate use of one megabit EPROMs is the same as for earlier generation EPROMs, and they are sold in the same channels of trade. Their physical differences are not more pronounced than the differences between other generations of EPROMs, and are outweighed by the similarities in function and use. For the same reasons expressed in our response to Hitachi comment #14, in which we describe why we do not consider other densities to constitute different classes or kinds of merchandise, we do not consider one megabit EPROMs to be a separate class or kind of merchandise. We have, therefore, decided not to exclude them from the scope of the investigation and final determination.

Toshiba Comment No. 1: The respondent argues that the Department's methodology to calculate R&D expenses is flawed because the approach does not follow GAAP and is administratively burdensome. They contend that although all companies maintain records differently from R&D, the Department should use the company method of recordkeeping.

DOC Position: The methodology for R&D used by the Department identifies R&D expenses associated with the manufacturing of the product. Generally accepted accounting principles' primary purpose is to develop principles which fairly present the company's overall operating results over a period of time. The constructed value provision of the antidumping law is intended to identify the cost necessary for the manufacture and sale of a particular product. Therefore, if there are costs which are not specifically identified with a product on the company's financial statements, but can be identified with the product through other documentation, the Department may use these product-specific costs in calculating the cost of production. The Department notes that it can not rely solely on the company's recordkeeping methods for determining costs, since such records may not capture all relevant expenses, may inappropriately value such costs, or may not identify such costs with the product.

Toshiba Comment No. 2: The respondent contends that the use of 15 percent of sales price, the average R&D expenditures reported by the Japanese companies to MITI, should not be used because (1) it represents the expenditures for prior years, and (2) the Department does not know all the categories of R&D included in the R&D reported by the companies to MITI.

DOC Position: The Department used Toshiba's actual R&D expenses, as adjusted.

Toshiba Comment No. 3: Toshiba claims that the Department should offset interest expense by interest income to the extent income is tied to operations.

DOC Position: We agree. See "Constructed Value" section, third paragraph.

Toshiba Comment No. 4: Toshiba states that although the selling, general

and administrative expense, included as part of the costs of EPROMs, is lower than the corporate average, the submitted amount included general expense from all corporate levels, corporate R&D and selling expenses. Therefore, the submitted amount should be included.

DOC Position: We disagree. The Department reviewed the general and administrative expenses submitted by Toshiba and found no evidence of divisional general expenses being included in the general expenses. Therefore, the submitted amount was not used.

Toshiba Comment No. 5: Toshiba alleges that because of the dynamic nature of the industry, the Department must adopt a flexible approach and analyze the sales and costs over an extended period, even over the expected life of the product.

DOC Position: We feel that, for this industry, the six month period of sales and costs examined was an extended period. This is also the period normally relied on by the Department for other products. To go beyond this period would require us to base our determination on costs and prices which have not been incurred or taken place. We believe it is inappropriate to make our determination on such subjective and unverifiable data.

Toshiba Comment No. 6: Toshiba contends that the Department made certain methodological errors in its preliminary determination. These were: (1) Lagging the cost of production to the sales prices, because the respondent had already lagged this cost, (2) imputing credit expenses and also including financing expenses, (3) not offsetting interest expense with interest income, and (4) not deducting rebates as a circumstance-of-sale adjustment.

DOC Position: The Department reviewed the respondent's submission prior to verification for use in its premliminary determination. When it appeared that certain costs were not included or were not appropriately valued, the Department used best information to adjust such costs. In the case of Toshiba's preliminary determination, the response: (1) Was not clear as to the method used or the costs which were lagged, (2) appeared to have offset interest expense with investment income not related to the ordinary operation, and (3) had not included an amount for credit expense. Therefore, the Department adjusted these costs for its preliminary determination. For its final determination, the Department continued to lag the cost of manufacturing and included a credit expense. The department deducted rebates as a circumstance of sale adjustment.

Toshiba Comment No. 7: Toshiba points out that in its books, a three-year useful life with additional bonus depreciation was used. However, a five year useful life was recalculated by the company for the verification, in accordance with tax law, since the Department used five years for its preliminary determination. Toshiba argues the the Department should accept the recalculated depreciation for the final determination.

DOC Position: The Company restated its depreciation from a three-year useful life to a five-year useful life by extending the life by two additional years and basing the deprecation on the residual value of the equipment as of the period of investigation. Although such method may be useful for tax purposes, the Department did not accept this restatement, because it substantially understated the amount of depreciation. Therefore, the Department used an estimate, based on data in the record, as best information for the depreciation expense. See the response to Hitachi Comment No. 2.

Toshiba Comment No. 8: Toshiba contends that the R&D it presented was in accordance with the Department's methodology except for an error of not including the quality assurance department expense. Contrary to the verification report, Toshiba points out that product-specific R&D after commercialization was included, and that certain expenses, which were not included in R&D, were considered to be selling expenses.

DOC Position: The Department verified the R&D expenses presented by Toshiba. This amount was used for the final determination.

Toshiba Comment No. 9: Toshiba argues that each density of EPROM should be treated as a separate class or kind of merchandise because of significant physical differences between characteristics and production process technologies associated with each generation of EPROM, differences in end use, and substantial price difference between EPROM generations.

DOC Position: We disagree. See response to Hitachi comment No. 14.

Toshiba Comment No. 10. Toshiba argues that the Department should calculate separate margins for CMOS and NMOS EPROMs. While NMOS EPROMs have an advantage of greater speed, lower power consumption, and the generation of less heat, CMOS EPROMs are more complex and employ a more costly technology, which requires more manufacturing steps than NMOS. Furthermore, CMOS EPROMS command a substantial premium over NMOS because they are suited to particular applications that cannot be adequately satisfied by NMOS models. The price difference, therefore, reflects a basic functional dissimilarity which supports the separate classification of NMOS and CMOS EPROMs.

DOC Position: We disagree. See response to Hatachi comment No. 14.

Toshiba Comment No. 11: Toshiba argues that the scope of the investigation should not include processed wafers and dice produced in Japan and assembled into finished EPROMs in another country prior to importation into the United States.

DOC Position: We disagree. See DOC response to Petitioners' Comment No. 28 (General).

Fujitsu Comment No. 1: Fujitsu argues that the lag methodology adopted by the Department has no statutory basis. In rapidly changing cost environments, the Department traditionally has constructed costs for each month and compared these costs with sales of the same month. In addition, the Department's assumption that all costs including assembly and testing were incurred two months before the month of sale is arbitrary and inconsistent in the case of EPROMs.

DOC Position: We disagree. The Department, for hyperinflationary economy countries, has matched current cost with sales in the same month in order to account for the rapidly changing nominal value of the currency. However, in this case, the change in the costs is a result of the efficiencies of the production cost. The increase or decrease in cost is not a result of a change in the value of the currency but is a change in the actual costs required for the production of the product.

For the Department's position on lag, see "Constructed Value" section, second paragraph.

Fujitsu Comment No. 2: Fujitsu declares that it is the Department's longstanding practice to calculate production costs in accordance with generally accepted accounting principles in the home market, unless those principles artificially distort the results. Fujitsu finds no basis for the Department's deviation from these principles with regard to calculation of Fujitsu's R&D and SG&A costs.

DOC Position: We disagree. See DOC response Toshiba Comment No. 1.

Fujitsu Comment No. 3: The appropriate value for Fujitsu's R&D is that amount expensed during the period for which costs were measured. Fujitsu argues that the Department should not assume general R&D is connected solely

with semiconductors. A portion of R&D should be allocated to costs associated with the wide variety of computer and telecommunications devices Fujitsu also manufacturers, as well as to costs associated with semiconductors used internally by Fujitsu.

DOC Position: With the exception of R&D devoted specifically to EPROMs prior to commercialization, the Department based the R&D expenses of Fujitsu on the period April-September 1985. R&D incurred at semiconductor research facilities was allocated to semiconductors used internally by Fujitsu as well as external sales. Expenses of the corporate laboratory were treated as general and administrative expenses.

Fujitsu Comment No. 4: The Department excluded product-specific R&D from SG&A and aggregated these costs with other direct costs of manufacturing. Fujitsu contends the exclusion of any R&D expense from SG&A violates standard accounting principles, raises the cost of manufacturing, and lowers SG&A.

DOC Position: The Department followed Fujitsu's practice of classifying product-specific R&D expense as a cost of manufacture.

Fujitsu Comment No. 5: Fujitsu declares the Department's method of calculating constructed value has led the Department to double count certain R&D expenses. In its preliminary determination, constructed value contained not only R&D expenses equal to 14 percent of the cost of manufacture, but also some costs (product-specific R&D) which were already reported and included in the cost of manufacture.

DOC Position: The Department used "best information" for its preliminary determination. Such double counting has been eliminated in the final determination. No industry-average figure was included in the R&D expenses of Fujitsu.

Fujitsu Comment No. 6: Fujitsu contends that the Department should use Fujitsu's actual financing costs submitted to the Department rather than an imputed percentage. Credit expenses and long- and short-term debt should not be included in SG&A to meet the 10 percent threshold.

DOC Position: We disagree. See "Constructed Value" section, paragraph three.

Fujitsu Comment No. 7: Fujitsu argues that the Department should not include in the U.S. assembly costs, material costs of the unassembled items transferred from Japan (chip, gold wire, lead frame). Only a small amount of gold ribbon is purchased in the U.S. for use in assembly. All other materials are transferred from Fujitsu Ltd. and should be added to the cost of production in Japan.

DOC Position: The cost of the chip was not included in the cost of U.S. assembly. Since the other materials were added in the production process in the United States, the costs of these items were included in U.S. assembly cost.

Fujitsu Comment No. 8: The Department stated the scope of testing was limited because worksheets were provided for two products for one month. The products referred to constitute most of the EPROMs sold by Fujitsu during the period of investigation. The company believed the Department wished to look at only one month's worksheets, but by the end of verification it provided workshets for three months.

DOC Position: The Department stressed to the respondents that the worksheets used in the preparation of the questionnaire responses should be saved and be available for review at verification. If a respondent cannot trace the cost amounts in the submissions through worksheets into the cost accounting system, the company cannot expect the Department to conclude that the submission is properly supported by the cost accounting system. The worksheets provided to the Department were not furnished in a timely manner nor did they provide a sufficient basis to conclude that all costs were included and appropriately stated.

Fujitsu Comment No. 9: Fujitsu states the company was unfamiliar with verification procedures, was cooperative, and would have provided all information requested at the Department's convenience.

DOC Position: The failure of Fujitsu to allow verification to proceed at an acceptable pace over a period of almost three weeks seriously impeded the progress of the investigation. Under the strict statutory timetable of this investigation, a prolonged verification would have disrupted the ability of the Department to analyze the information and the opportunity for petitioners to comment on the Department's findings. Furthermore, to allow respondents to treat verification in such a way, knowing that the result would simply be an additional verification, would severely damage the effectiveness of the Department's administration of the antidumping statute.

Fujitsu Comment No. 10: Fujitsu contends that the Department, in calculating depreciation expenses, should not assume that a large portion of production equipment is manufactured by related companies since Fujitsu provides the design specifications to several companies which then manufacture the equipment for Fujitsu. Only a small percentage of the total acquisition cost of all semiconductor equipment is provided by a related supplier. The purchase price for this equipment is equivalent to third party prices for substantially identical equipment.

DOC Position: The Department could not verify the facts related to this claim. Therefore, because this and other facts could not be verified, best information was used for the cost of manufacturing which included the depreciation expense for the final determination.

Fujitsu Comment No. 11: Fujitsu argues that the Department should accept as reasonable the different allocation methods used by the different plants, because there are substantial differences in the technical set-up the production lines at the different plants.

DOC Position: The Department could not verify the facts related to these allocation methods. The theoretical arguments related to the allocation methods are, therefore, not relevant. Because this information and other facts could not be verified, best information was used for the cost of manufacturing for the final determination.

Fujitsu Comment No. 12: Fujitsu calculated its average yield for each particular process in accordance with its process cost accounting system, rather then by lot or by wafer start. The Company argues that discrepancies between yields as tested and as submitted are due to errors in sampling methodology.

DOC Position: During verification, the Department attempted to reconcile the submitted yields to the company's records. Discrepancies were noted. The Department attempted to determine the credibility of the company's data by extending the sample which was tested. The company did not provide this additional information, nor did it suggest a different method for establishing the credibility of the data which were submitted.

Fujitsu Comment No. 13: Fujitsu requests that the Department accept the Semiconductor Operating Group's profit and loss statement which Fujitsu provided late in the verification. Fujitsu claims that it was not provided earlier because this management report was not a source document for the numbers submitted to the Department.

DOC Position: The profit and loss statement was not provided until subsequent to the on-site verification. Therefore, the information being verified

could not be reconciled to this statement.

Fujitsu Comment No. 14: The Department was provided, at the time of the suspension of verification, with a schedule of its acquisition costs of all fixed assets in EPROM production that have been purchased in the last five years, grouped by useful life. The Department should use this data.

DOC Position: This schedule of acquisition costs of fixed assets by useful life was provided subsequent to the completion of the on-site verification. The Department could not test or reconcile this information. Therefore, depreciation expense was not considered to be verified.

Fujitsu Comment No. 15: Fujitsu notes that the Department has included a foreign exchange loss as an item under "Miscellaneous expenses." Such exchange rate loss is unrelated to home market sales and should not be included.

DOC Position: We agree. Foreign exchange losses were not included in the cost of production.

Fujitsu Comment No. 16: Fujitsu argues that all underlying data needed to allocate labor and overhead expenses of Fujitsu in San Diego were verified. In addition, Fujitsu advocates a specific method of allocating standard costs plus variance to products produced in San Diego.

DOC Position: We agree that underlying data such as labor and overhead expenses by department and production quantities were verified and we have based our calculation of U.S. manufacturing cost on these amounts. Allocation of labor and overhead expenses to specific products was based on each device in proportion to its standard cost. The reallocation method proposed by Fujitsu was rejected as untimely and unverified.

Fujitsu Comment No. 17: Fujitsu argues that a characteristic of the royalty expense of Fujitsu makes it inappropriate to include this expense as a cost of production. The nature of this characteristic is business proprietary information.

DOC Position: We agree. In this case, the royalty expense of Fujitsu in San Diego was not included in U.S. manufacturing costs.

Fujitsu Comment No. 18: Fujitsu argues that reconciliation to the internal accounting system should be considered complete. Only an insignificant portion of reconciliation to the accounting system was not completed before verification was suspended. Fujitsu believes it supplied the Department with all remaining information necessary to complete the reconciliation.

DOC Position: When a company has an internal product cost accounting system which it uses in the ordinary course of business, the Department expects the company to base its response on this system. Fujitsu had such a system but developed another methodology for its questionnaire response. Under these circumstances, the Department must completely reconcile the costs in the response to the firm's accounting system to determine if all costs have been included, appropriately valued, and allocated. The Department did not complete this reconciliation for Fujitsu's submitted costs. The Department cannot use data submitted subsequent to the on-site verification, since such data cannot be tested or reconciled to other relevant information.

Fujitsu Comment No. 19: Fujitsu claims that the change in Fujitsu's basis for calculating depreciation from a six-month to a twelve-month fiscal period is independent of this investigation and should not be a source of concern to the Department.

DOC Position: Since the Department did not obtain sufficient documentation to verify the depreciation expense, the Department used best information.

Fujitsu Comment No. 20: Fujitsu argues that the Department possesses sufficient verified data concerning monthly depreciation expenses for the five wafer fabrication cost centers at one of the plants.

DOC Position: Although the Department obtained some information concerning monthly depreciation expenses for the five wafer fabrication cost centers at one production site, the sample was very limited. Therefore, the Department did not find the support sufficient to consider the information to be verified.

Fujitsu Comment No. 21: The Department has in its possession verified inventory data for finished devices by device type and access speed. Fujitsu has no inventory record which accumulates all devices by access speed alone. The Company believes the inventory data provided should be sufficient to substantiate submitted volumes.

DOC Position: The Department obtained some inventory information. However, the Department did not find this data to be sufficient to consider inventory to be verified. Information in addition to that related to inventory would need to be verified in order to consider production volume to be verified.

Fujitsu Comment No. 22: According to Fujitsu, the general differences in relative sizes of variances between the plant manufacturing EPROMs and the Semiconductor Operating Group as a whole are primarily a result of the facilities' relative ages and sizes.

DOC Position: The Department could not determine from the information provided whether the variances were appropriately identified with the various plants.

Fujitsu Comment No. 23: Fujitsu argues that EPROM dice should not be included in the scope of the investigation because they are not the same class or kind of merchandise as completed EPROMs.

DOC Position: We disagree. There is no use for an EPROM wafer or die other than in a completed EPROM. Therefore, both the ultimate use and the ultimate purchasers of the components and the finished product are the same. Similarly, there are no separate channels of trade, since the only way the product is advertised is in the form of a finished EPROM, which includes the components. Lastly, the only physical difference between the completed EPROM and die and wafers is that one is assembled and the other is not. The components are identical. (See DOC response to Hitachi Comment #14, for further discussion of class or kind.)

Fujitsu Comment No. 24: EPROM dice should not be included because they are manufactured into completed EPROMs in the U.S. and are, therefore, products of the United States and outside the scope of an antidumping investigation.

DOC Position: We disagree. Both EPROM dice and completed EPROM are explicitly included in the scope of investigation. The fact that EPROM dice are further manufactured in the United States prior to sale does not preclude their inclusion in our investigation. The exporter's sales price provisions of the statute (section 772(e)) implicitly gives the Department authority to include merchandise in the scope of the investigation or order which is further manufactured in the United States.

Fujitsu Comment No. 25: Fujitsu argues that if EPROM dice are included in the scope of the investigation, a separate weighted-average margin should be calculated for the merchandise.

DOC Position: We disagree. As stated in our response to Fujitsu comment #23, we feel that both EPROM dice and completed EPROMs are the same class or kind of merchandise, capable of performing the same functions with only minor modifications. We, therefore, have not differentiated between the products for purposes of determining dumping liability.

Fujitsu Comment No. 26: Fujitsu argues that the Department should calculate a margin based on completed EPROMs and apply it to both EPROM dice and completed EPROMs.

DOC Position: We disagree. As stated in response to Fujitsu comments No. 24 and No. 25, EPROM dice have been included in the scope of the investigation and importations of this merchandise cannot be ignored in our calculations of dumping margins. In order to derive the most accurate calculation of dumping margins, the Department determined that it was necessary to examine both EPROM dice and completed EPROMs.

Fujitsu Comment No. 27: Respondent claims each density of EPROM is a separate class or kind of merchandise and should be the subject of individual weighted-average margins.

DOC Position: We disagree. See response to Hitachi Comment No. 14.

Fujitsu Comment No. 28: Respondent argues that the Department erred in comparing U.S. sales to constructed value based on costs two months prior to the dates of sale.

DOC Position: See response to Hitachi Comment No. 13.

Fujitsu Comment No. 29: Respondent claims that the Department erred in calculating a profit or loss attributable to the EPROM dice used in the manufacture of a finished EPROM in the United States, in that the calculation did not take into consideration the disproportionate amount of value added in the U.S. assembly operation. Fujitsu proposes that the Department correct this error by either (1) making an ESP deduction for further manufacturing in the United States based on values rather than cost, or (2) by maintaining its current methodology, but adjusting profit or loss to reflect losses caused by the high U.S. manufacturing costs.

DOC Position: The Department has calculated United States prices in ESP situations by deducting the value of further processing based on the costs of the processing because these costs are the only reasonable measure of value available to it. Profit or loss has been assigned to the costs of the dice in the same ratio as found in the cost of the finished EPROM.

Fujitsu Comment No. 30: Fujitsu claims the Department's computerized formula for calculating the United States price of the unassembled EPROMs is flawed.

DOC Position: The Department agrees that its program to calculate United States price for its preliminary determination contained both technical and factual errors. The program was changed to eliminate the errors for our final determination.

Fujitsu Comment No. 31: Fujitsu contends an error was made in programming the identification codes for 128K, 64K, and SB0716 EPROMs.

DOC Position: We agree and have corrected this error for our final determination.

NEC Comment No. 1: The Department should not have sent a questionnaire to NEC as the three other producers examined represented nearly 90 percent of exports.

DOC Position: The selection of those producers who will be required to respond to questionnaires is discretionary. In this case, we gave full consideration to NEC's position as expressed in its letter of November 26, 1985. However, in view of the uncertainty of trade statistics (EPROMS do not have a separate tariff classification) we decided the NEC response was necessary to obtain an accurate determination of sales at less than fair value. Therefore, we did not withdraw our questionnaire.

NEC Comment No. 2: Information in the petition can no longer be considered the best information available to the Department. The best information available should be the average margins of responding firms or the highest weighted-average margin of one of these firms. The best available information should not be considered a punitive measure.

DOC Position: We rely on full and complete responses, successfully verified, to reach our determination. When a company is requested to respond and refuses, the most conservative approach is for us to assume that the potential respondent has seen the petition and determined that its actual margins of dumping are even higher than those alleged. To use rates which are lower than those alleged, derived from companies who have participated in the investigation, would enable a respondent to obtain more favorable treatment by refusing to respond than by answering the questionnaire. This is unacceptable. In those instances where we have used as the best information available the highest margins for other respondents, the producers for whom best information was used had made good-faith efforts to comply with our questionnaire; their responses had simply been incomplete or erroneous. That situation is sufficiently different from the case of NEC, which refused entirely to respond, to support different assumptions as to what the actual margins would have been, and therefore, what information should form the basis of best information available.

Petitioners' Comments

Petitioners' Comment No. 1 (Hitachi): Petitioners claim that Hitachi (1) did not account for all its R&D, nor were such costs verified, (2) allocated factory overhead on an incorrect basis, (3) incorrectly recalculated depreciation expenses, (4) offset interest expense with interest income related to other products, and (5) did not account for all of its selling, general, and administrative expense; therefore, the Department should use "best information" for these costs.

DOC Position: For the Department's treatent of such costs, see Respondent's Comments-Hitachi.

Petitioners' Comment No. 2 (Hitachi): The Department should allocate price protection and ship and debit post delivery price adjustments to particular original sales, if possible. If not, then they should connect payments to particular sales using a "first in, first out" (FIFO) inventory assumption. The payments should be assigned to the most recent sales to distributors. Payments should not be averaged as this dilutes the per unit amount rebated.

DOC Position: Since the rebates are not related to any identifiable individual sale, it was necessary for the respondents to choose some reasonable method to allocate these rebate payments. One used an average method, and two used FIFO for price protection and average for ship and debit. We believe that both methods are reasonable, and after adjustment for some under-allocation of payments, have accepted both methods. While the average method does spread out the effect of rebates, it is specific as to distributor and device. The FIFO method does not dilute per unit amounts, but probably assigns rebates to the wrong original sales, since the most recent sales to distributors tend to be at the lower invoice prices, and rebates are applicable more to the oldest purchases still in distributor stocks.

Petitioners' Comment No. 3 (Hitachi): Hitachi's home market sales listing cannot be used because it inconsistently reported sales, using various points in transactions as the date of sale.

DOC Position: The sales listing was revised to list only sales with dates of shipment within the period of investigation, and has been used in reaching our final determination. It has been verified.

Petitioners Comment No. 4 (Hitachi): The Department must track returned

EPROMs, as they reduce sales revenue and increase production cost.

DOC Position: Revenue figures are based on net sales (deliveries less returns) as reported in Hitachi sales journals. Since the returns are not of defective merchandise and are capable of being resold, the production cost should not be increased. Verification revealed that no EPROMs were written off, so saleable production totals are not affected.

Petitioners' Comment No. 5 (Hitachi): The Department should disallow Hitachi's claim for distribution of free EPROMs, as it could not be verified.

DOC Position: We agree.

Petitioners' Comment No. 6 (Hitachi): Hitachi must report all ship out of stock and debit (SOSAD) payments applicable to sales during the period of investigation. The revised amounts for June through November should be added to amounts paid in April and May to determine the total.

DOC Position: We disagree. Since all SOSAD payments are allocated to sales during the six month period of investigation, it would be inappropriate to apply eight months of payment to six months of sales. The period of payments was shifted two months forward (from April-September to June-November) to account for average delays in processing time by Hitachi. Since the average time a device is in distributor inventory is likely to vary by device and distributor, and is unknown to repondents, we decided that any attempt to estimate this period would not be accurate enough to justify the time required to make a change.

Petitioners' Comment #7 (Hitachi): Hitachi price protection payments should be applied to distributor sales on a FIFO inventory basis.

DOC Position: We disagree. The average method used by Hitachi is reasonable. See reponse to Petitioners' Comment #6 (Hitachi).

Petitioners' Comment #8 (Hitachi): The Department must obtain and verify information from Hitachi on price adjustments on U.S. sales.

DOC Position: We believe we have accounted for all adjustments to price.

Petitioners' Comment #9 (Hitachi): The Department should treat all returned EPROMs as rejects and unsaleable unless Hitachi can demonstrate the return was resold.

DOC Postion: We disagree. Hitachi has sparate accounting codes for returns of defective merchandise and stock rotation returns. We see no basis to assume stock rotation returns are defective and will not be resold.

Petitioners' Comment #10 (Hitachi): The Department must find a verifiable manner by which to calculate commissions paid by Hitachi in the United States.

DOC Position: The Department has used a verifiable method to calculate commissions paid by Hitachi in the United States. Hitachi commissions are paid to agents based on a percentage of distributor resale prices (when sales are to a distributor). As these commissions must be expressed as a percentage of distributor purchase prices, it was necessary, and appropriate, to develop a ratio between distributor purchase and resale prices. The method used is considered the most accurate approach given the documentation available to the respondent.

Petitioners' Comment #11 (Hitachi): The Department must identify EPROMS with special characteristics in Japan and the United States and ensure they are compared with each other. Separate costs of production should be developed for each type of specialized device.

DOC Position: We agree it would be desirable to compare only devices which are identical in all characteristics. However, for the present, we have differentiated only by denisty and process (NMOS or CMOS) as the Department did not have the administrative ability during this investigation stage of the proceeding to develop price and cost data on every sub-type of EPROM manufactured and sold by the respondent.

Petitioners' Comment #12 (Hitachi): The Department should not assume that the date of shipment is always the date of sale, as users (OEMs) sometimes purhase on long-term contracts.

DOC Position: In this particular trade, characterized by abrupt changes of market price and frequent renegotiation of terms, we continue to think that the date of shipment constitutes the date of sale, both in Japan and the United States. Where anomalous prices were found, we questioned the repondents as to reasons for these prices and, where appropriate, eliminated these sales from price comparisons.

Petitioners' Comment #13 (Toshiba): Petitioners' claim that Toshiba's (1) R&D did not include all costs and it was not vertified, (2) depreciation was incorrectly restated, (3) selling, general and administrative costs were incorrectly reported, and (4) yields for both wafer, assembly and test were not verified. On this basis, the Department should use "best information" for these costs.

DOD Position: For depreciation and selling, general, and administrative expenses we have used best available information. We have used actual yields. R&D was satisfactorily verified, and used after adjustments for some omitted costs. For further detail, see our response to Toshiba comments 1, 2, 4, 7, and 8.

Petitioners' Comment #14 (Toshiba): Petitioners argue that due to errors and omissions in Toshibia's reported production costs, the Department should (1) adjust reported labor and overhead costs for assembly and testing to reflect standard costs adjusted to actual, rather than the transfer prices used by Toshiba; (2) add to production costs the omitted ongoing modification costs for EPROM production line processing; and (3) adjust Toshiba's costs to include an appropriate cost for inventory write-offs and adjustments.

DOC Position: The Department reviewed the methodology used by Toshiba to determine the labor and overhead costs. Because the Department could not satisfactorily verify the methodology used, and because of the omission of certain costs, we used "best information."

Petitioners' Comment #15 (Toshiba): Petitioners argue that Toshiba did not accurately quantify its price protection adjustments for its U.S. distributors because it distributed the price protection amount over a larger number of units than the specific units which should have received them. Petitioners allege that this resulted in lower margins of dumping for the EPROMs to which the price protection actually applies. The Department should, therefore, use the best information available to approximate the level of the actual protection provided.

DOC Petition: We disagree. Although the price protection adjustments did not apply to the specific sales being protected, we considered the method of allocation to be a reasonable one. Toshiba used a first-in first-out (FIFO) method of accounting and went back through the most recent shipments until it captured the full price protection adjustment amount.

Petitioners' Comment #16 (Toshiba): Petitioners argue that Toshiba has not accurately quantified its ship and debit price adjustments in that portions of the adjustments falling within the period of investigation were not reported. Furthermore, petitioners allege that Toshiba's method of treating these adjustments reduced its dumping margins by distributing ship and debit expenditures over a larger number of units than those to which the adjustments actually applied.

DOC Position: We agree. Toshiba's ship and debit adjustments have been recomputed. The recomputation involved allocating all ship and debit

claims approved in June–November to sales in April–September. The allocation was distributor and device specific. We believe that the use of a 2-month lag period is necessary because verification indicated that the ship and debit adjustments were not actually paid until several months later. Furthermore, the price adjustments apply to distributor inventory and cannot be directly associated to individual sales. Therefore, the recomputation adjusts prices during the six-month investigative sales period with the adjustments paid during a later six-month period.

Petitioners' Comment #17 (Toshiba): Petitioners state that the Department must verify that Toshiba's reported sales to Canada which were included in sales to the United States are not included in the U.S. sales on which our final antidumping duty determination will be based.

DOC Position: We agree. Sales to Canada which were erroneously reported as sales to the United States were deleted from the U.S. sales listing prior to performing margin calculations for the final determination.

Petitioners' Comment #18 (Fujitsu): Petitioners argue that, since Fujitsu refused to provide the Department with the necessary documentation and information necessary to verify costs which resulted in the Department's suspension of verification, the Department must use "best information."

DOC Position: We agree. Best information was used when such data could not be verified.

Petitions' Comment #19 (Fujitsu): Petitioners contend that rebates for meeting sales objectives during the period of investigation must be applied to sales during the period.

DOC Position: We agree and have adjusted home market prices, where applicable, to reflect these rebates.

Petitioners' Comment #20 (Fujitsu): Petitioners contend that prices of the merchandise in the United States continued to decline througout the period of investigation necessitating further price protection adjustments than those disclosed at verification, and that the Department should impute such price reductions based on U.S. distributor selling prices, adjusted for distributor profit.

DOC Position: In verying the information submitted, the Department reviewed price protection mechanisms for a reasonable time after the period of investigation to account for post-sale adjustments to sales under investigation. U.S. prices were adjusted to reflect documented price protection adjustments. Without evidence that further price protection adjustments were being made, none will be imputed.

Petitioners' Comment No. 21 (Fujitsu): Petitioners argue that the Department must collect information on ship and debit adjustments beyond December 1985, and apply the adjustments to the specific shipments for which they were made.

DOC Position: The Department concluded that there months was a reasonable estimate of the time between shipment and ship and debit credit. Therefore, credits issued from July through December are considered a reasonable reflection of credits applicable to sales made during the period of investigation. As these special price authorizations apply to sales from distributor inventory, they cannot be associated with individual sales or shipments to distributors. We allocated these credtis based on units shipped during the period of investigation.

Petitioners' Comment #22 (Fujitsu): Petitioners contend that early payment rebates to distributors must be applied to the specific sales for which they were made, rather than be allocated over total distributor sales.

DOC Position: Discount claim and allowance account records were found not to be retained in sufficient detail to identify individuals sales receiving this rebate. The totals used to allocate this rebate were verified and the allocation method found to be reasonable.

Petitioners's Comment #23 (General): Petitioners claim that the Department should adjust the reported SG&A costs where SG&A expenses were allocated based on sales rather than cost or where expenses were omitted. The resultant SG&A percentage should not be substantially below the SG&A corporate average percentage.

DOC Position: The Department agrees and in those cases were the SG&A costs were not appropriately allocated or did not include certain costs, the Department used best information or adjusted the amounts of the SG&A expensed.

Petitioners' Comments #24 (General): Petitioners claim that the Department should lag production costs at least three to four months when comparing constructed value with United States prices and when comparing the cost of production to home market sales, in order to match actual costs to the sales price.

DOC Position: We agree. The Department attempted to verify actual production time for each respondent. While production information was not satisfactorily verified for any one company, from the information obtained, the Department estimated the production cycle time to be three months and used this estimate as the "best information" for all of the companies involved.

Petitioners' Comment #25 (General): Petitioners claim that because each respondent had several deficiencies in its reporting of R&D costs the Department should use the "best information" available. It should use average publicly reported Japanese DRAM industry R&D amounts, in the range of 60 percent of variable production costs, or the 1982–84 average R&D as a percentage of sales as reported by MITI.

DOC Position: The Department, when it could not satisfactorily verify the R&D, used the best information, based on data issued by the Ministry of International Trade and Industry. In one case where R&D had been verified, but certain costs were omitted, the Department adjusted the R&D costs by adding the omitted costs.

Petitioners' Comment #26 (General): Petitioners stress that the Department should not permit the respondents to claim that all R&D is a general expense of the corporation.

DOC Position: The Department includes in the cost of manufacturing all costs, direct and indirect, incurred prior to or during production, which are directly related to the manufacturing of the product. R&D expenses, such as those related to the design of the product and product line, are necessary for the manufacturing of the product and, therefore, are included in the cost of manufacturing.

Petitioner's Commment #27 (General): EPROMs in plastic cases are within the scope of the investigation, despite the fact that they are not erasable. Their electrical properties are identical to ceramic cased EPROM and the lack of erasability is irrelevant to most users.

DOC Position: We agree. Material supplied by a respondent and petitioners indicates that the plastic-cased devices are directly interchangeable with those in ceramic cases which have a window through which the erasing light can reach the dice. Although once packaged in plastic the EPROM cannot be erased, the active portion of the chip (the dice) is erasable. An overwhelming majority of the users have no need for the erasability feature.

The plastic devices move in the same channels of trade as the EPROMs encased in ceramic. We have, therefore, determined that the plastic-cased devices are of the same class or kind of merchandise and are included within the scope of this investigation.

Petitioners' Comment #28 (General): EPROMs which are assembled in third countries using processed wafers or dice fabricated in Japan should be included in the scope of this investigation.

DOC Position: We agree. Pursuant to section 731 of the statute the Department is required to look at the class or kind of merchandise produced in the country under investigation. Although the statute is not explicit, section 773(g) indicates that merchandise exported to the United States through an intermediate country is included within the class or kind of merchandise covered by the investigation, unless it is substantially transformed prior to importation into the United States.

The class or kind of merchandise subject to this investigation includes wafers and dice. Thus, when the dice are exported from Japan they are covered by the scope of the investigation, unless they are substantially transformed prior to importation into the United States. Upon examination, we do not regard the packaging of the dice as constituting substantial transformation. In reaching this conclusion we have taken note of the fact that the processed wafer or dice is not only a major component of the finished device, it is *the* essential active component which defines the merchandise under investigation. All of the electrical properties that make an EPROM an EPROM are encoded on the processed side, and neither this element, nor the intended use of the merchandise, is changed by the assembly process in the third country. Further, encapsulation is not a sophisticated process; rather, it is the wafer fabrication in Japan which is the technology intensive portion of EPROM production. Additionally, based upon the factors just discussed, and because of the fact that the asssembly process is the mechanical stage which can be accomplished relatively easily in any country, we find that a failure to include third country imports in the scope of the investigation could lead to substantial circumvention of any order. Respondents have suggested that because U.S. Customs Service rulings have found that assembly and testing in a third country constitutes substantial transformation of the product, we cannot consider the imported finished product to be merchanidse from Japan within the scope of the investigation. However, in making scope determinations, the Department is not required to rely on U.S. Customs rulings, but as independent authority to determine the scope of its investigations, (see *Diversified Products Corp.* v. *United States*, 5 ITRD 1263 (CIT 1983). Lastly, we have evidence of indirect shipments of the merchandise, indirect imports were included in the scope of the petition, and the parties have addressed this issue throughout the proceeding. See also, "Products Under Investigation" section of this notice.

Petitioners' Comment #29 (General): The Department should not exclude EPROMs which are pre-programmed or intended only for the replacement market.

DOC Postion: We agree. We do not regard these devices as sufficiently distinguishable in commercial or physical characteristics to constitute a separate class of merchandise. Further, it would be administratively impossible for U.S. Customs to separate "special order sales" from all other sales if this exception was implemented.

Petitioners' Comment #30 (General): The Department should not calculate separate dumping margins for each density and process of EPROM.

DOC Position: We agree. See response to Hitachi Comment #14.

Petitioners' Comment #31 (General: The Department should continue to use a two-month lag when comparing production costs to sales.

DOC Position: See response to Hitachi Comment #12.

Results of Investigation. The Results of our investigation are as follows:

Manufacturer/producer/exporter	Margin percentage
Hitachi Ltd	85.2
Fujitsu Limited	103.0
Toshiba Corporation	60.1
NEC Corporation	188.0
All others	93.9

ITC Notification

In accordance with section 735(d) of the Act, we will notify the ITC of our determination. In addition, we are making available to the ITC all nonprivileged and nonproprietary information relating to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms that it will not disclose such information either publicly or under an administrative protective order without the consent of the Deputy Assistant Secretary for Import Administration. The ITC will determine whether these imports materially injure, or threaten material injury to, a U.S. industry within 45 days after we make our final determination. If the ITC determines that material injury or threat of material injury does not exist, this proceeding will be terminated.

This determination is published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)).

Paul Freedenberg,

Assistant Secretary for Trade Administration.

October 24, 1986.

[FR Doc. 86-24599 Filed 10-29-86; 8:45 am]

BILLING CODE 3510-DS-M

[A-351-605]

Postponement of Final Antidumping Duty Determination; Frozen Concentrated Orange Juice from Brazil

AGENCY: International Trade Administration, Import Administration, Commerce.

ACTION: Notice.

SUMMARY: This notice informs the public that we have received a request from a respondent in this investigation to postpone the final determination, as permitted in section 735(a)(2)(A) of the Tariff Act of 1930, as amended (the Act) (19 U.S.C. 1673d(a)(2)(A)). Based on this request, we are postponing our final determination as to whether frozen concentrated orange juice (FCOJ) from Brazil is being, or is likely to be, sold in the United States at less than fair value until not later than March 9, 1987. We are also postponing our public hearing from November 25, 1986 until January 6, 1987.

EFFECTIVE DATE: October 30, 1986.

FOR FURTHER INFORMATION CONTACT: Raymond Busen or Mary Clapp, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 377-3464 or 377-1769.

SUPPLEMENTARY INFORMATION: On June 4, 1986, we published a notice in the **Federal Register** (51 FR 20321) that we were initiating, under section 732(c) of the Act, (19 U.S.C. 1673a(c)), an antidumping duty investigation to determine whether FCOJ from Brazil was being, or was likely to be, sold at less than fair value. On June 23, 1986, the International Trade Commission determined that there is a reasonable indication that imports of FCOJ from Brazil are materially injuring a United States industry (51 FR 24238, July 2, 1986). On October 16, 1986, we preliminary determined that FCOJ is being, or is likely to be, sold in the United States at less than fair value. The notice stated that if the investigation proceeded normally, we would make our

will apply to products that are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register**. For these entries, the Customs Service will require a cash deposit or posting of a bond equal to the weighted-average amount by which the normal value exceeds the export price as shown below. These suspension of liquidation instructions will remain in effect until further notice. The weighted-average dumping margins are as follows:

Exporter/manufacturer	Weighted-average percent margin
Samsung	[1] 1.59
Hyundai	3.38
LG Semicon [2]	[2] 55.36
All others	3.38

[1] De minimis.
[2] Facts Available Rate.

ITC Notification

In accordance with section 733(f) of the Act, we have notified the ITC of our determination. If our final determination is affirmative, the ITC will determine before the later of 120 days after the date of this preliminary determination or 45 days after our final determination whether these imports are materially injuring, or threatening material injury to, a U.S. industry.

Public Comment

Case briefs or other written comments in at least six copies must be submitted to the Assistant Secretary for Import Administration no later than December 29, 1997; and rebuttal briefs, no latter than January 5, 1997. A list of authorities used and an executive summary of issues should accompany any briefs submitted to the Department. The summary should be limited to five pages total, including footnotes. In accordance with section 774 of the Act, we will hold a public hearing, if requested, to give interested parties an opportunity to comment on arguments raised in case or rebuttal briefs. Tentatively, the hearing will be held on January 7, 1998; time and room to be determined; at the U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230. Parties should confirm by telephone the time, date, and place of the hearing 48 hours before the scheduled time.

Interested parties who wish to request a hearing, or to participate if one is requested, must submit a written request to the Assistant Secretary for Import Administration, U.S. Department of Commerce, Room 1870, within ten days of the publication of this notice. Requests should contain: (1) the party's name, address, and telephone number; (2) the number of participants; and (3) a list of the issues to be discussed. Oral presentations will be limited to issues raised in the briefs. If this investigation proceeds normally, we will make our final determination by February 5, 1998.

This determination is published pursuant to sections 773(f) and 777(i) of the Act.

Dated: September 23, 1997.

Robert S. LaRussa,

Assistant Secretary for Import Administration.

[FR Doc. 97–25942 Filed 9–30–97; 8:45 am]

BILLING CODE 3510–DS–M

DEPARTMENT OF COMMERCE

International Trade Administration

[A–583–827]

Notice of Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination: Static Random Access Memory Semiconductors From Taiwan

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

EFFECTIVE DATE: October 1, 1997.

FOR FURTHER INFORMATION CONTACT: Shawn Thompson or David Genovese, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230; telephone: (202) 482–1776 or (202) 482–0498, respectively.

The Applicable Statute

Unless otherwise indicated, all citations to the Tariff Act of 1930, as amended (the Act), are references to the provisions effective January 1, 1995, the effective date of the amendments made to the Act by the Uruguay Round Agreements Act (URAA). In addition, unless otherwise indicated, all citations to the Department's regulations are to the regulations codified at 19 CFR part 353 (April 1, 1996).

Preliminary Determination

We preliminarily determine that static random access memory semiconductors (SRAMs) from Taiwan are being, or are likely to be, sold in the United States at less than fair value (LTFV), as provided in section 733 of the Act. The estimated margins of sales at LTFV are shown in the "Suspension of Liquidation" section of this notice.

Case History

Since the initiation of this investigation *(Notice of Initiation of Antidumping Duty Investigations: SRAMs from the Republic of Korea and Taiwan* (62 FR 13596, March 21, 1997)), the following events have occurred:

During March and April 1997, the Department obtained information from the American Institute in Taiwan identifying potential producers and/or exporters of the subject merchandise to the United States. Based on this information, in April 1997, the Department issued antidumping questionnaires to 22 companies.[1]

Also in April 1997, the United States International Trade Commission (ITC) issued an affirmative preliminary injury determination in this case (*see* ITC Investigation No. 731–TA–761–762).

In May 1997, the Department received responses to Section A of the questionnaire from 18 of the 22 companies. Three of the remaining companies, Advanced Microelectronics, BIT, and Texas-Instruments, did not submit responses to Section A. Therefore, we have assigned a margin to these companies based on facts available. (See the "Facts Available" section below, for further discussion.) Regarding the fourth company, Lien Hsing, we were notified by one of the respondents in this investigation that it had received the questionnaire addressed to Lien Hsing, but that it was unaware of the existence of this company. Because Lien Hsing never received the Department's questionnaire and we found no way in which to locate and serve it with the questionnaire, no adverse inference is warranted with respect to it.

Based on the information received from the 18 responding companies, in May 1997, the Department determined that it did not have the administrative resources to investigate all known producers and/or exporters of SRAMs

[1] These companies are as follows: (1) Advanced Microelectronics Products Inc. (Advanced Microelectronics); (2) Alliance Semiconductor Corp. (Alliance); (3) Asia Specific Technology Limited; (4) Best Integrated Technology, Inc. (BIT); (5) Chia Hsin Livestock Corp.; (6) E–CMOS Technology Corporation; (7) Etron Technology, Inc.; (8) G–Link Technology Corp.; (9) Holtek Microelectronics Inc.; (10) Hualon Microelectronics Corporation; (11) Integrated Silicon Solution (Taiwan) Inc. (ISSI); (12) Kes Rood Technology Taiwan Ltd.; (13) Lien Hsing Integrated Circuits (Lien Hsing); (14) Macronix International Co., Ltd.; (15) Mosel-Vitelic, Inc.; (16) Taiwan Memory Technology, Inc.; (17) Taiwan Semiconductor Manufacturing Corporation (TSMC); (18) Texas Instruments-Acer Inc. (Texas Instruments); (19) United Microelectronics Corporation (UMC); (20) Utron Technology, Inc.; (21) Vanguard International Semiconductor Corporation; and (22) Winbond Electronics Corporation (Winbond).

during the period of investigation (POI). Accordingly, we decided to limit the number of mandatory respondents in this investigation to the five companies that we believed had the largest sales volumes of SRAMs to the United States during the POI, pursuant to section 777A(c) of the Act. These companies are Alliance, ISSI, TSMC, UMC, and Winbond (hereinafter ''respondents''). For a more detailed discussion regarding this issue, see the memorandum to Louis Apple from the Team, dated May 21, 1997.

Respondents submitted questionnaire responses in June 1997. We issued supplemental questionnaires to these companies in July 1997, and received responses to these questionnaires in August 1997. Based on a review of these responses, we have excluded TSMC from our analysis in this investigation. For a discussion of this issue, see the memorandum to Louis Apple from the Team, dated September 23, 1997.

Pursuant to section 735(a)(2)(A) of the Act, on August 14, 1997, one of the respondents, Winbond, requested that, in the event of an affirmative preliminary determination in this investigation, the Department postponed its final determination until no later than 135 days after the publication of this notice in the **Federal Register**. For further discussion, see the ''Postponement of Final Determination and Extension of Provisional Measures'' section of this notice.

In September 1997, Alliance submitted revised sales and cost databases at the Department's request.

Facts Available

Three interested parties in this investigation, Advanced Microelectronics, BIT, and Texas Instruments, failed to respond to the Department's requests for information. Specifically, these companies did not provide a response to the Department's questionnaire issued in April 1997.

Section 776(a)(2) of the Act provides that if an interested party: (1) Withholds information that has been requested by the Department, (2) fails to provide such information in a timely manner or in the form or manner requested, (3) significantly impedes a determination under the antidumping statute, or (4) provides such information but the information cannot be verified, the Department shall, subject to subsections 782(c)(1) and (e) of the Act, use facts otherwise available in reaching the applicable determination. Because Advanced Microelectronics, BIT, and Texas Instruments failed to respond to the Department's questionnaire and because subsections (c)(1) and (e) do not apply with respect to these companies, we must use facts otherwise available to calculate their dumping margins.

Section 776(b) of the Act provides that adverse inferences may be used against a party that has failed to cooperate by not acting to the best of its ability to comply with requests for information. *See also* Statement of Administrative Action accompanying the URAA, H.R. Rep. No. 316, 103d Cong., 2d Sess. 870 (SAA). The failure of Advanced Microelectronics, BIT, and Texas Instruments to reply to the Department's questionnaires or to provide a satisfactory explanation of their conduct demonstrates that they have failed to act to the best of their ability in this investigation. Thus, the Department has determined that, in selecting among the facts otherwise available to these companies, an adverse inference is warranted. As facts otherwise available, we are assigning to Advanced Microelectronics, BIT, and Texas Instruments the highest margin stated in the notice of initiation, 113.85 percent.

Section 776(c) of the Act provides that, when the Department relies on secondary information (such as the petition) in using the facts otherwise available, it must, to the extent practicable, corroborate that information from independent sources that are reasonably at its disposal. When analyzing the petition, the Department reviewed all of the data the petitioner relied upon in calculating the estimated dumping margins, and adjusted those calculations where necessary. *See* Initiation Checklist, dated March 17, 1997. These estimated dumping margins were based on a comparison of constructed value (CV) to U.S. price, the latter of which was based on price quotations offered by two Taiwanese companies. The estimated dumping margins, as recalculated by the Department, ranged from 93.54 to 113.85 percent. For purposes of corroboration, the Department re-examined the price information provided in the petition in light of information developed during the investigation and found that it has probative value. *See* the memorandum from the Team to Louis Apple dated September 23, 1997, for a detailed explanation of corroboration of the information in the petition.

Therefore, as adverse facts available, we are assigning to Advanced Microelectronics, BIT, and Texas Instruments the highest margin stated in the notice of initiation, 113.85 percent. This margin is higher than the margin calculated for any respondent in this investigation.

Postponement of Final Determination and Extension of Provisional Measures

Two of the respondents, Winbond and Alliance, requested on September 11 and 18, 1997, respectively, that, in the event of an affirmative preliminary determination in this investigation, the Department postpone its final determination until no later than 135 days after the publication of this notice in the **Federal Register**, pursuant to section 735(a)(2)(A) of the Act. In accordance with 19 CFR section 353.20(b), because (1) our preliminary determination is affirmative, (2) Winbond and Alliance account for a significant proportion of exports of the subject merchandise, and (3) no compelling reasons for denial exist, we are granting respondents' request and are postponing the final determination until no later than 135 days after the publication of this notice in the **Federal Register**. Suspension of liquidation will be extended accordingly (*see Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination: Open-End Spun Rayon Singles Yarn From Austria*, 62 FR 14399, 14400 (March 26, 1997); *Final Determination of Sales at Less Than Fair Value: Certain Pasta From Italy*, 61 FR 30326 (June 14, 1996)).

Scope of Investigation

The products covered by this investigation are synchronous, asynchronous, and specialty SRAMs from Taiwan, whether assembled or unassembled. Assembled SRAMs include all package types. Unassembled SRAMs include processed wafers or die, uncut die and cut die. Processed wafers produced in Taiwan, but packaged, or assembled into memory modules, in a third country, are included in the scope; processed wafers produced in a third country and assembled or packaged in Taiwan are not included in the scope.

The scope of this investigation includes modules containing SRAMs. Such modules include single in-line processing modules (SIPs), single in-line memory modules (SIMMs), dual in-line memory modules (DIMMs), memory cards, or other collections of SRAMs, whether unmounted or mounted on a circuit board.

The SRAMs within the scope of this investigation are classifiable under the subheadings 8542.13.8037 through 8542.13.8049, 8473.30.10 through 8473.30.90, and 8542.13.8005 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheading is provided for convenience and customs purposes, our

written description of the scope of this investigation is dispositive.

Period of Investigation

The POI is January 1, 1996, through December 31, 1996.

Time Period for Cost and Price Comparisons

Section 777A(d) of the Act states that in an investigation, the Department will compare the weighted average of the normal values to the weighted average of the export prices/constructed export prices. Generally, the Department will compare sales and conduct the sales below cost test using annual averages. However, where prices have moved significantly over the course of the POI, it has been the Department's practice to use shorter time periods. *See, e.g., Final Determination of Sales at Less Than Fair Value: Erasable Programmable Read Only Memories (EPROMs) from Japan*, 51 FR 39680, 39682 (October 30, 1986), *Final Determination of Sales at Less Than Fair Value: Dynamic Random Access Memory Semiconductors of One Megabit and Above From the Republic of Korea*, 58 FR 15467, 15476 (March 23, 1993).

We invited comments from interested parties regarding this issue. An analysis of these comments revealed that all parties agreed that the SRAMs market experienced a significant and consistent price decline during the POI. Accordingly, in recognition of the significant and consistent price declines in the SRAMs market during the POI, the Department has compared prices and conducted the sales below cost test using quarterly data.[2]

Treatment of Foundry Sales and Elimination of TSMC as a Respondent

During the course of this investigation, we found that two of the five companies we had selected to be respondents, UMC and TSMC, acted as foundries for SRAMs design houses. As foundries, they manufactured processed SRAMs wafers according to designs provided by the design houses. Two of these design houses, Alliance and ISSI, were also selected to be respondents. The design houses arranged for the probing, testing, and assembly of the processed wafers into individual SRAMs that were subsequently sold to unaffiliated downstream purchasers.

At the time we selected respondents, we had not determined conclusively how the transaction between a design house and its foundry should be treated. *See* the memorandum from the Team to Louis Apple, dated May 15, 1997. We noted that, when the Department had had an opportunity to perform a thorough analysis of the respondents' responses to our questionnaire, the Department may conclude that the appropriate sales transaction to analyze is not the sale from the foundry to the design house, but the subsequent downstream sale of the encapsulated SRAMs to the United States.

When considering this issue for purposes of this determination, we determined that it was necessary to decide which entity, the foundry or the design house, was the manufacturer of the subject merchandise, and which entity controlled the ultimate sale of it. For guidance in making this determination, we relied on the Department's policy expressed in our proposed regulations which, while they are not our final regulations, state our policy on this issue. The proposed regulations state that: "[w]here a party owning the components of subject merchandise has a subcontractor manufacture or assemble that merchandise for a fee, the Department will consider the owner to be the manufacturer, because that party has ultimate control over how the merchandise is produced and the manner in which it is ultimately sold. The Department will not consider the subcontractor to be the manufacturer or producer regardless of the proportion of production attributable to the subcontracted operation or the location of the subcontractor or owner of the good." *See Notice of Proposed Rulemaking and Request for Public Comment: Antidumping Duties; Countervailing Duties*, 61 FR 7308, 7330 (February 26, 1996).

We also reviewed section 351.401(h) of the Department's regulations which, while not applicable to this investigation, codifies past practice and current policy. Section 351.401(h) states that the Department "will not consider a toller or subcontractor to be a manufacturer or producer where the toller or subcontractor does not acquire ownership, and does not control the relevant sale of, the subject merchandise or foreign like product."

In reviewing and analyzing the information submitted by respondents concerning the relationship between the design houses and their foundries, we have found the following: the design house performs all of the product research and development for the SRAMs that are to be produced. The design house produces, or arranges and pays for the production of, the design mask. At all stages of production, it retains ownership of the proprietary design and design mask. The design house then subcontracts the production of processed wafers with a foundry and provides the foundry with the design mask. Design houses tell the foundry what and how much to make. The foundry agrees to dedicate a certain amount of its production capacity to the production of the processed wafers for the design house. The foundry has no right to sell those wafers to any party other than the design house unless the design house fails to pay for the wafers. Once the design house takes possession of the processed wafers, it arranges for the subsequent steps in the production process (*i.e.*, probing, testing, and assembly), then sells the encapsulated SRAMs to downstream customers.

The design of the processed wafer is not only an important part of the finished product, it is a substantial element of production and imparts the essential features of the product. The design defines the ultimate characteristics and performance of the subject merchandise and delineates the purposes for which it can be used. The foundries manufactured processed SRAMs wafers using the proprietary designs of the design houses during the POI. As such, they did not control the production of the processed wafers in question, but rather merely translated the design of other companies into actual products.

For purposes of this investigation, we have determined that the entity that controls and owns the SRAMs design, *i.e.*, the design house, controls the production, and ultimate sale, of the subject merchandise. Consequently, we have determined to disregard the foundry sales of UMC and TSMC for purposes of this investigation. Moreover, because all of TSMC's sales during the POI were foundry sales, we have determined that it should no longer be considered a respondent in this investigation. For a more detailed analysis of this decision, *see* the memorandum from the Team to Louis Apple, dated September 23, 1997, concerning the Treatment of Foundry Sales and the Elimination of TSMC as a Respondent.

Fair Value Comparisons

To determine whether sales of SRAMs from Taiwan to the United States were made at less than fair value, we compared the United States Price (USP) to the Normal Value (NV), as described in the "United States Price" and "Normal Value" sections of this notice, below. In accordance with section 777A(d)(1)(A)(i) of the Act, we

[2] In accordance with section 773(b)(2)(D) of the Act, we conducted the recovery of cost test using annual cost data.

calculated weighted-average USPs for comparison to weighted-average NVs.

In order to determine whether or not we should base price-averaging groups on customer types, we conducted an analysis of the prices submitted by respondents. This analysis does not indicate that there was a consistent and uniform difference in prices between customer types. Accordingly, we have not based price comparisons on customer types.

In making our comparisons, in accordance with section 771(16) of the Act, we considered all products sold in the home market, fitting the description specified in the "Scope of Investigation" section of this notice, above, to be foreign like products for purposes of determining appropriate product comparisons to U.S. sales. Where there were no sales of identical merchandise in the home market to compare to U.S. sales, we compared U.S. sales to the next most similar foreign like product, based on the characteristics listed in Sections B and C of the Department's antidumping questionnaire.

Regarding Alliance, because we found no home market sales at prices above the COP, we made no price-to-price comparisons. *See* the "Normal Value" section of this notice, below, for further discussion.

Regarding ISSI, because this company did not report cost or difference in merchandise information for certain products sold in the United States, there is insufficient information on the record to calculate a margin for these products. Accordingly, we based the margin for the sales in question on facts available. As facts available, we used the highest non-aberrational margin calculated for any other product.

Level of Trade and Constructed Export Price (CEP) Offset

In accordance with section 773(a)(1)(B) of the Act, to the extent practicable, we determined NV based on sales in the comparison market at the same level of trade as the export price (EP) or CEP. The NV level of trade is that of the starting-price sales in the comparison market or, when NV is based on CV, that of the sales from which we derive selling, general and administrative (SG&A) expenses and profit. For EP, it is also the level of the starting-price sale, which is usually from exporter to importer. For CEP, it is the level of the constructed sale from the exporter to the importer.

To determine whether NV sales are at a different level of trade than EP or CEP, we examined stages in the marketing process and selling functions along the chain of distribution between the producer and the unaffiliated customer. If the comparison-market sales are at a different level of trade, and the difference affects price comparability, as manifested in a pattern of consistent price differences between the sales on which NV is based and comparison-market sales at the level of trade of the export transaction, we make a level of trade adjustment under section 773(a)(7)(A) of the Act. Finally, for CEP sales, if the NV level is more remote from the factory than the CEP level and there is no basis for determining whether the difference in the levels between NV and CEP affects price comparability, we adjust NV under section 773(a)(7)(B) of the Act (the CEP offset provision). *See Certain Welded Carbon Steel Standard Pipes and Tubes From India: Preliminary Results of New Shipper Antidumping Duty Administrative Review*, 62 FR 23760, 23761 (May 1, 1997).

Only one of the respondents in this investigation, UMC, claimed that its home market sales were made at different levels of trade. Specifically, UMC claimed that its sales of branded SRAMs products to original equipment manufacturers (OEMs) and distributors were made at two distinct levels of trade because it provided greater customer support to, and performed more significant marketing functions for, its OEM customers. In particular, UMC stated that it met with OEM customers to assist them in qualifying UMC's products for particular applications and to discuss how UMC's products may meet the customer's current and future needs. Regarding marketing functions, UMC stated that its salesmen make regular on-site visits to OEM customers and attend trade shows primarily targeted at OEMs. However, UMC does not attend similar shows targeted at distributors.

We examined the selling activities at each reported marketing stage and found that there was no substantive difference in the selling functions performed by UMC at either of its claimed marketing stages. Consequently, we determine that only one level of trade exists with respect to sales made by UMC to all customers. For a detailed explanation of this analysis, see the memorandum from the Team to Louis Apple, dated September 23, 1997.

Because we have found that only one level of trade existed in the home market for all respondents during the POI, we conducted an analysis to determine whether a CEP offset was warranted for each respondent. In order to determine whether NV was established at a level of trade which constituted a more advanced state of distribution than the level of trade of the CEP, we compared the selling functions performed for home market sales with those performed with respect to the CEP (*i.e.*, excluding economic activities occurring in the United States). We found that all respondents performed most of the selling functions and services related to U.S. sales at their sales offices in the United States, and therefore, these selling functions are associated with those expenses which we deduct from the CEP starting price, as specified in section 772(d) of the Act. Regarding home market sales, respondents performed largely the same selling functions for sales to unaffiliated customers as were performed in the United States. Therefore, their sales in Taiwan were at a more advanced stage of marketing and distribution (*i.e.*, more remote from the factory) than the constructed U.S. level of trade, which represents an ex-factory price after the deduction of expenses associated with U.S. selling activities. However, because the respondents sell at only one home market level of trade, the difference in the level of trade cannot be quantified. Because the difference in the level of trade cannot be quantified, but the home market is at a more advanced level of trade, we have granted a CEP offset to all respondents.

United States Price

For UMC and Winbond, we based USP on EP, in accordance with section 772(a) of the Act, when the subject merchandise was sold directly to the first unaffiliated purchaser in the United States prior to importation because CEP methodology was not otherwise indicated.

In addition, for all companies, where sales to the first unaffiliated purchaser took place after importation into the United States, we based USP on CEP, in accordance with section 772(b) of the Act.

We made company-specific adjustments as follows:

A. Alliance

We calculated CEP based on packed, FOB U.S. warehouse prices, to unaffiliated purchasers in the United States. We corrected gross unit price for clerical errors identified in Alliance's narrative response. We made deductions from the gross unit price, where appropriate, for discounts. We also made deductions for international freight (including air freight and U.S. Customs merchandise processing fees), where appropriate, pursuant to section 772(c)(2)(A) of the Act.

In accordance with section 772(d) (1) and (2) of the Act, we made additional

deductions for commissions, warranty and credit expenses, indirect selling expenses, inventory carrying costs, U.S. repacking expenses and U.S. further manufacturing costs. Regarding credit expenses, Alliance reported that it had not received payment for certain sales as of the date of its latest questionnaire response. As such, we based the date of payment for those sales on the date of the preliminary determination and recalculated credit expenses accordingly.

Pursuant to section 772(d)(3) of the Act, gross unit price was further reduced by an amount for profit, to arrive at CEP. In accordance with section 772(f) of the Act, the CEP profit rate was calculated using the expenses incurred by Alliance on its sales of the subject merchandise in the United States and foreign like product in the home market and the profit associated with those sales.

With regard to modules which were further-manufactured in the United States, we have based USP on the net price of the modules rather than the net price of the individual SRAMs included in the modules.

B. ISSI

We calculated CEP based on packed, FOB U.S. warehouse prices, to unaffiliated purchasers in the United States. We made deductions from the gross unit price, where appropriate, for discounts. We also made deductions for foreign inland freight, pre-sale warehousing expenses, foreign and U.S. inland insurance, foreign brokerage and handling, and international freight (including air freight, U.S. customs merchandise processing fees, and U.S. inland freight to ISSI's U.S. office), where appropriate, pursuant to section 772(c)(2)(A) of the Act.

In accordance with section 772(d)(1) of the Act, we made additional deductions for commissions, credit expenses, indirect selling expenses, inventory carrying costs, and U.S. repacking expenses. We recalculated credit expenses using the interest rate paid by ISSI (Taiwan) on its borrowings denominated in U.S. dollars. In addition, where ISSI had not received payment for certain sales as of the date of its latest questionnaire response, we based the date of payment for those sales on the date of the preliminary determination and recalculated credit expenses accordingly.

Pursuant to section 772(d)(3) of the Act, gross unit price was further reduced by an amount for profit, to arrive at CEP. In accordance with section 772(f) of the Act, the CEP profit rate was calculated using the expenses incurred by ISSI and its affiliate on their sales of the subject merchandise in the United States and foreign like product in the home market and the profit associated with those sales.

C. UMC

We calculated EP and CEP based on packed, FOB prices, to unaffiliated purchasers in the United States. We adjusted the gross unit price for billing adjustments and freight charges. We made deductions from the gross unit price, where appropriate, for discounts. We also made deductions for foreign inland freight, foreign brokerage and handling, and international freight, where appropriate, pursuant to section 772(c)(2)(A) of the Act.

Where USP was based on CEP, we made additional deductions, in accordance with section 772(d)(1) of the Act, for commissions, warranty and credit expenses, indirect selling expenses, and inventory carrying costs. Regarding credit expenses, UMC reported that it had not received payment for certain sales as of the date of its latest questionnaire response. Consequently, we based the date of payment for those sales on the date of the preliminary determination and recalculated credit expenses accordingly.

Pursuant to section 772(d)(3) of the Act, gross unit price was further reduced by an amount for profit, to arrive at CEP. In accordance with section 772(f) of the Act, the CEP profit rate was calculated using the expenses incurred by UMC and its affiliates on their sales of the subject merchandise in the United States and foreign like product in the home market and the profit associated with those sales.

D. Winbond

We calculated EP and CEP based on packed, delivered and FOB prices to unaffiliated purchasers in the United States. We made deductions from the gross unit price, where appropriate, for discounts. We also made deductions for foreign inland freight, pre-sale warehousing expenses, foreign inland insurance, foreign brokerage and handling, international freight (including air freight, U.S. inland freight from the port to Winbond's U.S. warehouse, U.S. brokerage and handling fees, and customs fees), international insurance, U.S. customs merchandise processing fees, and U.S. inland freight to customer, where appropriate, pursuant to section 772(c)(2)(A) of the Act.

Where USP was based on CEP, we made additional deductions, in accordance with section 772(d)(1) of the Act, for commissions, credit expenses, advertising expenses, warranty expenses, technical service expenses, indirect selling expenses, inventory carrying costs, and U.S. repacking expenses.

Pursuant to section 772(d)(3) of the Act, gross unit price was further reduced by an amount for profit, to arrive at CEP. In accordance with section 772(f) of the Act, the CEP profit rate was calculated using the expenses incurred by Winbond and its affiliates on their sales of the subject merchandise in the United States and foreign like product in the home market and the profit associated with those sales.

Normal Value

In order to determine whether there is a sufficient volume of sales in the home market to serve as a viable basis for calculating NV (*i.e.*, the aggregate volume of home market sales of the foreign like product is greater than five percent of the aggregate volume of U.S. sales), we compared each respondent's volume of home market sales of the foreign like product to the volume of U.S. sales of the subject merchandise, in accordance with section 773(a)(1)(C) of the Act. Because each respondent's aggregate volume of home market sales of the foreign like product was greater than five percent of its aggregate volume of U.S. sales for the subject merchandise, we determined that the home market was viable for each respondent.

Because UMC and Winbond reported home market sales to an affiliated party during the POI, as defined by section 771(4)(B) of the Act, we tested these sales to ensure that the affiliated party sales were at "arm's length," in accordance with our practice. To conduct this test, we compared the gross unit prices of sales to affiliated and unaffiliated customers net of all movement charges, discounts and rebates, and packing, where appropriate. Based on the results of that test, we used the sales from UMC and Winbond to their affiliated parties because they were made at "arm's length."

Based on the cost allegation contained in the petition, the Department found reasonable grounds to believe or suspect that sales in the home market were made at prices below the cost of producing the merchandise, in accordance with section 773(b)(1) of the Act. As a result, the Department initiated an investigation to determine whether the respondents made home market sales during the POI at prices below their respective COPs within the meaning of section 773(b) of the Act.

We calculated the COP based on the sum of each respondent's cost of materials and fabrication for the foreign like product, plus amounts for SG&A and packing costs, in accordance with section 773(b)(3) of the Act.

Where possible, we used the respondents' reported COP amounts, adjusted as discussed below, to compute quarterly weighted-average COPs during the POI. In cases where there was no production within the same quarter as a given sale, we referred to the most recent quarter, prior to the sale, for which costs had been reported. In cases where there was no cost reported for either the same quarter as the sale, or a prior quarter, we used the reported costs from the closest subsequent quarter in which production occurred.

In their calculation of research and development expenses (R&D), three of the respondents, Alliance, ISSI, and Winbond, excluded from their calculation R&D incurred on certain semiconductor products. The fourth respondent, UMC, calculated R&D on a quarterly basis. For all respondents, we revised the R&D ratios to allocate the total amount of semiconductor R&D for the POI over the total cost of sales of semiconductor products sold during the POI, using an annual ratio. *See* the Concurrence memorandum from James Maeder to Louis Apple, dated September 23, 1997, for further discussion. We preliminarily determine that R&D related to semiconductors benefits all semiconductor products, and that allocation of R&D on a product-specific basis was not appropriate. In support of our methodology, we have placed on the record information regarding cross-fertilization of semiconductor R&D.

We compared the weighted-average quarterly COP figures to home market sales of the foreign like product as required under section 773(b) of the Act, in order to determine whether these sales had been made at prices below COP. On a product-specific basis, we compared the COP to the home market prices, less any applicable movement charges and discounts.

In determining whether to disregard home market sales made at prices below the COP, we examined (1) whether, within an extended period of time, such sales were made in substantial quantities, and (2) whether such sales were made at prices which permitted the recovery of all costs within a reasonable period of time in the normal course of trade.

Where 20 percent or more of a respondent's sales of a given product were at prices below the COP, we found that sales of that model were made in "substantial quantities" within an extended period of time, in accordance with section 773(b)(2) (B) and (C) of the Act. To determine whether prices were such as to provide for recovery of costs within a reasonable period of time, we tested whether the prices which were below the per unit cost of production at the time of the sale were above the weighted-average per-unit cost of production for the POI, in accordance with section 773(b)(2)(D). If they were, we disregarded below cost sales in determining NV.

In accordance with section 773(e) of the Act, we calculated CV based on the sum of each respondent's cost of materials, fabrication, SG&A, profit, and U.S. packing costs. In accordance with section 773(e)(2)(A) of the Act, we based SG&A expenses and profit on the amounts incurred and realized by each respondent in connection with the production and sale of the foreign like product in the ordinary course of trade, for consumption in the foreign country. Where respondents made no home market sales in the ordinary course of trade (*i.e.*, all sales were found to be below cost), we based profit and SG&A expenses on the weighted average of the profit and SG&A data computed for those respondents with home market sales of the foreign like product made in the ordinary course of trade.

We deducted from CV weighted-average home market direct selling expenses incurred on sales made in the ordinary course of trade. Where a company had no sales above COP, we based home market direct selling expenses on the weighted average selling expense data computed for those respondents with home market sales of the foreign like product in the ordinary course of trade. Company-specific calculations are discussed below.

A. Alliance

We relied on the reported COP and CV amounts except as noted above. Additionally, we did not rely on amounts reported by Alliance for SG&A and profit since all of Alliance's sales were made below the cost of production.

Because all of Alliance's home market sales were sold below COP, we based NV on CV. In addition to the adjustments to CV reported above, in accordance with section 773(a)(7)(B) of the Act, we granted a CEP offset adjustment and reduced CV by the amount of weight-averaged home market indirect selling expenses and commissions incurred by respondents with sales above the COP up to the amount of indirect expenses deducted from the CEP under 772(d)(1)(D).

B. ISSI

We relied on respondent's reported COP and CV amounts except as noted above. Additionally, we revised the reported general and administrative and R&D expense ratios to use the cost of sales figure from the audited financial statements as the denominator in these equations.

For those comparison products for which there were sales at prices above the COP, we based NV on delivered prices to home market customers. We made deductions for discounts, foreign inland freight, and insurance, where appropriate, pursuant to section 773(a)(6)(B) of the Act. We also made deductions for credit expenses and bank charges, pursuant to section 773(a)(6)(C)(iii) of the Act. Regarding credit expenses, ISSI reported that it had not received payment for certain sales as of the date of its latest questionnaire response. As such, we based the date of payment for those sales on the date of the preliminary determination and recalculated credit expenses accordingly.

We deducted home market indirect selling expenses, including inventory carrying costs and other indirect selling expenses, up to the amount of indirect selling expenses incurred on U.S. sales, in accordance with section 773(a)(7)(B) of the Act. In addition, we deducted home market packing costs and added U.S. packing costs, in accordance with section 773(a)(6) of the Act. Where appropriate, we made adjustments to NV to account for differences in physical characteristics of the merchandise, in accordance with 773(a)(6)(C)(ii) of the Act and 19 CFR 353.57. Where applicable, in accordance with 19 CFR section 353.56(b)(1), we offset any commission paid on a U.S. sale by reducing the NV by any home market commissions and indirect selling expenses remaining after the deduction for the CEP offset.

Where NV was based on CV, we deducted from CV the weighted-average home market direct selling expenses. In accordance with section 773(a)(7)(B) of the Act, we granted a CEP offset adjustment and reduced normal value by the amount of commissions and indirect selling expenses incurred by ISSI in Taiwan on sales of SRAMs in Taiwan, up to the amount of commissions and indirect selling expenses incurred on U.S. sales deducted from the CEP, in accordance with section 773(a)(7)(B) of the Act.

C. UMC

We relied on respondent's COP and CV amounts except as noted above.

Additionally, we calculated 1996 bonuses to directors, supervisors, and employees and included them in the cost of manufacturing. We revised the reported general and administrative expense to exclude foreign exchange gains. We revised the reported net financing expense ratio to include net foreign exchange gains related to accounts payable.

UMC has claimed a startup adjustment for a new fabrication facility under section 773(f)(1)(C)(ii) and (iii) of the Act. We conducted an analysis of the facts and have preliminarily granted the claimed startup adjustment. The SAA specifies two conditions for the application of a startup cost adjustment:

(1) The company used new production facilities or was producing a new product that required substantial additional investment; and

(2) Production levels were limited by technical factors associated with the initial phase of commercial production.

UMC appears to have met these threshold criteria by opening and using a new production facility whose production levels were limited by technical factors associated with the initial phase of production. In accordance with the Act, we replaced the unit production costs incurred during the startup period with the unit production costs incurred at the end of the startup period. This resulted in the exclusion of some costs which were incurred during the startup period from the actual cost calculation. The difference between the actual costs incurred and the costs calculated for purposes of the startup adjustment was amortized over the useful life of the machinery, subsequent to the startup phase. We also capitalized certain pre-production costs which were incurred before the new fabrication facility began production. We amortized these pre-production costs, beginning with the first month in which production took place, over the useful life of the machinery. *See* the memorandum to Louis Apple from Chris Marsh, dated September 23, 1997, for a detailed discussion of this issue.

For those comparison products for which there were sales at prices above the COP, we based NV on delivered and FOB prices to home market customers. For home market price-to-EP comparisons, we made deductions, where appropriate, for discounts, export duties, and foreign inland freight, in accordance with section 773(a)(6)(B) of the Act. Pursuant to section 773 (a)(6)(C)(iii) of the Act and 19 CFR section 353.56(a)(2), we made circumstance of sale adjustments, where appropriate, for differences in warranty and credit expenses. We did not allow an adjustment for home market commissions because we determined that they were not at ''arm's length.'' *See* the memorandum to Louis Apple from the Team dated September 23, 1997, for a detailed explanation.

For home market price-to-CEP comparisons, we made deductions, where appropriate, for discounts, export duties, and foreign inland freight, pursuant to section 773(a)(6)(B) of the Act. We also made deductions for warranty and credit expenses. We deducted home market indirect selling expenses, including inventory carrying costs, and other indirect selling expenses, up to the amount of indirect selling expenses incurred on U.S. sales, in accordance with 773(a)(7)(B) of the Act. Where applicable, in accordance with 19 CFR 353.56(b), we offset any commission paid on a U.S. sale by reducing the NV by any home market indirect selling expenses remaining after the deduction for the CEP offset.

For all price-to-price comparisons, we deducted home market packing costs and added U.S. packing costs, in accordance with section 773(a)(6) of the Act. In addition, where appropriate, we made adjustments to NV to account for differences in physical characteristics of the merchandise, in accordance with 773(a)(6)(C)(ii) of the Act.

Where CV was compared to EP, we made circumstance of sale adjustments, where appropriate, for credit and warranty expenses and U.S. commissions in accordance with sections 773 (a)(6)(C)(iii) and (a)(8) of the Act. In accordance with section 773(a)(7)(B) of the Act, we granted a CEP offset adjustment and reduced normal value by the amount of commissions and indirect selling expenses incurred by UMC in Taiwan on sales of SRAMs in Taiwan, up to the amount of commissions and indirect selling expenses incurred on U.S. sales deducted from the CEP.

Where CV was compared to CEP, we deducted from CV, where appropriate, credit and warranty expenses. We also deducted indirect selling expenses, including inventory carrying costs and other indirect selling expenses, up to the amount of commissions and indirect selling expenses incurred on U.S. sales, in accordance with 773(a)(7)(B) of the Act.

D. Winbond

We relied on the reported COP and CV amounts except as noted above. Additionally, we reclassified production technology royalty expenses reported in the Sections B and C of our questionnaire as a cost of manufacturing. We included 1996 bonuses to directors, supervisors, and employees in the cost of manufacturing. We revised the reported general and administrative expense to exclude foreign exchange gains and to include miscellaneous income and expense. We revised the reported net financing expense ratio to include net foreign exchange gains related to accounts payable.

For those comparison products for which there were sales at prices above the COP, we based NV on delivered prices to home market customers.

For home market price-to-EP comparisons, we made deductions, where appropriate, for discounts, import duties and development fees paid on sales to customers outside of duty free zones, and home market movement charges including pre-sale warehouse expenses, foreign inland freight, brokerage and handling charges, and inland insurance. Pursuant to section 773 (a)(6)(C)(iii) of the Act, we made circumstance of sale adjustments, where appropriate, for differences in credit expenses (offset by the interest revenue actually received by the respondent), direct advertising expenses, warranty expenses, technical service expenses, and post-sale payments to a third-party customer.

For home market price-to-CEP comparisons, we made deductions for discounts, import duties and development fees paid on sales to customers outside of duty free zones, and home market movement charges including pre-sale warehouse expenses, foreign inland freight, brokerage and handling charges, and inland insurance, where appropriate, in accordance with section 773(a)(6)(B) of the Act. We also made deductions for credit expenses (offset by the interest revenue actually received by the respondent), direct advertising expenses, warranty expenses, technical service expenses, and post-sale payments to a third-party customer, pursuant to section 773(a)(6)(C)(iii) of the Act.

We deducted home market indirect selling expenses, including inventory carrying costs, other indirect selling expenses, up to the amount of indirect selling expenses incurred on U.S. sales, in accordance with section 773(a)(7)(B) of the Act. Where applicable, in accordance with 19 CFR section 353.56(b), we offset any commission paid on a U.S. sale by reducing the NV by any home market indirect selling expenses remaining after the deduction for the CEP offset.

For all price-to-price comparisons, we deducted home market packing costs and added U.S. packing costs, in

accordance with section 773(a)(6) of the Act. In addition, where appropriate, we made adjustments to NV to account for differences in physical characteristics of the merchandise, in accordance with section 773(a)(6)(C)(ii) of the Act.

Where CV was compared to EP, we deducted from CV the weighted-average home market direct selling expenses and added the weighted-average U.S. product-specific direct selling expenses in accordance with section 773 (a)(6)(C)(iii) of the Act.

Where CV was compared to CEP, we deducted from CV the weighted-average home market direct selling expenses. In accordance with section 773(a)(7)(B) of the Act, we granted a CEP offset adjustment and reduced normal value by the amount of indirect selling expenses, including inventory carrying costs and other indirect selling expenses, up to the amount of indirect selling expenses incurred on U.S. sales deducted from the CEP.

Currency Conversion

We made currency conversions into U.S. dollars based on the official exchange rates in effect on the dates of the U.S. sales as certified by the Federal Reserve Bank.

Section 773A(a) directs the Department to use a daily exchange rate in order to convert foreign currencies into U.S. dollars unless the daily rate involves a fluctuation. It is the Department's practice to find that a fluctuation exists when the daily exchange rate differs from the benchmark rate by 2.25 percent. The benchmark is defined as the moving average of rates for the past 40 business days. When we determine a fluctuation to have existed, we substitute the benchmark rate for the daily rate, in accordance with established practice. Further, section 773A(b) directs the Department to allow a 60-day adjustment period when a currency has undergone a sustained movement. A sustained movement has occurred when the weekly average of actual daily rates exceeds the weekly average of benchmark rates by more than five percent for eight consecutive weeks. (For an explanation of this method, see *Policy Bulletin 96–1: Currency Conversions* (61 FR 9434, March 8, 1996).) Such an adjustment period is required only when a foreign currency is appreciating against the U.S. dollar. The use of an adjustment period was not warranted in this case because the New Taiwan dollar did not undergo a sustained movement.

Verification

As provided in section 782(i) of the Act, we will verify all information determined to be acceptable for use in making our final determination.

Suspension of Liquidation

In accordance with section 733(d) of the Act, we are directing the Customs Service to suspend liquidation of all imports of subject merchandise that are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register**. We will instruct the Customs Service to require a cash deposit or the posting of a bond equal to the weighted-average amount by which the NV exceeds the U.S. price, as indicated in the chart below. These suspension of liquidation instructions will remain in effect until further notice. The weighted-average dumping margins are as follows:

Exporter/manufacturer	Weighted-average margin percentage
Advanced Microelectronics	113.85
Alliance	59.06
BIT	113.85
ISSI	10.96
Texas Instruments	113.85
UMC	63.36
Winbond	94.10
All Others	41.30

Pursuant to section 735(c)(5)(A) of the Act, the Department has excluded the margins determined entirely under section 776 of the Act from the calculation of the "All Others Rate."

ITC Notification

In accordance with section 733(f) of the Act, we have notified the ITC of our determination. If our final determination is affirmative, the ITC will determine before the later of 120 days after the date of this preliminary determination or 45 days after our final determination whether these imports are materially injuring, or threaten material injury to, the U.S. industry.

Public Comment

Case briefs or other written comments in at least ten copies must be submitted to the Assistant Secretary for Import Administration no later than December 18, 1997, and rebuttal briefs no later than December 22, 1997. A list of authorities used and an executive summary of issues should accompany any briefs submitted to the Department. Such summary should be limited to five pages total, including footnotes. In accordance with section 774 of the Act, we will hold a public hearing, if requested, to afford interested parties an opportunity to comment on arguments raised in case or rebuttal briefs. Tentatively, the hearing will be held on December 23, 1997, time and room to be determined, at the U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230. Parties should confirm by telephone the time, date, and place of the hearing 48 hours before the scheduled time.

Interested parties who wish to request a hearing, or to participate if one is requested, must submit a written request to the Assistant Secretary for Import Administration, U.S. Department of Commerce, Room 1870, within ten days of the publication of this notice. Requests should contain: (1) The party's name, address, and telephone number; (2) the number of participants; and (3) a list of the issues to be discussed. Oral presentations will be limited to issues raised in the briefs. If this investigation proceeds normally, we will make our final determination by no later than 135 days after the publication of this notice in the **Federal Register**.

This determination is published pursuant to section 733(d) of the Act.

Dated: September 23, 1997.

Robert S. LaRussa,

Assistant Secretary for Import Administration.

[FR Doc. 97–25943 Filed 9–30–97; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–421–701]

Brass Sheet and Strip From the Netherlands: Final Results of Antidumping Duty Administrative Review

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

ACTION: Notice of final results of antidumping duty administrative review.

SUMMARY: On May 12, 1997, the Department of Commerce (the Department) published the preliminary results of the administrative review of the antidumping duty order on brass sheet and strip from the Netherlands. This review covers sales to the United States by one manufacturer/exporter, Outokumpu Copper Strip B.V. (OBV), and its U.S. affiliate, Outokumpu Copper (USA), Inc., of the subject merchandise during the period of

the persons submitting the comments and will not consider them. All comments submitted in response to this notice will be a matter of public record and will be available for public inspection and copying.

The Office of Administration, Bureau of Industry and Security, U.S. Department of Commerce, displays public comments on the BIS Freedom of Information Act (FOIA) Web site at *http://www.bis.doc.gov/foia.* This office does not maintain a separate public inspection facility. If you have technical difficulties accessing this web site, please call BIS's Office of Administration, at (202) 482–0637, for assistance.

Dated: November 20, 2002.

James J. Jochum,

Assistant Secretary for Export Administration.

[FR Doc. 02–30011 Filed 11–26–02; 8:45 am]

BILLING CODE 3510–33–P

DEPARTMENT OF COMMERCE

International Trade Administration

[C–580–851]

Notice of Initiation of Countervailing Duty Investigation: Dynamic Random Access Memory Semiconductors from the Republic of Korea

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

ACTION: Initiation of Countervailing Duty Investigation.

EFFECTIVE DATE: November 27, 2002.

FOR FURTHER INFORMATION CONTACT: Suresh Maniam or Ryan Langan at (202) 482–0176 or (202) 482–2613, respectively; AD/CVD Enforcement, Group I, Office 1, Import Administration, International Trade Administration, U.S. Department of Commerce, Room 3099, 14th Street and Constitution Avenue, NW, Washington, DC 20230.

SUMMARY: The Department of Commerce is initiating a countervailing duty investigation to determine whether manufacturers, producers, or exporters of dynamic random access memory from the Republic of Korea have received countervailable subsidies.

SUPPLEMENTARY INFORMATION:

INITIATION OF INVESTIGATION:

The Applicable Statute and Regulations

Unless otherwise indicated, all citations to the statute are references to the provisions effective January 1, 1995, the effective date of the amendments made to the Tariff Act of 1930 (the ''Act'') by the Uruguay Round Agreements Act. In addition, unless otherwise indicated, all citations to the Department of Commerce's (the ''Department'') regulations are references to the provisions codified at 19 CFR Part 351 (April 2002).

The Petition

On November 1, 2002, the Department received a petition filed in proper form by Micron Technology, Inc. (the ''petitioner''). The Department received supplemental information to support the petition on November 13 and 19, 2002.

In accordance with section 702(b)(1) of the Act, the petitioner alleges that manufacturers, producers, or exporters of the subject merchandise from the Republic of Korea (''Korea'') receive countervailable subsidies within the meaning of section 701 of the Act, and that imports of the subject merchandise are materially injuring, or threatening material injury to, an industry in the United States.

The Department finds that the petitioner filed this petition on behalf of the domestic industry because the petitioner is an interested party as defined in section 771(9)(C) of the Act and it has demonstrated sufficient industry support. See ''Determination of Industry Support for the Petition'' section, below.

Scope of Investigation

The products covered by this investigation are Dynamic Random Access Memory semiconductors (''DRAMs'') from Korea, whether assembled or unassembled. Assembled DRAMs include all package types. Unassembled DRAMs include processed wafers, uncut die, and cut die. Processed wafers fabricated in Korea, but assembled into finished semiconductors outside Korea are also included in the scope. Processed wafers fabricated outside Korea and assembled into finished semiconductors in Korea are not included in the scope.

The scope of this investigation additionally includes memory modules containing DRAMs from Korea. A memory module is a collection of DRAMs, the sole function of which is memory. Memory modules include single in-line processing modules (''SIPs''), single in-line memory modules (''SIMMs''), dual in-line memory modules (''DIMMs''), small outline dual in-line memory modules (''SODIMMs''), Rambus in-line memory modules (''RIMMs''), and memory cards or other collections of DRAMs, whether unmounted or mounted on a circuit board. Modules that contain other parts that are needed to support the function of memory are covered. Only those modules that contain additional items which alter the function of the module to something other than memory, such as video graphics adapter (''VGA'') boards and cards, are not included in the scope. This investigation also covers future DRAM module types.

The scope of this investigation additionally includes, but is not limited to, video random access memory (''VRAM''), and synchronous graphics RAM (''SGRAM''), as well as various types of DRAMs, including fast page-mode (''FPM''), extended data-out (''EDO''), burst extended data-out (''BEDO''), synchronous dynamic RAM (''SDRAM''), Rambus DRAM (''RDRAM'') and Double Data Rate DRAM, (''DDR SDRAM''). The scope also includes any future density, packaging, or assembling of DRAMs. Also included in the scope of this investigation are removable memory modules placed on motherboards, with or without a central processing unit (''CPU''), unless the importer of the motherboards certifies with the Customs Service that neither it, nor a party related to it or under contract to it, will remove the modules from the motherboards after importation. The scope of this investigation does not include DRAMs or memory modules that are re-imported for repair or replacement.

The DRAMs subject to this investigation are currently classifiable under subheadings 8542.21.8005 and 8542.21.8021 through 8542.21.8029 of the Harmonized Tariff Schedule of the United States (''HTSUS''). The memory modules containing DRAMs from Korea, described above, are currently classifiable under subheadings 8473.30.10.40 or 8473.30.10.80 of the HTSUS. Although the HTSUS subheadings are provided for convenience and Customs purposes, the Department's written description of the scope of this investigation remains dispositive.

Scope Issue

The scope language as proposed by the petitioner included ''[p]rocessed wafers fabricated outside Korea, and assembled into finished semiconductors in Korea.'' As discussed below, the Department has determined not to include this language in the scope of this investigation. In past semiconductor cases, the Department has determined that country of fabrication confers country of origin and in fact has specifically excluded wafers produced in a third country that are

assembled and packaged in Korea. *See, e.g., Notice of Final Determination of Sales at Less Than Fair Value: Dynamic Random Access Memory Semiconductors of One Megabit and Above ("DRAMs") From Taiwan*, 64 FR 56308, 56309 (October 19, 1999) and *Final Determination of Sales at Less Than Fair Value: Dynamic Random Access Memory Semiconductors of One Megabit and Above From the Republic of Korea*, 58 FR 15467 (March 23, 1993).

The petitioner states that it considers DRAMs to originate in Korea if the DRAMs are fabricated and/or assembled in Korea, asserting that this position takes into account the country of origin rule used for U.S. Customs purposes, which is based on the country of assembly. The petitioner further asserts that the subsidies that are being provided by the Government of the Republic of Korea ("GOK") provide a significant benefit to all facets of the semiconductor production process in Korea, including the assembly and testing phases. The petitioner notes that the past cases before the Department have been antidumping cases and asserts that the scope from earlier antidumping cases should not be imported into a countervailing duty case based on the fundamental differences between the two types of proceedings. According to the petitioner, unlike an antidumping case where the Department is concerned with unfair pricing between private parties, a countervailing duty case involves the examination of government subsidies that benefit an entire production process. The petitioner claims that any DRAM assembled in Korea must be included in the scope because all DRAMs have benefitted from the subsidies. According to the petitioner, while the limitation of scope to the country of fabrication may be reasonable in an antidumping case, such a finding in this case would address only a part of the overall DRAM production process in Korea and would permit a continuation of the material injury the law is designed to prevent.

The petitioner further argues that the increasing cost and sophistication of the assembly and testing operations in recent years separately justifies including DRAMs assembled in Korea in the scope of this investigation. In addition, the petitioner asserts that to include assembly in the scope resolves an inconsistency in the earlier semiconductor cases where the Department based the scope on country of fabrication but the International Trade Commission's definition of the domestic industry included fabricators and assemblers. Finally, the petitioner states that the Department typically defers to the petitioner when framing the scope of the merchandise being investigated.

At consultations and in its later filings, the GOK has argued that the Department should not expand the scope from prior determinations to include merchandise fabricated outside Korea but assembled and tested in Korea. The GOK contends that the expanded scope is contrary to Department practice and that the facts do not support a change in practice. The GOK asserts that the wafers are the defining component of the DRAM or memory module and that the value added for final assembly is much smaller than the wafer fabrication, accounting for less than 15 percent of the total cost of the DRAM. In support of its position, the GOK cites *Erasable Programmable Read Only Memories (EPROMs) From Japan; Final Determination of Sales at Less than Fair Value* ("*EPROMs*"), 51 FR 39680 (October 30, 1986), where the Department found that EPROM wafers and dice originated in the country of fabrication, not in the country where assembly and testing occurred. In *EPROMs*, the Department found that third country assembly and testing did not constitute a "substantial transformation" that changed the country of origin from the country of fabrication. Concerning the petitioner's assertion that the language in past cases is not applicable because those cases were antidumping cases, the GOK notes that the Department based its analysis in *EPROMS* on its interpretation of the "class or kind of foreign merchandise" as defined in the antidumping statute, and that the subsidy statute uses almost the identical language.

Concerning the petitioner's argument regarding Customs' rulings, the GOK points out that the Department has not felt bound by Customs' country of origin rulings because these rulings serve different purposes.

We have considered this issue carefully and, as stated in the "scope of investigation" section above, have determined that processed wafers fabricated outside Korea and assembled into finished semiconductors in Korea are not included in the scope. The principal reason for this determination is that in numerous past proceedings on DRAMs and similar products such as EPROMs, the Department has consistently maintained that the country of origin is the country where wafer fabrication occurs. Given those precedents, we are unwilling to adopt different criteria for determining origin absent compelling information that new criteria are appropriate. The information presented by the petitioner does not meet that threshold.

First, section 701(a)(1) of the Act provides for the investigation of whether a countervailable subsidy is being provided to "a class or kind of merchandise." A single definable class or kind of merchandise is linked inextricably to its country of origin, which is in turn determined, for purposes of both antidumping and countervailing duty proceedings, by the substantial transformation test. (*EPROMs*, *supra*, at General Comment 28.) Accordingly, the Department finds that it would not be appropriate or feasible to have a class or kind of merchandise subject to investigation that would require two different and potentially conflicting country-of-origin tests. Thus, the Department cannot accept the alternative test implicated by petitioner's proposed scope language, i.e., that the assembly and testing operations should also set country-of-origin.

The Department has independent authority to determine the scope of its investigations. See *Diversified Products Corp. v. United States*, 572 F. Supp. 883, 887 (CIT 1983). The Department's authority to make its own country of origin determinations is inherent in its independent authority to determine the scope of AD/CVD investigations. Moreover, the Department's country-of-origin determinations, which have not always been identical with Customs's country-of-origin determinations, reflect concerns specific to enforcement of the AD/CVD laws, such as the potential for the circumvention of orders. *See, e.g., EPROMS from Japan*, 51 FR 39680 (October 30, 1986); *DRAMS of 256 Kilobits and Above from Japan*, 51 FR 28396 (August 7, 1986); *Certain Cold-Rolled Carbon Steel Flat Products From Argentina*, 58 FR 37062 (July 9, 1993).

Given this authority, the Department has determined that it is appropriate to continue to base origin on wafer fabrication. While the petitioner may be correct that testing and assembly may be more costly than in the past, there does not seem to be any dispute that wafer fabrication is still the more important stage of the production process. Indeed, the petitioner contends, and we agree as in past determinations, that wafers fabricated in Korea and assembled and tested in third countries are within the scope of this proceeding. Consequently, we have not adopted the petitioner's proposed scope.

Consultations

Pursuant to section 702(b)(4)(A)(ii) of the Act, the Department invited

representatives of the GOK for consultations with respect to the petition filed. On November 12, 2002, the Department held consultations with the GOK. The points raised in the consultations are described in a memorandum to the file entitled "CVD Consultations with Officials from the Government of the Republic of Korea," dated November 13, 2002. This memorandum is on file in the Department's Central Records Unit, Room B–099 of the main Department of Commerce building. The GOK filed submissions with the Department on November 18 and 19, 2002.

Determination of Industry Support for the Petition

Section 771(4)(A) of the Act defines the "industry" as the producers as a whole of a domestic like product. Thus, when determining the degree of industry support, the statute directs the Department to look to producers and workers who produce the domestic like product. The International Trade Commission ("ITC"), which is responsible for determining whether "the domestic industry" has been injured, must also determine what constitutes a domestic like product in order to define the industry. While both the Department and the ITC must apply the same statutory definition regarding the domestic like product (section 771(10) of the Act), they do so for different purposes and pursuant to separate and distinct authority. In addition, the Department's determination is subject to limitations of time and information. Although this may result in different definitions of the like product, such differences do not render the decision of either agency contrary to the law.[1]

Section 771(10) of the Act defines the domestic like product as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this title." Thus, the reference point from which the domestic like product analysis begins is "the article subject to an investigation," *i.e.*, the class or kind of merchandise to be investigated, which normally will be the scope as defined in the petition. As discussed in the scope section of this notice, we have modified the scope from the scope presented in the petition. For purposes of calculating industry support, we have used a domestic like product definition that is consistent with our revised scope language. The petition covers DRAMs as defined in the "Scope of the Investigation" section, above, a single class or kind of merchandise.

Section 702(b)(1) of the Act requires that a petition be filed on behalf of the domestic industry. Section 702(c)(4)(A) of the Act provides that a petition meets this requirement if the domestic producers or workers who support the petition account for: (1) at least 25 percent of the total production of the domestic like product; and (2) more than 50 percent of the production of the domestic like product produced by that portion of the industry expressing support for or opposition to the petition. Finally, section 702(c)(4)(D) of the Act provides that if the petition does not establish support of domestic producers or workers accounting for more than 50 percent of the total production of the domestic like product, the administering agency shall: (i) poll the industry or rely on other information in order to determine if there is support for the petition as required by subparagraph (A); or (ii) determine industry support using any statistically valid sampling method to poll the industry.

The Department has determined, pursuant to section 702(c)(4)(D), that there is support for the petition as required by subparagraph (A). Specifically, the Department made the following determinations. The domestic producers or workers who support the petition established industry support representing over 50 percent of total production of the domestic like product. Therefore, the domestic producers or workers who support the petition account for at least 25 percent of the total production of the domestic like product, and the requirements of section 702(c)(4)(A)(i) are met. Furthermore, because the Department received no opposition to the petition, the domestic producers or workers who support the petition account for more than 50 percent of the production of the domestic like product produced by that portion of the industry expressing support for or opposition to the petition. Thus, the requirements of section 702(c)(4)(A)(ii) are also met. Accordingly, the Department determines that the petition was filed on behalf of the domestic industry within the meaning of section 702(b)(1) of the Act. *See* the Initiation Checklist dated November 21, 2002 ("*Initiation Checklist*").

Injury Test

Because Korea is a "Subsidies Agreement Country" within the meaning of section 701(b) of the Act, section 701(a)(2) of the Act applies to this investigation. Accordingly, the ITC must determine whether imports of the subject merchandise from Korea materially injure, or threaten material injury to, an industry in the United States.

Allegations and Evidence of Material Injury and Causation

The petition alleges that the U.S. industry producing the domestic like product is being materially injured, or is threatened with material injury, by reason of the subsidization of the imports of the subject merchandise. The petitioner contends that the industry's injured condition is evident in the declining trends in domestic prices, operating income and profitability, market share, budgeting for research and development, capital expenditures, inventory valuations,[2] production capacity,[3] as well as lost sales and revenue due to subject imports. The petitioner further alleges threat of injury due to increased import volumes, inventory levels in Korea, unused and increasing production capacity, and price depression. The petitioner asserts that because of the negative trends discussed above, several domestic producers have either ceased operations or consolidated operations with other domestic producers, and there have been no new entrants in the domestic industry. The allegations of injury and causation are supported by relevant evidence including U.S. Customs import data, the financial statements of Micron and Infineon Technologies, lost sales and revenue data, and pricing information. We have assessed the allegations and supporting evidence regarding material injury and causation, and we have determined that these allegations are properly supported by accurate and adequate evidence, and meet the statutory requirements for initiation (*see Initiation Checklist*).

Allegations of Subsidies

Section 702(b) of the Act requires the Department to initiate a countervailing duty proceeding whenever an interested party files a petition on behalf of an industry that (1) alleges the elements necessary for the imposition of a duty

[1] *See Algoma Steel Corp. Ltd., v. United States*, 688 F. Supp. 639, 642-44 (CIT 1988); *High Information Content Flat Panel Displays and Display Glass from Japan: Final Determination; Rescission of Investigation and Partial Dismissal of Petition*, 56 FR 32376, 32380-81 (July 16, 1991).

[2] Specifically, the petitioner alleges that the industry has recently experienced large write-downs of inventory valuation due to historically low selling prices.

[3] The petitioner states that wafer capacity has not increased over the last three years. Rather, capacity has been reduced due to industry consolidation and plant closures, and it has been retooled for production of other types of semiconductors or upgraded with new equipment to accommodate new densities, die shrinks, or address technologies.

under section 701(a), and (2) is accompanied by information reasonably available to the petitioner supporting the allegations.

Period of Investigation

The petitioner has identified numerous instances of alleged government support for Hynix Semiconductor Inc. ("Hynix")[4] in 2001. The petitioner has argued that much of this assistance should be addressed under the Department's grant methodology because although the assistance was ostensibly in the form of loans, there were non-viable contingencies on repayment. Alternatively, the petitioner has argued that the assistance should be treated as long-term loans with special characteristics such that the benefit would be recognized at the time the funds were disbursed to Hynix in accordance with the methodology described in 19 CFR 351.505(b) and 351.505(c)(3). If the Department rejects these methodologies, then its regulations indicate that the benefit would accrue at the time that interest would be paid on a comparable commercial loan, according to the petitioner. However, based on information reasonably available to it, the petitioner has not been able to determine the terms of the allegedly subsidized assistance and, consequently, has not been able to calculate the interest that would have been paid in 2001 or whether, in fact, interest obligations even began before 2002.

To address these unique circumstances, the petitioner requests that the Department expand the period of investigation ("POI") to include not only 2001, but also the first six months of 2002. The petitioner claims this is necessary because a POI limited to 2001 may permit the subsidies to Hynix to escape scrutiny. If the Department finds that the assistance to Hynix should be addressed under a methodology that assigns the benefits to 2001, the petitioner states that there may be no need to extend the POI.

In consultations, the GOK argued that Hynix, Samsung Electronics Company ("Samsung"), and the GOK have calendar fiscal years and, as such, the Department's standard practice is to use only the calendar year 2001 as the POI. The GOK claims that no basis for expanding the POI exists because 1) any benefits received in 2002 would be captured in a review; 2) expanding the POI would unnecessarily complicate the case; 3) completed and audited financial statements or completed and submitted tax returns would not be available, placing an unnecessary burden on the U.S. government, the GOK, and the respondents; and 4) no rationale was provided to expand the POI, nor has the petitioner cited any cases in which the Department departed from its practice of using a single calendar year POI.

Under 19 CFR 351.204(b)(2), the Department normally relies on information pertaining to the most recently completed fiscal year for the government and exporters or producers in question. That same regulation also states, however, that we may rely on information for any additional or alternative period that we conclude is appropriate. In this proceeding, because the petition was filed in November 2002, the normal POI would be 2001.

Recognizing that adoption of an 18–month period of investigation would be a departure from our normal practice, we have carefully considered the merits of the petitioner's claims and the concerns raise by the GOK. Given the lateness of the filing in 2002, we considered collecting data for two separate 12–month periods, 2001 and 2002, and then deciding which data set to use once the relevant facts were discovered through the investigation process. However, such an approach has the obvious drawback that the Department would have to select between the two periods in making its final determination of subsidies, and the period picked could have a significant effect on the outcome of the proceeding.

Instead, we have determined from the outset of this proceeding that we will use the 18–month period of investigation urged by the petitioner. We agree that the terms of various alleged subsidies are not reasonably available to the petitioner and that the methodology, including the point in time that the benefits would be deemed to have accrued, will only be known after an investigation and analysis of the parties' comments. In these circumstances, we do not believe that we should limit this investigation to the normal POI because doing so may be tantamount to telling the petitioner that it has to bring a case simply to learn that the petition should have been filed at a later time (despite that fact that allegedly injurious imports have been occurring all along). Our regulations at 19 CFR 351.204(b)(2) accord us the flexibility to address these unusual circumstances by expanding the POI.

Moreover, we do not intend to scale back the 18–month period of investigation if, as the petitioner suggests, we find it unnecessary. By setting out an 18–month POI at the outset, we avoid the situation of having parties seek to shape the period of investigation to achieve a particular outcome.

Regarding the concerns raised by the GOK, the issue is not whether the subsidies will be captured in the investigation or a possible administrative review. Instead, the petitioner has provided information available to it indicating that the subject merchandise is subsidized. The lack of perfect information, or questions about the timing of the benefits under the Department's various methodological approaches, should not preclude the petitioner from seeking meaningful relief. Second, we do not see that an expanded POI would complicate the investigation beyond the collection of additional data. Third, although completed and audited 2002 financial statements might not be initially available, the Department routinely relies on draft financial statements. Finally, although the petitioner has not cited any cases in which the Department departed from its practice of using a single calendar year as the POI, as noted above, the Department has the discretion to do so.

Initiation of Countervailing Duty Investigation

The Department has examined the countervailing duty petition on DRAMs from Korea and found that it complies with the requirements of section 702(b) of the Act. Therefore, in accordance with section 702(b) of the Act, we are initiating a countervailing duty investigation to determine whether manufacturers, producers, or exporters of DRAMs from Korea receive countervailable subsidies.

I. Creditworthiness and Equityworthiness

The petitioner alleges that Hynix was uncreditworthy in 2000 and 2001 and continues to be uncreditworthy in 2002. The petitioner claims that at the end of 1999, HEI was at a cash crisis point, with 495 billion Won in short-term debt and 2,502 billion Won in long-term debt, and approximately one trillion Won in interest payments due in 2000. HEI had only 808 billion Won in operating profits in 1999 so it was clear that HEI would be unable to pay off the loans and meet its interest obligations. Specifically, the petitioner claims that Hynix has not received any new lending on commercial terms since the beginning of 2001. With one exception, all loans received by Hynix in 2002 were from government agencies or creditors entrusted or directed by the

[4] Hynix was known as Hyundai Electronics Industries Co. Ltd. ("HEI") until March 29, 2001.

government to extend credit to Hynix. The petitioner states that Hynix received one ''relatively insignificant'' loan from Citibank. However, the petitioner notes that the Department's practice is to examine the circumstances surrounding commercial bank loans that are part of financing packages that involve the government to determine whether there are any special features of the package that would lead the commercial lender to offer lower, more favorable terms than would be offered absent the government/ commercial bank package (citing to the Preamble to the *Countervailing Duties: Final Rule*, 63 FR 65348, 65363–64 (November 25, 1998). The petitioner claims that the loan from Citibank, for several reasons, could not be viewed as being comparable to the GOK's loans.

The petitioner further alleges that throughout the period 2000 and 2001, Hynix had a significant amount of debt coming due and the company would not be able to pay off this debt using its internal free cash flow. Therefore, Hynix needed help from the government. To support this, the petitioner points to comments made by investment banks in their reports during 2000 and 2001. For example, the reports stated: ''[w]e believe it would be difficult for [Hynix] to secure sufficient funds to repay its debt...;'' ''[Hynix has a] fundamental problem of excessive debt which was around 87 percent of 2001 sales;'' ''[Hynix is] not profitable and is not paying off debt at a sufficiently fast rate from internal cash flow or asset disposals;'' ''we believe Hynix's balance sheet risk remains high.'' According to the petitioner, the investment community's analyses at the time reveals that it was known that Hynix did not have the cash flow to repay debts and would not be able to obtain funding from normal commercial sources.

Since the two bailouts in 2001, the petitioner claims that Hynix's financial situation has continued to worsen, with Hynix reporting a loss of more than 410 billion Won for the first half of 2002. Meanwhile, the petitioner notes, Hynix still has 5,982 billion Won in debt, a large portion of which is coming due in the next few years. With DRAM prices at historical lows, the petitioner argues that there is no reasonable expectation, under normal commercial considerations, that Hynix's debt will ever be repaid without GOK assistance. Without GOK intervention, the petitioner claims, banks would not continue to provide new money to Hynix, at any interest rate.

The petitioner additionally examines Hynix's financial condition during the time relying on various financial indicators: total liabilities to net worth; fixed assets to net worth; current liabilities to net worth; the current ratio; and the quick ratio. According to the petitioner, the current ratio indicates that even if Hynix were to liquidate its current assets at full book value, it would be unable to pay off its current liabilities in full. Regarding the quick ratio, the petitioner notes that Hynix could cover only 8 percent of its current liabilities with current assets other than inventories. The petitioner also claims that Hynix's debt was increasing. The company's debt-to-equity ratio was 186 percent in 2000 and rose to 193 percent in 2001. Finally, the petitioner notes that for the period 1998 to 2001, Hynix had current liabilities which exceeded its net worth for three of the years. According to the petitioner, only after the bailout in 2001, did this ratio drop below one. In examining a company's creditworthiness we attempt to determine if the company in question could obtain long-term financing from conventional commercial sources. 19 CFR 351.505(a)(4). We find that the financial information submitted by the petitioner provides a reasonable basis to believe or suspect that Hynix was uncreditworthy in 2000 - 2002. Therefore, if we find that Hynix received any non-recurring grants, loans, or loan guarantees in those years, we will determine whether the company was creditworthy in those years.

The petitioner also alleges that Hynix was unequityworthy in 2001, the year in which Hynix recorded convertible bonds as capital adjustments (*i.e.*, swapped debt for equity). Specifically, according to the petitioner: 1) Hynix posted net losses since 1998; 2) the lead underwriter of Hynix's 2001 issuance of global depository receipts (''GDR'') did not foresee positive free cash flow for the company through the fourth quarter of 2003; 3) without free positive cash flow, Hynix could not service its debt, forcing it into bankruptcy and eliminating any claims by the shareholders on the company's proceeds; 4) Hynix's return on equity was negative for the period 1998 through 2000 (negative 35.5 in 2000), and was projected to range from negative 54.1 percent to negative 89.1 percent through 2003; and 5) although Hynix had a GDR equity offering to private investors in June 2001, because the 72 percent drop in the prices of these GDRs showed that Hynix's financial position had degenerated, this offering does not indicate that Hynix was equityworthy at the time of the debt-equity swap in October 2001. The petitioner claims that the convertible bonds should be treated as equity, not debt, because the bondholders were obligated to convert the bonds and Hynix treated these bonds as capital adjustments. In the case of a government equity infusion, the Department measures the benefit by examining the investment decision against the usual investment practice of a private investor. 19 CFR 351.507(a)(1). Specifically, the Department compares the purchase price paid by the government to prices paid for new shares by private investors, if such prices exist. 19 CFR 351.507(a)(2). If actual private investor prices are unavailable, the Department will determine the equityworthiness of a company at the time of the equity infusion. 19 CFR 351.507(a)(3).

In this case, although Hynix did issue GDR's in the first half of 2001, we find that the petitioner provides a reasonable basis to believe or suspect that, at the time of the October 2001 bailout, Hynix was not equityworthy. If we determine that Hynix received an equity infusion in 2001, we will make a determination regarding Hynix's equityworthiness at the time of the infusion.

II. Programs

We are including in our investigation the following programs alleged in the petition to have provided countervailable subsidies to producers and exporters of the subject merchandise in Korea. The bases for our determination to investigate these programs are set forth in the *Initiation Checklist*.

For several of the programs listed below, the petitioner alleges that the GOK 1) directs credit in Korea, and 2) this credit was directed specifically to the semiconductor industry. For the reasons stated in the *Initiation Checklist*, we are investigating whether the GOK directs credit in Korea and whether the semiconductor industry receives a disproportionate share of the directed credit.

A. Bailout Subsidies to Hynix

1. Syndicated Bank Loan of 800 Billion Won
2. 22.7 Billion Won Citibank Loan
3. KDB Fast Track Program
4. May 2001 Bailout
a. Creditor Purchase of 994.1 Billion Won of Convertible Bonds
b. 6 Billion Won Grant
c. 5.9 Billion Won Loan
d. Extension of Maturities of 58 Billion Won of Short-Term Loans
e. Extension of Maturities of Long-Term Loans
f. Committed Availability of Short-Term Financing

5. 680 Billion Won Bond Guarantee
6. October 2001 Bailout
a. Equity Infusion
b. Extension of Debt Maturities and Reduction or Elimination of Interest Obligations
c. Debt Forgiveness
d. Conversion of Short-Term Financing to Long-Term Loans
e. Fresh Loans
7. D/A Financing
B. Other Subsidies
1. Preferential Loan Programs
a. Fund for Industrial Technology Development
b. Fund for Promotion of Science and Technology
c. Fund for Rental Housing
d. Fund for Promotion of Defense Industry
e. Long-Term Usance Loans
f. Export Industry Facility Loans (''EIFLs'')
g. Short-term Export Financing
h. Export Credit Financing From Export-Import Bank of Korea
i. Loans From the Energy Savings Fund
j. Fund for Machinery Made in Korea
k. Fund for Promotion of Informatization
2. R&D Support
3. Tax Programs
a. Reserve for Overseas Market Development - (Former) Article 17 of TERCL
b. Technological Development Reserve Funds - (Former) Article 8 of TERCL
c. Reserve for Export Loss - (Former) Article 16 of TERCL
d. Tax Credit for Investment in Facilities for Productivity Enhancement under Article 24 of RSTA
e. Miscellaneous Investment Tax Credits - Article 10, 18, 25, 26, and 71 of RSTA
f. Foreign Investment Promotion Act (Formerly Foreign Capital Inducement Law (''FCIL''))
4. Other Benefits
a. Duty Drawback on Non-Physically Incorporated Items and Excessive Loss Rates
b. Export Insurance
c. Electricity Discounts Under the Requested Load Adjustment Program
d. Targeted Assistance Programs
i. Operation G&/HAN Program and 21st Century Frontier R&D Program
ii. Korean Semiconductor Research Project

We are not investigating the following alleged subsidy programs: Tax Credit for Investment in Equipment to Develop Technology and Manpower - Article 11 of RSTA (formerly Article 9 of TERCL) and Special Taxation Provisions Relating to Corporate Restructuring.

Distribution of Copies of the Petition

In accordance with section 702(b)(4)(A)(i) of the Act, a public version of the petition has been provided to the GOK. We will attempt to provide a public version of the petition to each exporter named in the petition, as provided for under 19 CFR 351.203(c)(2).

ITC Notification

We have notified the ITC of our initiation, as required by section 702(d) of the Act.

Preliminary Determination by the ITC

The ITC will determine, no later than December 16, 2002, whether there is a reasonable indication that imports of DRAMs from Korea are causing material injury, or threatening to cause material injury, to an industry in the United States. A negative ITC determination will result in the investigation being terminated; otherwise, this investigation will proceed according to statutory and regulatory time limits.

This notice is issued and published pursuant to section 777(i) of the Act.

Dated: November 21, 2002.

Faryar Shirzad,

Assistant Secretary for Import Administration.

[FR Doc. 02–30138 Filed 11–26–02; 8:45 am]

BILLING CODE 3510–DS–S

DEPARTMENT OF COMMERCE

International Trade Administration

Notice of Open Town Meeting for Information Gathering on Exploring the Development of a Textile ''Marker'' System

November 22, 2002.

AGENCY: Department of Commerce, International Trade Administration.

ACTION: Notice of an open meeting.

SUMMARY: The International Trade Administration (ITA) will hold a public meeting on technologies under investigation for a textile ''marker'' system.

DATES: The meeting is scheduled for December 10, 2002, from 10:00am to 12:00pm.

ADDRESSES: The meeting will be held at the North Carolina Center for Applied Textile Technology (NCCATT), 7220 Wilkinson Boulevard, Belmont, NC. Telephone, (704) 825-3737.

FOR FURTHER INFORMATION CONTACT: Don Niewiaroski, Jr. at (202) 482-4058, Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230.

SUPPLEMENTARY INFORMATION: Directions to the NCCATT are as follows: Take Exit 27 off of I-85 South. Go left at the top of the exit ramp on Highway 273 for approximately 1/3 of a mile. Go left on Highway 74 for approximately 2/3 of a mile until you reach the NCCATT campus on your right. Proceed to the auditorium in the ''new building'' at 7230 Wilkinson Boulevard. From Charlotte airport follow signs to I-85 South and the directions are the same as above. For further information please contact the North Carolina Center for Applied Textile Technology at (704) 825-3737.

The meeting will be co-chaired by James C. Leonard III, Commerce Deputy Assistant Secretary for Textiles, Apparel and Consumer Goods Industries and Dr. Glenn O. Allgood, Principal Investigator, Oak Ridge National Laboratory. During the meeting the following agenda item will be discussed.

Department of Commerce (DOC)/ Department of Energy (DOE) Project to Explore the Development of a Special Textile ''Marker'' System

DOE will make a presentation on the technologies under investigation for a textile ''marker'' system. DOE and DOC officials will discuss this project at the meeting, and will encourage participants to provide individual comments and information on these technologies with particular reference to: cost effectiveness; compatibility with U.S. manufacturing processes; the ability to survive foreign fabrication techniques; and compatibility with U.S. Customs processes and procedures. Discussion will include possibilities of and opportunities for plant visits by DOE personnel and other pertinent issues.

Background

On October 29, 2002 the Department of Commerce entered into an agreement with the Department of Energy's Oak Ridge Operations Office to explore the development of a special ''marker'' system to track the presence of U.S.-made yarns and fabrics in U.S. apparel imports.

Certain provisions of U.S. apparel import preference programs and free trade area agreements require the use of U.S. textile inputs. However, the origin of such inputs is difficult to determine and the development of a textile marker system is intended to ensure the use of U.S. fabrics and yarns in products receiving preferences.

social security tax which was refunded upon exportation should be included under cost of production as a usual general expense. The court in that case reasoned that the tax was not an expense sustained by the manufacturer in manufacturing or producing such or similar merchandise.

These cases stand for the proposition that "*an expense not incurred in connection with the exported merchandise is not an element of cost or expense within the 'cost of production' statute*". (Italic added.) See *C. J. Tower & Sons of Buffalo, Inc.* v. *United States*, 65 Cust. Ct. 792, A.R.D. 277 (1970). (In *Tower*, the court excluded from usual general expenses under statutory cost of production certain home-market costs which were not incurred in connection with the imported merchandise.)

In addition, the cases provide further definition to the general interpretation of the cost of production statute as enunciated in the landmark case of *Ford Motor Company* v. *United States* (29 Cust. Ct. 553, A.R.D. 9 (1952)). In that case, the court stated that the purpose of the statute "is to derive, not the manufacturer's actual cost, but the *actual* cost of manufacture." (Italic added.) The principles gleaned from the cases dealing with statutory cost of production are equally applicable to statutory constructed value under the new law. (Sec 402(d) of the act.)

Holding.—Where no interest expense is incurred in connection with a loan by a U.S. parent to its foreign subsidiary, interest expense cannot be imputed to the subsidiary for purposes of including it as a cost item under statutory cost of production or constructed value of merchandise imported from the foreign subsidiary.

(C.S.D. 80-227)

Country-of-Origin Marking: Exception From Marking for Semiconductor Chips Arriving in Properly Marked Containers; Substantial Transformation

Date: February 13, 1980
File: MAR-2-05-RRUEE
712193 MC

This ruling concerns the country-of-origin marking of integrated circuits assembled in the United States from foreign components.

Issue.—Whether assembly of integrated circuits, including attachment of the die and lead wires, encapsulation and testing, from imported semiconductor chips constitutes a substantial transformation.

Facts.—An American subsidiary of a Japanese corporation proposes to produce integrated circuit packages in the United States. Silicon semiconductor chips and other materials used in the circuit assembly process will be imported from Japan. The assembly operation in the United States will include attachment of the die, attachment of lead wires, encapsulation, and then testing and marking.

Law and analysis.—Section 304 of the Tariff Act of 1930, as amended (19 U.S.C. 1304), provides in general that all articles of foreign origin, or their containers, imported into the United States, shall be legibly and conspicuously marked to indicate the English name of the country of origin to an ultimate purchaser in the United States.

Section 134.1(b) of the Customs Regulations defines "country of origin" as "the country of manufacture, production or growth of any article of foreign origin entering the United States. Further work or material added to an article must effect a substantial transformation in order to render such other country the 'country of origin' within the meaning of this part."

Section 134.35 states that in order to effect a substantial transformation, an article used in the United States in manufacture must result "in an article having a name, character, or use differing from that of the imported article * * *. Under this principle, the manufacturer or processor in the United States who converts or combines the imported article into the different article will be considered the 'ultimate purchaser' of the imported article * * * and the article shall be excepted from marking. The outermost container of the imported articles shall be marked in accordance with this part."

In this case, semiconductor chips and other materials of no functional use in their imported state are to be assembled by a manufacturer in the United States. Several procedures will be performed by the manufacturer including attachment of the die and lead wires and then encapsulation of the integrated circuit. The final product must then be tested and marked before being available for sale.

We are of the opinion that the procedures of attachment of the die and lead wires and encapsulation will result in a substantially transformed product. The use, character, name and value of a finished integrated circuit is substantially different from a semiconductor chip. Testing and marking only, however, are not considered to result in a substantial transformation.

Accordingly, the finished product will be considered of United States origin for purposes of 19 U.S.C. 1304, and need not be marked. As the assembler is to be considered the "ultimate purchaser" of the components, including the semiconductor chips, those imported articles need not be marked either, provided the outermost containers

of the imported articles are marked "Japan," and Customs officers at the port of entry are satisfied the chips will reach the assemblers in the marked containers. The chips will be exempt from individual marking under 19 U.S.C. 1304(a)(3)(D).

Holding.—The assembler of integrated circuits from semiconductor chips and other materials effects a "substantial transformation," and is thus to be considered the "ultimate purchaser" of the imported components. Accordingly, the chips and other components may be excepted from marking pursuant to 19 U.S.C. 1304(a)(3)(D). There is no requirement under the Customs laws that the finished integrated circuits be marked to indicate the origin of the components.

(C.S.D. 80-228)

Classification: Whether Cast Hose Couplings Are "Cast Iron" for Tariff Purposes

Date: February 15, 1980
File: CLA-2:RRUCGC
061666 E

Re Decision on application for further review of protest Nos. 4101-9-000009 and 4101-9-000010

DISTRICT DIRECTOR OF CUSTOMS,
Cleveland, Ohio

DEAR SIR: This decision concerns protests filed against your decision in classifying certain cast hose couplings under the provision for articles of iron, not coated or plated with precious metal, other, in item 657.20 or 657.25, Tariff Schedules of the United States (TSUS), dutiable at the rate of 9.5 percent ad valorem in the liquidation of the following entries:

Entry No.	Entry date	Liquidation date
104471	Oct. 24, 1975	Dec. 29, 1978
106046	Mar. 4, 1977	Dec. 22, 1978
114095	June 26, 1975	Do.
100847	July 22, 1975	Do.
101156	July 31, 1975	Do.
102911	Sept. 16, 1975	Do.
108963	Feb. 27, 1976	Do.
111790	May 13, 1976	Do.
113477	June 10, 1975	Do.
112419	May 13, 1975	Do.
110721	Apr. 19, 1976	Do.

HQ 732357
May 21, 1990
MAR 2-05 CO:R:C:V 732357 pmh
CATEGORY: Marking
Mr. Tom Allen Kintetsu Intermodal USA, Inc.

P.O. Box 30355 Portland, OR 97230
RE: Country of origin marking requirements for integrated circuits manufactured in the U.S., Korea and Hong Kong
Dear Mr. Allen:

This is in response to your April 10, 1989 letter on behalf of your client, Sharp Microelectronics Technology, Inc. (the importer) requesting a ruling on the country of origin marking requirements for integrated circuits that are manufactured in the U.S., Korea and Hong Kong, using silicon wafers manufactured in Japan. We regret the delay in responding to your request.

FACTS:

According to your letter, your client imports silicon wafers manufactured by the Sharp Corporation in Japan. The Sharp Corporation plans on distributing the silicon wafers to various assembly plants in Korea, Hong Kong and the U.S. At the assembly plants, the silicon wafers will be cut into integrated circuit- size pieces which are mounted to the leadframe by eutectic or epoxy mechanisms. Gold or aluminum wires are then attached to the circuit and to the leadframe by means of ultrasonic or thermionic bonding. The leadframe and circuit are finally encapsulated and the finished circuits are packed.

ISSUE:

For marking purposes, what is the country of origin of finished integrated circuits that are assembled in Hong Kong, Korea or the U.S. from silicon wafers manufactured in Japan, and other materials.

-2-
LAW AND ANALYSIS:

Section 304 of the Tariff Act of 1930, as amended (19 U.S.C.), provides that unless excepted, every article of foreign origin imported into the U.S. shall be marked in a conspicuous place as legibly, indelibly, and permanently as the nature of the article (or container) will permit, in such a manner as to indicate to the ultimate purchaser in the U.S. the English name of the country of origin of the article.

Part 134, Customs Regulations (19 CFR Part 134), implements the country of origin marking requirements

and exceptions of 19 U.S.C. 1304. Section 134.1(b), Customs Regulations (19 CFR 134.1(b)), defines the country of origin of an article as the country of manufacture, production, or growth of any article of foreign origin entering the U.S. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the country of origin for marking purposes.

To constitute a substantial transformation, a new and different article of commerce having a new name, character or use must emerge from the processing. See United States v. Gibsen- Thomsen Co. Inc., 27 C.C.P.A. 267, C.A.D. 98 (1940). In addition, factors such as complexity and cost of the processing operations and whether the essence of the article has been changed, have also been considered. See Uniroyal Inc. v. United States, 3 C.I.T. 220, 542 F. Supp. 1026 (1982), aff'd, 702 F.2d 1022 (Fed.Cir. 1983).

In a ruling published as C.S.D. 80-227, dated February 13, 1980, Customs determined that assembly of integrated circuits from imported silicon semiconductor chips, and which included attachment of the die and lead wires, and encapsulation effected a substantial transformation. Customs reasoned that the silicon semiconductor chips and other materials were of no functional use in their original state before they were assembled in the finished integrated circuit and that "the use, character, name and value of a finished integrated circuit is substantially different from a semiconductor chip."

-3-

Likewise in this case, the processing of the Japanese silicon wafers into integrated circuits, which includes cutting the wafers into chips, mounting the individual circuit by eutectic or epoxy mechanisms to the leadframe, bonding of gold and aluminum wires to circuit and leadframe and encapsulation of leadframe and circuit is the same as that described in C.S.D. 80- 227. Indeed, the processing in this case includes the additional step of cutting the silicon wafers into integrated circuit-size chips. Consequently, we find that the silicon wafers are substantially transformed by the processing that occurs in either Korea, Hong Kong or the U.S. The finished integrated circuits are products of the country in which such processing occurs.

Those integrated circuits that are products of either Hong Kong or Korea, should be marked accordingly at the time they are imported into the U.S. Such marking must be in compliance with the requirements of 19 U.S.C. 1304 and 19 CFR Part 134. Those integrated circuits that are produced in the U.S. are not subject to the requirements of 19 U.S.C. 1304 and 19 CFR Part 134.

We note, however, that the silicon wafers that are imported for use in the manufacture of the U.S. integrated circuits must be marked to indicate the country of origin to the ultimate purchaser in the U.S. Section 134.35, Customs Regulations (19 CFR 134.35), provides that if an imported article will be used in manufacture, the manufacturer is the ultimate purchaser if he subjects the imported article to a process which results in a substantial transformation. In such circumstances, the imported article is excepted from individual marking; it is sufficient to mark the bulk container in which they are imported. Since the U.S. manufacturing operations described above result in a substantial transformation of the silicon wafers, it is acceptable to mark the bulk container in which the silicon wafers are imported.

HOLDING:

The assembly of integrated circuits using imported silicon wafers and which consists of cutting the wafers into chips, mounting the individual circuit to the leadframe, bonding gold or

-4-

aluminum wire to the leadframe and encapsulating the leadframe and circuit constitutes a substantial transformation. The finished integrated circuit is considered to be a product of the country in which such processing occurs and should be marked accordingly, in compliance with the requirements of 19 U.S.C.

1304.

Sincerely,
Marvin M. Amernick Chief, Value, Special Programs and Admissibility Branch

Print this document

NY C80261

October 17, 1997

MAR-2 RR:NC:MM:109 C80261

CATEGORY: MARKING

Mr. Buck Hall Export Control Manager American Microsystems, Inc.

2300 Buckskin Road Pocatello, Idaho 83201

RE: THE COUNTRY OF ORIGIN MARKING OF INTEGRATED CIRCUITS

Dear Mr. Hall:

This is in response to your letter, dated September 24, 1997, requesting a ruling on whether the proposed marking "US origin" is an acceptable country of origin marking for imported application specific integrated circuits (ASICs). A marked sample was not submitted with your letter for review.

Your letter states that the ASIC wafers are manufactured in your Pocatello, Idaho facility. These integrated circuits are mass produced on silicon wafers. A single wafer may contain several hundred integrated circuits. The wafers are sent to various Pacific Rim countries for electrical testing and packaging. The packaging process involves separating the wafer into individual integrated circuit referred to as "dice or chips." The dice are mounted individually in ceramic or plastic packages. Your letter did not provide a complete description of the packaging operation. However, this would involve mounting each die inside the package, electrically connecting the die to the package leads, and closing and sealing the package.

The marking statute, section 304, Tariff Act of 1930, as amended (19 U.S.C. 1304), provides that, unless excepted, every article of foreign origin (or its container) imported into the U.S. shall be marked in a conspicuous place as legibly, indelibly and permanently as the nature of the article (or its container) will permit, in such a manner as to indicate to the ultimate purchaser in the U.S. the English name of the country of origin of the article.

As provided in section 134.41(b), Customs Regulations (19 CFR 134.41(b)), the country of origin marking is considered conspicuous if the ultimate purchaser in the U.S. is able to find the marking easily and read it without strain.

With regard to the permanency of a marking, section 134.41(a), Customs Regulations (19 CFR 134.41(a)), provides that as a general rule marking requirements are best met by marking worked into the article at the time of manufacture. For example, it is suggested that the country of origin on metal articles be die sunk, molded in, or etched. However, section 134.44, Customs Regulations (19 CFR 134.44), generally provides that any marking that is sufficiently permanent so that it will remain on the article until it reaches the ultimate purchaser unless deliberately removed is acceptable.

While the United States is a party to the North American Free Trade Agreement (NAFTA), Part 102, Customs Regulations (19 CFR 102), Rules of Origin would not apply in this instance, because a Certificate of Origin could not be issued for the purpose of claiming preferential treatment under section 181.11, Customs Regulations (19 CFR 181.11).

The issue of whether packaging of integrated circuit dice or chips constitutes a substantial transformation has been addressed in a ruling published as C.S.D. 80-227, dated February 13, 1980, and also in **HQ 732357**, dated May 21, 1990. In these rulings, Customs determined that assembly of integrated circuits from imported silicon semiconductor chips, which included attachment of the die and lead wires, and encapsulation, effected a substantial transformation. These rulings held that the finished integrated circuits were products of the country in which such processing occurred. Therefore, those integrated circuits that are products of Pacific Rim countries, should be marked accordingly at the time they are imported into the United States. Such marking must be in compliance with the requirements of 19 U.S.C. 1304 and 19 CFR Part 134.

The proposed marking of the imported application specific integrated circuits, as described in your letter is not an acceptable country of origin marking for the imported goods. The assembly of integrated circuits using imported silicon wafers, and which consists of cutting the wafers into chips, mounting the individual circuit, electrically connecting the circuit to the leads and encapsulating the circuit constitutes a substantial transformation. The finished integrated circuit is considered to be a product of the country in which such processing occurs and should be marked accordingly, in compliance with the requirements of 19 U.S.C. 1304.

This ruling is being issued under the provisions of Part 177 of the Customs Regulations (19 CFR Part 177).

A copy of the ruling or the control number indicated above should be provided with the entry documents filed at the time this merchandise is imported. If you have any questions regarding the ruling, contact National Import Specialist Eileen S. Kaplan at 212-466-5673.

Sincerely,
Robert B. Swierupski Director, National Commodity Specialist Division

Print this document

Exhibit 11

Excerpts from First Solar 10-Q, Third Quarter 2013

EDGAR®Online

FIRST SOLAR, INC.

FORM 10-Q
(Quarterly Report)

Filed 11/01/13 for the Period Ending 09/30/13

Address	350 WEST WASHINGTON STREET SUITE 600 TEMPE, AZ 85281
Telephone	(602) 414-9300
CIK	0001274494
Symbol	FSLR
SIC Code	3674 - Semiconductors and Related Devices
Industry	Semiconductors
Sector	Technology
Fiscal Year	12/31

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

Form 10-Q

(Mark one)

[x] **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

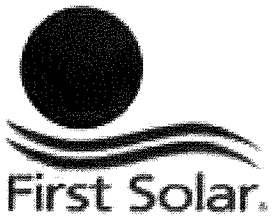
For the quarterly period ended September 30, 2013

or

[ ] **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-33156



First Solar, Inc .

(Exact name of registrant as specified in its charter)

Delaware	**20-4623678**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

350 West Washington Street, Suite 600
Tempe, Arizona 85281
(Address of principal executive offices, including zip code)
(602) 414-9300
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes [x] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes [x] No [ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer [x]	Accelerated filer [ ]	Non-accelerated filer [ ] *(Do not check if a smaller reporting company)*	Smaller reporting company [ ]

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes [ ] No [x]

As of October 25, 2013 , 99,440,100 shares of the registrant's common stock, $0.001 par value per share, were issued and outstanding.

FIRST SOLAR, INC. AND SUBSIDIARIES

FORM 10-Q FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2013

TABLE OF CONTENTS

		Page
Part I.	Financial Information (Unaudited)	
Item 1.	Condensed Consolidated Financial Statements:	
	Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2013 and September 30, 2012	3
	Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and nine months ended September 30, 2013 and September 30, 2012	4
	Condensed Consolidated Balance Sheets as of September 30, 2013 and December 31, 2012	5
	Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2013 and September 30, 2012	6
	Notes to Condensed Consolidated Financial Statements	7
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	44
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	70
Item 4.	Controls and Procedures	70
Part II.	Other Information	72
Item 1.	Legal Proceedings	72
Item 1A.	Risk Factors	73
Item 4.	Mine Safety Disclosures	73
Item 5.	Other Information	73
Item 6.	Exhibits	73
Signatures		75

PART I. FINANCIAL INFORMATION

Item 1. ***Unaudited Condensed Consolidated Financial Statements***

FIRST SOLAR, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 30, 2013	September 30, 2012	September 30, 2013	September 30, 2012
Net sales	$ 1,265,587	$ 839,147	$ 2,540,552	$ 2,293,534
Cost of sales	901,553	600,431	1,867,094	1,734,332
Gross profit	364,034	238,716	673,458	559,202
Operating expenses:				
Research and development	34,984	32,372	95,879	100,821
Selling, general and administrative	63,870	73,507	204,600	217,511
Production start-up	—	1,595	2,768	6,186
Restructuring and asset impairments	57,276	24,197	62,004	444,262
Total operating expenses	156,130	131,671	365,251	768,780
Operating income (loss)	207,904	107,045	308,207	(209,578)
Foreign currency (loss) gain	(705)	3	(155)	34
Interest income	4,197	3,405	12,549	9,695
Interest expense, net	(275)	(2,902)	(1,900)	(11,194)
Other income (expense), net	(2,433)	3,210	(2,762)	665
Income (loss) before income taxes	208,688	110,761	315,939	(210,378)
Income tax expense	13,650	22,844	28,161	40,138
Net income (loss)	$ 195,038	$ 87,917	$ 287,778	$ (250,516)
Net income (loss) per share:				
Basic	$ 1.98	$ 1.01	$ 3.14	$ (2.89)
Diluted	$ 1.94	$ 1.00	$ 3.08	$ (2.89)
Weighted-average number of shares used in per share calculations:				
Basic	98,720	86,992	91,751	86,785
Diluted	100,378	87,765	93,517	86,785

See accompanying notes to these condensed consolidated financial statements.

FIRST SOLAR, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)
(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 30, 2013	September 30, 2012	September 30, 2013	September 30, 2012
Net income (loss)	$ 195,038	$ 87,917	$ 287,778	$ (250,516)
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	2,781	2,600	1,204	6,314
Unrealized (loss) gain on marketable securities and restricted investments	(6,314)	11,009	(33,684)	19,571
Unrealized loss on derivative instruments	(2,134)	(9,879)	(5,071)	(22,594)
Total other comprehensive income (loss), net of tax	(5,667)	3,730	(37,551)	3,291
Comprehensive income (loss)	$ 189,371	$ 91,647	$ 250,227	$ (247,225)

See accompanying notes to these condensed consolidated financial statements.

operate; future financial results, operating results, revenues, gross margin, operating expenses, products, projected costs, warranties, solar module efficiency and balance of systems ("BoS") cost reduction roadmaps, restructuring, product reliability and capital expenditures; our ability to continue to reduce the cost per watt of our solar modules; our ability to reduce the costs to construct photovoltaic ("PV") solar power systems; research and development programs and our ability to improve the conversion efficiency of our solar modules; sales and marketing initiatives; and competition. In some cases, you can identify these statements by forward-looking words, such as "estimate," "expect," "anticipate," "project," "plan," "intend," "believe," "forecast," "foresee," "likely," "may," "should," "goal," "target," "might," "will," "could," "predict," "continue" and the negative or plural of these words and other comparable terminology. Forward-looking statements are only predictions based on our current expectations and our projections about future events. All forward-looking statements included in this Quarterly Report on Form 10-Q are based upon information available to us as of the filing date of this Quarterly Report on Form 10-Q. You should not place undue reliance on these forward-looking statements. We undertake no obligation to update any of these forward-looking statements for any reason. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to differ materially from those expressed or implied by these statements. These factors include, but are not limited to, the matters discussed in Item 1A: "Risk Factors," of our Annual Report on Form 10-K for the year ended December 31, 2012 , as updated and supplemented by the risk factors included in our Prospectus dated June 12, 2013 filed with the SEC pursuant to Rule 424 (b)(5) (the "Prospectus") and elsewhere in this Quarterly Report on Form 10-Q, in our Annual Report on Form 10-K and in the Prospectus and other factors. You should carefully consider the risks and uncertainties described under this section.

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and the accompanying notes contained in this Quarterly Report on Form 10-Q. Unless expressly stated or the context otherwise requires, the terms "we," "our," "us," "Company," and "First Solar" refer to First Solar, Inc. and its subsidiaries.

When referring to our manufacturing capacity, total sales and solar module sales, the unit of electricity in watts for megawatts("MW") and gigawatts ("GW") is direct current ("DC") unless otherwise noted. When referring to our PV solar power systems, the unit of electricity in watts for MW and GW is alternating current ("AC") unless otherwise noted.

Executive Overview

We are a premier global provider of solar energy solutions. We manufacture and sell PV solar modules with an advanced thin-film semiconductor technology, and we develop, design, construct, and sell PV solar power systems that use the solar modules we manufacture. We are the world's largest thin-film PV solar module manufacturer and one of the world's largest PV solar module manufacturers.

In addressing overall global demand for PV solar electricity, we have developed a differentiated, fully integrated systems business that can provide a competitively priced turn-key utility-scale PV system solution for system owners and competitively priced electricity to utility end-users. Our fully integrated systems business, which uses the solar modules we manufacture, has enabled us to increase module throughput, drive cost reduction across the value chain, identify and break constraints to sustainable markets, and deliver compelling solutions to our customers and end-users. With our fully integrated systems business, we believe we are in a position to expand our business in economically sustainable markets (in which support programs are minimal), which are developing in areas that have a combination of abundant solar resources, relatively high current electricity costs and sizable electricity demand. We are committed to continually lowering the cost of solar electricity, and in the long-term, we plan to compete on an economic basis with conventional fossil-fuel-based peaking power generation.

In furtherance of our goal of delivering affordable solar electricity, we are continually focused on reducing PV solar power system costs in five primary areas: module manufacturing, BoS costs (consisting of the costs of the components of a solar power system other than the solar modules that we manufacture, such as inverters, mounting hardware, trackers, grid interconnection equipment, wiring and other devices, and installation labor costs), project development costs, the cost of capital, and the operating expenses of a PV solar system. First, with respect to our module manufacturing costs, our advanced technology has allowed us to reduce our average module manufacturing costs to among the lowest in the world for modules produced on a commercial scale, based on publicly available information. In the three months ended September 30, 2013 , our total average manufacturing costs were $0.59 per watt, which is competitive on a comparable basis with, or lower than, those of traditional crystalline silicon solar module manufacturers, based on publicly available information. By continuing to improve conversion efficiency, increasing production line throughput, and lowering raw material costs, we believe that we can further reduce our manufacturing costs per watt and maintain cost competitiveness with traditional crystalline silicon solar module manufacturers. Second, with respect to our planned BoS cost reduction roadmap, we have aggressive programs which target key improvements in components and system design, which, when combined with continued improvements in solar module conversion efficiency, volume procurement around standardized hardware platforms, use of innovative installation techniques and know how, and accelerated installation times, are expected to result in substantial reductions in our BoS costs resulting in a lower system levelized cost of energy. Third, with respect

to our project development costs, we seek optimal site locations in an effort to minimize transmission and permitting costs, and to accelerate lead times to electricity generation. Fourth, with respect to the cost of capital, by continuing to demonstrate the financial viability and operational performance of our utility-scale PV solar power systems and increasing our PV solar power system operating experience, we believe we can continue to lower the cost of capital associated with our PV solar power systems, thereby further enhancing the economic viability of our projects and lowering the cost of electricity generated by PV solar power systems that incorporate our modules and technology. The remaining primary PV solar power system cost relates to the actual operating expenses of a PV solar power system, which includes the operations and maintenance costs of the plant. We believe that our operations and maintenance services are an important aspect to the overall future reduction expected in the levelized cost of electricity ("LCOE") of a PV solar power system through seamless grid integration, increased reliability and maximization of availability of the PV solar power systems we operate and maintain for our customers.

We believe that combining our reliable, low-cost module manufacturing capability with our systems business enables us to more rapidly reduce the price of solar electricity, accelerate the adoption of our technology in utility-scale PV solar power systems, and identify and remove constraints to the successful migration to sustainable solar markets around the world. Our vertically integrated capabilities enable us to maximize value and mitigate risk for our customers and thereby deliver meaningful PV energy solutions to varied energy problems worldwide. We offer leadership across the entire solar value chain, resulting in more reliable and cost effective PV energy solutions for our customers, and furthering our mission to create enduring value by enabling a world powered by clean, affordable solar electricity.

Business Segments

We operate our business in two segments. Our components segment involves the design, manufacture, and sale of solar modules which convert sunlight into electricity. Third-party customers of our components segment include project developers, system integrators, and owners and operators of PV solar power systems.

Our second segment is our fully integrated systems business ("systems segment"), through which we provide complete turn-key PV solar power systems, or solar solutions that draw upon our capabilities, which include (i) project development, (ii) engineering, procurement, and construction ("EPC") services, (iii) operating and maintenance ("O&M") services, and (iv) project finance expertise, all as described in more detail below. We may provide our full EPC services or any combination of individual products and services within our EPC capabilities depending upon the customer and market opportunity. All of our systems segment products and services are for PV solar power systems which use our solar modules, and such products and services are sold directly to investor owned utilities, independent power developers and producers, commercial and industrial companies, and other PV solar power system owners.

- During project development, we obtain land and land rights for the development of PV solar power systems incorporating our modules, negotiate long-term power purchase agreements ("PPA") with potential purchasers of the electricity to be generated by those plants or develop plants in regulated markets where feed-in-tariff or similar structures are in place, manage the interconnection and transmission process, negotiate agreements to interconnect the systems to the electricity grid, and obtain the permits which are required prior to the construction of the PV solar power systems, including applicable environmental and land use permits. We also buy projects in various stages of development and continue developing those projects with system designs incorporating our own modules. We sell developed PV solar power systems to system operators who wish to own generating facilities, such as utilities, or to investors who are looking for long-term investment vehicles that are expected to generate consistent returns.

- We provide EPC services to projects developed by us, to projects developed by independent solar power project developers, and directly to system owners such as utilities. EPC products and services include engineering design and related services, BoS procurement, advanced development of grid integration solutions, and construction contracting and management. Depending on the customer and market need, we may provide our full EPC services or any combination of individual products and services within our EPC capabilities. An example of such combination of individual services would be providing engineering design and procurement of BoS parts ("EP" services) for a third party constructing a PV solar power system.

- We have a comprehensive O&M service offering with multiple PV solar power systems in operation. Utilizing a state of the art Global Operations Center, our team of O&M experts provide comprehensive services including North America Electric Reliability Corporation compliance, energy forecasting, 24/7 monitoring and control, PPA and Large Generator Interconnection Agreement compliance, performance engineering analysis, turn-key maintenance services including spare parts and breakdown repair, and environmental services.

TetraSun Acquisition

In April 2013, we completed the acquisition of TetraSun, Inc. ("TetraSun"), a company that is in the advanced stages of developing a novel, high-efficiency, low-cost crystalline silicon cell technology. We believe that when the technology is successfully transitioned to commercial manufacturing scale, the innovative cell architecture developed by TetraSun is capable of conversion efficiencies exceeding 21 percent with manufacturing costs comparable to conventional multicrystalline silicon solar modules. We expect modules incorporating this technology to complement our current CdTe module and systems offerings by allowing us to expand our leadership position and effectively address markets in space constrained commercial and residential rooftop applications. In such applications, we expect our high-efficiency modules based on the TetraSun technology to be competitively differentiated by enabling solar systems with high energy density in constrained spaces at competitive pricing. We are in the process of evaluating and developing commercial partnerships around this technology in Japan and other target markets. We are currently targeting commencement of manufacturing by the end of 2014 or early 2015. We expect to market and sell such high efficiency modules using the First Solar name or through co-branding with strategic partners.

Certain Trends and Uncertainties

We believe that our continuing operations may be favorably or unfavorably impacted by the following trends and uncertainties that may affect our financial condition and results of operations. See "Risk Factors" in Part I, Item 1A of the Company's Annual Report on Form 10-K filed with the SEC on February 27, 2013, the risk factors included in the Prospectus and elsewhere in this report (the "Risk Factors") for a discussion of other risks that may affect our financial condition and results of operations.

Long Term Strategic Plan

In May 2012 and April 2013, we provided information regarding our long term strategic plan ("Long Term Strategic Plan" or "LTSP") to transition our business to primarily sustainable opportunities by the end of 2016. In executing the LTSP we are focusing on providing solar PV generation solutions using our modules to sustainable geographic markets that we believe have a compelling need for mass-scale PV electricity, including markets throughout the Americas, Asia, Australia, the Middle East, and Africa. As part of our LTSP, we are focusing on opportunities in which our solar PV generation solutions will compete directly with fossil fuel offerings on an LCOE basis. Execution of the LTSP entails a reallocation of resources around the globe, in particular dedicating resources to regions such as Latin America, Asia, the Middle East, and Africa where we have not traditionally conducted significant business to date. We are evaluating and managing closely the appropriate level of resources required as we transition into and penetrate these specific markets. We have and intend to continue to dedicate significant capital and human resources to reduce the total installed cost of solar PV generation, to optimize the design and logistics around our solar PV generation solutions, and to ensure that our solutions integrate well into the overall electricity ecosystem of each specific market.

We expect that, over time, an increasing portion of our consolidated net sales, operating income and cash flows will come from solar offerings in the sustainable markets described above as we execute on our LTSP, and that, over time, larger relative contributions to our overall financial performance will continue to come from systems offerings in comparison to module only sales. The timing, execution and financial impacts of our LTSP are subject to risks and uncertainties, as described in the Risk Factors.

We are focusing our resources in those markets and energy applications in which solar power can be a least-cost, best-fit energy solution, particularly in regions with high solar resources, significant current or projected electricity demand and/or relatively high existing electricity prices. As part of these efforts, we continue to expand resources globally, including by appointing country heads and supporting professional, sales and other staff in target sustainable markets. Accordingly we are shifting current costs and expect to incur additional costs over time as we establish a localized business presence in these regions.

Joint ventures or other business arrangements with strategic partners are a key part of our LTSP, and we have begun initiatives in several markets using such arrangements to expedite our penetration of those markets and establish relationships with potential customers and policymakers. Some of these business arrangements have and are expected in the future to involve significant investments or other allocations of capital on our part. We are in the process of developing relationships with policymakers, regulators, and especially end customers in each of these markets with a view to creating markets for utility scale PV solar power systems. We sell solar power solutions that include our modules directly to end customers, including independent power producers, utilities, retail electricity providers and commercial and industrial customers. Depending on the market opportunity, our sales offerings range from third party module only sales, to module sales with a range of development, engineering, procurement and construction services and solutions, to full turn-key PV solar power system sales. We expect these sales offerings to continue to evolve over time as we work with our customers to optimize how our PV solar generation solutions can best meet our customers' energy and economic needs.

(Dollars in thousands)	Three Months Ended September 30, 2013	Three Months Ended September 30, 2012	Three Month Period Change	
Cost of Sales				
Components	$ 291,008	$ 259,353	$ 31,655	12%
Systems	610,545	341,078	269,467	79%
Total Cost of Sales	$ 901,553	$ 600,431	$ 301,122	50%
% of net sales	71.2%	71.6%		

Our cost of sales increased $301.1 million or 50% and decreased 0.4% as a percentage of net sales for the three months ended September 30, 2013 compared with the three months ended September 30, 2012 . The increase in cost of sales was primarily due to a $269.5 million increase in our systems segment cost of sales primarily for BoS components and other construction and development costs related to an increase in the number of solar power systems under construction or the timing of when all revenue recognition criteria have been met between the periods. Cost of sales increased $31.7 million in our components segment primarily as a result of the following: (i) an increase in volume of watts sold by 54% during the three months ended September 30, 2013 versus comparable 2012 period; and (ii) in the third quarter of 2013, we ran our factories at approximately 80% capacity utilization, which is down 6 percentage points compared to the third quarter of 2012. The increase in underutilization of our manufacturing capacity increased cost of sales by $14.1 million period over period. The above increases were partially offset by: (i) a change in estimate of our expected future recycling costs, which contributed to a $43.3 million decrease in cost of sales as discussed in Note 14. "Commitments and Contingencies;" (ii) expenses associated with voluntary remediation efforts for workmanship issues affecting a limited number of solar modules manufactured between October 2008 and June 2009 decreased $15.8 million from the three months ended September 30, 2012; and (iii) accelerated depreciation expense for certain manufacturing equipment that was replaced as part of our planned equipment upgrade program in 2012 decreased $5.3 million from the three months ended September 30, 2012.

Our average manufacturing cost per watt decreased by $0.11 , or 16% , from $0.70 in the three months ended September 30, 2012 to $0.59 in the three months ended September 30, 2013 . The decrease is primarily the result of increased module efficiencies realized, the closure of our German manufacturing plants at the end of 2012, and manufacturing improvement programs and cost savings initiatives that are being developed and implemented by our research and development and manufacturing teams.

Gross profit

(Dollars in thousands)	Three Months Ended September 30, 2013	Three Months Ended September 30, 2012	Three Month Period Change	
Gross profit	$ 364,034	$ 238,716	$ 125,318	52%
% of net sales	28.8%	28.4%		

Gross profit as a percentage of net sales increased by 0.4% in the three months ended September 30, 2013 compared to the three months ended September 30, 2012, primarily due to a 3.4% increase related to lower estimated future recycling costs as discussed in Note 14. "Commitments and Contingencies," and a 1.9% increase in gross profit associated with lower costs of voluntary remediation efforts for workmanship issues affecting a limited number of solar modules manufactured between October 2008 and June 2009 and a 0.6% increase due to prior year accelerated depreciation of certain manufacturing equipment that have been replaced as part of our planned upgrade programs. Gross profit was unfavorably impacted by (i) a 4.1% decrease in systems gross profit due to the mix of lower gross profit projects under construction during the periods; (ii) a 0.4% decrease due to lower gross profit from modules sold in our systems business due to a decrease in average selling price; and (iii) a 1.0% decrease due to underutilization of our manufacturing capacity.

Research and development

(Dollars in thousands)	Three Months Ended September 30, 2013	Three Months Ended September 30, 2012	Three Month Period Change	
Research and development	$ 34,984	$ 32,372	$ 2,612	8%
% of net sales	2.8%	3.9%		

The increase in research and development expense of $2.6 million was primarily due to a $2.1 million increase in testing and qualification materials expense and a $1.5 million increase in personnel-related expenses. These increases were partially offset by decreases of $1.0 million primarily related to lower travel and other expenses as a result of our cost containment measures.

During the three months ended September 30, 2013 , we continued the development of solar modules with increased efficiencies at converting sunlight into electricity and increased the average conversion efficiency of our solar modules from 12.7% for the three months ended September 30, 2012 to 13.3% for the three months ended September 30, 2013 .

Selling, general and administrative

(Dollars in thousands)	Three Months Ended September 30, 2013	Three Months Ended September 30, 2012	Three Month Period Change	
Selling, general and administrative	$ 63,870	$ 73,507	$ (9,637)	(13)%
% of net sales	5.0%	8.8%		

The most significant items affecting our selling, general and administrative costs during the three months ended September 30, 2013 and 2012 are summarized as follows: (i) accretion related to our future estimated recycling costs decreased $4.5 million for the three months ended September 30, 2013 versus the comparable 2012 period primarily in connection with a change in estimate of our expected future recycling costs as discussed in Note 14 "Commitments and Contingencies"; (ii) salary and benefits expense decreased $3.2 million quarter over quarter primarily due to headcount reductions as well as lower incentive compensation accrual; and (iii) losses associated with fixed asset disposals decreased $3.1 million during the current quarter versus prior year in addition to a $1.8 million decrease in infrastructure and other expenses. These decreases were partially offset by an increase of business development costs of $2.3 million and professional service costs of $0.6 million.

Production start-up

(Dollars in thousands)	Three Months Ended September 30, 2013	Three Months Ended September 30, 2012	Three Month Period Change	
Production start-up	$ —	$ 1,595	$ (1,595)	(100)%
% of net sales	—%	0.2%		

During the three months ended September 30, 2013 and 2012 , we incurred zero and $1.6 million , respectively, of production start-up expenses. Expenses are primarily for our global manufacturing personnel dedicated to plant expansion, new equipment installation, equipment upgrades and process improvements for both new and existing plants. During the three months ended September 30, 2013 we incurred no production start-up expenses.

Restructuring and asset impairments

(Dollars in thousands)	Three Months Ended September 30, 2013	Three Months Ended September 30, 2012	Three Month Period Change	
Restructuring and asset impairments	$ 57,276	$ 24,197	$ 33,079	137%
% of net sales	4.5%	2.9%		

During the three months ended September 30, 2013 and 2012 , we incurred $57.3 million and $24.2 million , respectively, of restructuring and asset impairment charges, of which $0.7 million and $24.2 million related to the February 2012 manufacturing restructuring and April 2012 European restructuring initiatives, which included charges associated with the closure of our German manufacturing plants at the end of 2012. In addition, on October 3, 2013, we entered into an agreement to sell our facility in Mesa, Arizona. The facility consists of land, a building, and certain fixtures and improvements. The facility currently houses our O&M capabilities as well as certain equipment and inventory. The facility was originally designed to house a CdTe PV module manufacturing factory; however, we never commissioned manufacturing at the facility. As a result of the sales agreement, we have classified the Mesa facility as "Assets held for sale" in the condensed consolidated balance sheet as of September 30, 2013 and recognized a $56.6 million asset impairment charge during the third quarter of 2013, which lowered the book value of the facility to fair value, less costs to sell.

Foreign currency (loss) gain

First Solar Exhibit 2010, Page 220 of 223
JinkoSolar v. First Solar - IPR2025-01130

Exhibit 12

First Solar Press Release, First Solar Sets CDTE Module Efficiency World Record, Launches Series 3 Black Module, April 9, 2013, available at http://investor.firstsolar.com/releasedetail.cfm?releaseid=755244

First Solar.

April 9, 2013

First Solar Sets CdTe Module Efficiency World Record, Launches Series 3 Black Module

16.1 Percent Total Area Efficiency Module Confirmed by NREL;

Enhanced Series 3 Module Platform Certified for Desert Conditions & Field Durability;

Production Module Efficiency Roadmap Accelerated and Extended to 16.4-17.1 Percent for 2017

TEMPE, Ariz.--(BUSINESS WIRE)-- First Solar, Inc. (Nasdaq: FSLR) today announced it set a new world record for cadmium-telluride (CdTe) photovoltaic (PV) module conversion efficiency, achieving a record 16.1 percent total area module efficiency in tests confirmed by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL). The new record is a substantial increase over the prior record of 14.4 percent efficiency, which the Company set in January 2012. Separately, First Solar also set a record for CdTe open circuit voltage (V_{OC}), a critical parameter for PV performance, reaching 903.2 millivolts (mV) in NREL-certified testing. This new record marks the first substantial increase in CdTe V_{OC} in over a decade of international R&D. The new records come just six weeks after First Solar announced a new world record for CdTe solar cell efficiency of 18.7 percent.

First Solar's R&D team in Perrysburg, Ohio, set a new world record for CdTe module conversion efficiency, achieving 16.1 percent in tests confirmed by NREL. (Photo: Business Wire)

Transferring its success in the R&D lab to its commercial modules, First Solar also launched a new evolution of its proven Series 3 thin-film PV module platform, the Series 3 Black™, which incorporates First Solar's latest advances in conversion efficiency as well as additional features to enhance its performance in utility-scale power plants. The all-black module's change in appearance results from the use of an advanced, all-black edge seal technology combined with an innovative encapsulation material that further enhances its field durability and demonstrates improvements in accelerated life testing results.

The Series 3 Black's performance in a wide range of operating environments is further validated by its new IEC 60068-2-68 "sand and dust test" certification, which measures durability in harsh desert environments characterized by blowing abrasive sand. The certification complements existing IEC salt mist and ammonia certifications to provide a comprehensive range of independent testing that reflects world-class durability and performance in the harshest operating conditions. The Series 3 Black module maintains all the existing IEC certifications and UL listings for the Series 3 family which enable the 1000-volt system designs that typify the Company's utility-scale power plants. First Solar began to implement the Series 3 Black enhancements in production modules earlier this year.

Based on the Company's record-setting technology and robust Series 3 Black platform, the Company also has accelerated its module conversion efficiency roadmap, raising its lead production line module efficiency target for 2015 to 15-16.2 percent. First Solar also extended its module conversion efficiency roadmap to 2017, with targets for lead production line module efficiency of 16.2-16.9 percent in 2016 and 16.4-17.1 percent in 2017.

"We are especially proud of this new efficiency record because the technology was created for production-scale implementation, as evidenced by our accelerated efficiency roadmaps," said Raffi Garabedian, First Solar's Chief Technology Officer. "Measurements in the lab are an important benchmark, but our R&D mission is to deliver technology that is designed to shine in real-world conditions as part of our integrated power plant systems, engineered to deliver the best performance, reliability and value for our customers. The Series 3 Black is a testament to our integrated approach to product development, combining technological advances from the lab with years of real-world data and experience operating utility-scale power plants in harsh environments."

Since it began commercial production in 2002, First Solar has produced more than 90 million of its advanced thin-film solar modules with a capacity of over 7 gigawatts (GW), enough to provide clean electricity for more than 3.7 million homes and displace approximately 5 million metric tons of CO_2 annually, based on world averages. If laid end-to-end, the modules would circle the equator nearly three times. First Solar utilizes a continuous manufacturing process which transforms a sheet of glass into a complete solar module in less than 2.5 hours, contributing to the industry-leading energy payback time and low carbon footprint of systems using First Solar PV modules.

For more information visit: http://www.firstsolar.com/Innovation/Advanced-Thin-Film-Modules.

About First Solar, Inc.

First Solar is a leading global provider of comprehensive photovoltaic (PV) solar systems which use its advanced module and system technology. The company's integrated power plant solutions deliver an economically attractive alternative to fossil-fuel electricity generation today. From raw material sourcing through end-of-life module recycling, First Solar's renewable energy systems protect and enhance the environment. For more information about First Solar, please visit www.firstsolar.com.

For First Solar Investors

This release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934. The forward-looking statements in this release do not constitute guarantees of future performance. Those statements involve a number of factors that could cause actual results to differ materially, including risks associated with the company's business involving the company's products, their development and distribution, economic and competitive factors and the company's key strategic relationships and other risks detailed in the company's filings with the Securities and Exchange Commission. First Solar assumes no obligation to update any forward-looking information contained in this press release or with respect to the announcements described herein.

Photos/Multimedia Gallery Available: http://www.businesswire.com/multimedia/home/20130409006059/en/

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