

A-570-979 Circumvention Inquiry Malaysia 2022 **Public Document** E&C/OVII: CY/PS

December 1, 2022

MEMORANDUM TO:	Lisa W. Wang Assistant Secretary for Enforcement and Compliance
FROM:	James Maeder Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations
SUBJECT:	Antidumping and Countervailing Duty Orders on Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China: Preliminary Decision Memorandum for the Circumvention Inquiry With Respect to Malaysia

I. SUMMARY

The U.S. Department of Commerce (Commerce) preliminarily determines that imports of crystalline silicon photovoltaic cells, whether or not assembled into modules (solar cells and modules), from Malaysia are circumventing the antidumping duty (AD) and countervailing duty (CVD) orders on solar cells and modules from the People's Republic of China (China).¹

II. BACKGROUND

On April 1, 2022, Commerce initiated a country-wide circumvention inquiry pursuant to section 781(b) of the Tariff Act of 1930, as amended, (the Act) to determine whether imports of solar cells and/or modules completed or assembled in Malaysia using parts and components manufactured in China are circumventing the *Orders*.²

On March 29, 2022, we released entry data from U.S. Customs and Border Protection (CBP) for the period January 1, 2016, through December 31, 2021, to all interested parties under an

² See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China: Initiation of Circumvention Inquiry on the Antidumping Duty and Countervailing Duty Orders, 87 FR 19071 (April 1, 2022) (Initiation Notice), and a companying Circumvention Initiation Memorandum, at 1.



¹ See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules from the People's Republic of China: Amended Final Determination of Sales at Less Than Fair Value, and Antidumping Duty Order, 77 FR 73018 (December 7, 2012); see also Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China: Countervailing Duty Order, 77 FR 73017 (December 7, 2012) (collectively, Orders).

administrative protective order and invited interested parties to comment on the data.³ We relied on these data, as well as a list of Malaysian producers of solar cells and/or modules in the request for circumvention inquiries made by Auxin Solar Inc. (Auxin), a member of the U.S. solar industry,⁴ to identify the largest exporters or producers of inquiry merchandise in Malaysia. On March 31, 2022, we issued questionnaires to 20 of these companies in which we requested the quantity and value (Q&V) of their sales of solar cells and modules to the United States during calendar years 2016 through 2021, as well as information regarding their sourcing of solar cells and module inputs from China.⁵ We also invited parties to which we did not issue the Q&V questionnaire to respond to it by the deadline for responses.⁶

On April 25, 2022, we received timely Q&V questionnaire responses from 17 companies, including from three companies to which we did not issue a Q&V questionnaire.⁷ On April 28, 2022, we received comments on respondent selection from Auxin.⁸ We subsequently selected Hanwha Q CELLS Malaysia Sdn. Bhd. (Hanwha) and Jinko Solar Technology Sdn. Bhd. (Jinko Tech) as the mandatory respondents in this circumvention inquiry⁹ and issued circumvention inquiry questionnaires to these companies.¹⁰ Hanwha¹¹ and Jinko Tech¹² submitted timely responses to these questionnaires. Jinko Tech submitted questionnaire responses on behalf of itself and Jinko Solar (Malaysia) Sdn. Bhd. (Jinko Solar) (collectively, Jinko).

In May 2022, after we provided interested parties with an opportunity to comment on potential certification requirements,¹³ we received comments on certifications from numerous interested parties.¹⁴ We also received comments on, and factual information to rebut, clarify, and correct

⁸ See Auxin's Letter, "Comments on Respondent Selection-Malaysia," dated April 28, 2022.

Response to Circumvention Inquiry Questionnaire (Part II)," dated June 23, 2022 (Hanwha Part II IQR).

³ See Memorandum, "Release of Customs and Border Protection Entry Data," dated March 29, 2022.

⁴ See Auxin's Letter, "Auxin Solar's Request For An Anti-Circumvention Ruling Pursuant To Section 781(b) Of

The Tariff Act Of 1930, As Amended," dated February 8, 2022 (Circumvention Request), at Exhibit 2.

⁵ See Commerce's Letters, "Quantity and Value Questionnaire for Circumvention Inquiries With Respect to Cambodia, Malaysia, Thailand, and Vietnam," dated March 31, 2022.

⁶ See Memorandum, "Notification of Issuance of Q&V Questionnaires to Certain Malaysian Companies," dated March 31, 2022.

⁷ Five of the remaining six companies to which we issued a Q&V questionnaire failed to respond to it. FedEx was unable to deliver the questionnaire to the sixth company. *See* Memorandum, "Confirmed Delivery of Quantity and Value Questionnaires," dated May 12, 2022. FedEx was unable to deliver the Q&V questionnaire to Smile Power Trading Sdn Bhd. *See also* the appendix to this memorandum for a listing of the companies from whom we requested questionnaire responses, as well as a listing of the companies that failed to respond.

⁹ See Memorandum, "Respondent Selection," dated May 12, 2022.

 ¹⁰ See Commerce's Letters, "Circumvention Inquiry Questionnaire," dated May 13, 2022, and May 16, 2022.
¹¹ See Hanwha's Letters, "Hanwha Q CELLS Malaysia Sdn. Bhd.'s Response to Circumvention Inquiry

Questionnaire (Part I)," dated June 3, 2022 (Hanwha Part I IQR); and "Hanwha Q CELLS Malaysia Sdn. Bhd.'s

 ¹² See Jinko's Letters, "Jinko Initial Questionnaire Part I Questionnaire Response," dated June 6, 2022 (Jinko Part I IQR); and "Jinko Initial Questionnaire Part II Questionnaire Response," dated June 23, 2022 (Jinko Part II IQR).
¹³ See Memorandum, "Circumvention Inquiries With Respect to Cambodia, Malaysia, Thailand, and Vietnam – Potential Certification Requirements" dated May 2, 2022.

¹⁴ See Auxin's Letter, "Comments on Certification Regime and Applicable Cash Deposit Rates," dated May 19, 2022; BYD (H.K.) Co., Ltd.'s (BYD HK) Letter, "BYD Comments Regarding the U.S. Department of Commerce's May 2, 2022 Memorandum," dated May 19, 2022; Clearway's Letter, "Solar Anti-Circumvention Inquiries and Proposed Certification Requirements)," dated May 19, 2022; EGP North America's Letter," Comments on Potential

factual information in, Auxin's request to initiate circumvention inquiries from various interested parties, ¹⁵ as well as rebuttal comments from Auxin.¹⁶

In May 2022, we provided interested parties with a surrogate country list and invited them to comment on the list, the selection of surrogate countries, and the selection of surrogate values.¹⁷ We also requested surrogate value information from interested parties in July 2022.¹⁸ From May through August 2022, interested parties provided comments in response to these requests,¹⁹ as well as rebuttal comments.²⁰

In July 2022, we provided interested parties with an opportunity to submit information regarding the investment required to construct and start-up, and research and development (R&D) expenses for operations in, certain types of facilities in China and Malaysia related to the production of solar cells and modules.²¹ We received investment and R&D information from Auxin in response to our request,²² as well as rebuttal comments from NextEra Energy Constructors, LLC (NextEra), an interested party.²³

Circumvention Inquiry Initiation," dated May 2, 2022.

Certification Requirements," dated May 19, 2022; NextEra's Letter, "Comments on Potential Certification Requirements," dated May 19, 2022; Pine Gate Renewables, LLC's Letter, "Response to Commerce's Request for Comments on Proposed Certifications," dated May 19, 2022; Silfab Solar WE Inc.'s (Silfab) Letter, "Response to U.S. Department of Commerce's Mav 2, 2022 Request for Comments Regarding Potential Certification Requirements," dated May 19, 2022; and Tesla Inc.'s (Tesla) Letter, "Response to the Department's Request for Comments on Any Certification Regime the Department May Implement," dated May 19, 2022.

¹⁵ See BYDHK's Letter, "BYD Group Comments and Factual Information to Rebut, Clarify and Correct Factual Information in Auxin's Request for a Circumvention Ruling," dated May 2, 2022; EGP North America's Letter, "Comments Requesting Rescission of Anti-Circumvention Inquiries," dated May 2, 2022; Imperial Star's Letter, "Imperial Star Comments and Factual Information Submission," dated May 2, 2022; NextEra's Letter, "NextEra Comments on Auxin's Circumvention Ruling Request," dated May 2, 2022; Silfab's Letter, "Comments and Factual Information to Rebut, Clarify and Correct Factual Information Contained in Auxin's Request for a Circumvention Ruling," dated May 2, 2022; and Tesla' Letter, "New Factual Information and Comments on the Department's

¹⁶ See Auxin's Letter, "Auxin's Response to Rebuttal Comments and Factual Information," dated May 16, 2022. ¹⁷ See Memorandum, "Request for Economic Development, Surrogate Country Comments and Information," dated May 13, 2022 (Request for Comments on Surrogate Countries).

 ¹⁸ See Memorandum, "Request for Surrogate Value Comments and Information," dated July 14, 2022.
¹⁹ See Auxin's Letter, "Comments on Surrogate Country List—Cambodia, Malaysia, and Thailand," dated May 20, 2022; BYD HK's Letter, "Comments on the List of Economically Comparable Countries," dated May 20, 2022; Auxin's Letter, "Surrogate Country Comments—Malaysia, Thailand, Malaysia," dated June 28, 2022; BYD HK's Letter, "Selection of Primary Surrogate Country Comments," dated June 28, 2022; Hanwha's Letter, "Hanwha Q CELLS Malaysia Sdn. Bhd.'s Comments on Surrogate Country Selection," dated June 28, 2022; NE Solar's Letter, "New East Solar's Comments on Surrogate Country List," dated June 28, 2022; Auxin's Letter, "Submission of Surrogate Value Information for Chinese Factors of Production," dated July 27, 2022; and BYD HK's Letter, "Rebuttal to Petitioner's Primary Surrogate Country Comments," dated July 27, 2022; and BYD HK's Letter, "Rebuttal to Auxin's July 27, 2022 Submission of Surrogate Value Information for Chinese Factors of Primary Surrogate Country Comments," dated July 5, 2022; and BYD HK's Letter, "Rebuttal to Auxin's July 27, 2022 Submission of Surrogate Value Information for Chinese Factors of Primary Surrogate Country Comments," dated July 5, 2022; and BYD HK's Letter, "Rebuttal to Auxin's July 27, 2022 Submission of Surrogate Value Information for Chinese Factors of Primary Surrogate Country Comments," dated July 5, 2022; and BYD HK's Letter, "Rebuttal to Auxin's July 27, 2022 Submission of Surrogate Value Information for Chinese Factors of Primary Surrogate Country Comments," dated July 5, 2022; and BYD HK's Letter, "Rebuttal to Auxin's July 27, 2022 Submission of Surrogate Value Information for Chinese Factors of Production," dated August 3, 2022.

²¹ See Memorandum, "Circumvention Inquiries with Respect to Cambodia, Malaysia, Thailand, and Vietnam-Request for Information," dated July 14, 2022.

 ²² See Auxin's Letter, "Submission of Investment and Research and Development Information," dated July 29, 2022.
²³ See NextEra's Letter, "Response to Auxin's Submission of Investment and Research and Development Information," dated August 12, 2022.

Between July and October 2022, we issued supplemental questionnaires to Hanwha and Jinko,²⁴ to which they responded between August and November 2022.²⁵

On August 22, 2022, Commerce extended the deadline for issuing the preliminary determination in this circumvention inquiry by 90 days, until November 28, 2022.²⁶ On November 14, 2022, Commerce further extended this deadline by three days until December 1, 2022.²⁷

III. SCOPE OF THE ORDERS

The merchandise covered by the *Orders* is 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.

The *Orders* cover 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.

Merchandise under consideration 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 merchandise under consideration are included in the scope of the *Orders*.

Excluded from the scope of the *Orders* 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 the *Orders* are crystalline silicon photovoltaic cells, not exceeding 10,000mm² 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

²⁴ See Commerce's Letters, "First Supplemental Questionnaire," dated July 27, 2022; "First Supplemental Questionnaire," dated July 27, 2022; Surrogate Value Supplemental Questionnaire," dated August 10, 2022; "Third Supplemental Questionnaire," dated September 26, 2022; and "Fourth Supplemental Questionnaire," dated October 20, 2022.

²⁵ See Jinko's Letter, "Jinko's First Supplemental Questionnaire Response," dated August 8, 2022 (Jinko 1st SQR); Jinko's Letter, "Jinko's Second Supplemental Questionnaire Response," dated August 19, 2022; Jinko's Letter, "Jinko's Third Supplemental Questionnaire Response," dated October 11, 2022; Jinko's Letter, "Jinko's Fourth Supplemental Questionnaire Response," dated November 2, 2022 (Jinko 4th SQR); Hanwha's Letter, "Hanwha Q CELLS Ma laysia Sdn. Bhd.'s First Supplemental Questionnaire Response," dated August 9, 2022 (Hanwha 1st SQR); Hanwha's Letter, "Hanwha Q CELLS Malaysia Sdn. Bhd.'s Second Supplemental Questionnaire Response," dated August 19, 2022; and Hanwha's Letter, "Hanwha Q CELLS Malaysia Sdn. Bhd.'s Third Supplemental Questionnaire Response," dated October 11, 2022.

²⁶ See Auxin's Letter, "Request for Extension of the Deadline for the Preliminary Determination and the Deadline for Pre-Preliminary Comments," dated August 11, 2022; and Memorandum, "Extension of Preliminary Determinations in Circumvention Inquiries," dated August 22, 2022.

²⁷ See Commerce Letter, "Second Extension of Preliminary and Final Determinations in Circumvention Inquiries," dated November 14, 2022.

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.

Additionally, excluded from the scope of the *Orders* are panels with surface area from 3,450 mm² to 33,782 mm² with one black wire and one red wire (each of type 22 AWG or 24 AWG not more than 206 mm in length when measured from panel extrusion), and not exceeding 2.9 volts, 1.1 amps, and 3.19 watts. For the purposes of this exclusion, no panel shall contain an internal battery or external computer peripheral ports.

Also excluded from the scope of the Orders are:

- 1) Off grid crystalline silicon photovoltaic cells (CSPV) panels in rigid form with a glass cover, with the following characteristics:
 - (A) A total power output of 100 watts or less per panel;
 - (B) a maximum surface area of 8,000 cm2 per panel;
 - (C) do not include a built-in inverter;
 - (D) must include a permanently connected wire that terminates in either an 8mm male barrel connector, or a two-port rectangular connector with two pins in square housings of different colors;
 - (E) must include visible parallel grid collector metallic wire lines every 1–4 millimeters across each solar cell; and
 - (F) must be in individual retail packaging (for purposes of this provision, retail packaging typically includes graphics, the product name, its description and/or features, and foam for transport); and
- 2) Off grid CSPV panels without a glass cover, with the following characteristics:
 - (A) A total power output of 100 watts or less per panel;
 - (B) a maximum surface area of 8,000 cm2 per panel;
 - (C) do not include a built-in inverter;
 - (D) must include visible parallel grid collector metallic wire lines every 1–4 millimeters across each solar cell; and
 - (E) each panel is
 - 1. permanently integrated into a consumer good;
 - 2. encased in a laminated material without stitching, or
 - 3. has all of the following characteristics: (i) the panel is encased in sewn fabric with visible stitching, (ii) includes a mesh zippered storage pocket, and (iii) includes a permanently attached wire that terminates in a female USB-A connector.

In addition, the following CSPV panels are excluded from the scope of the Orders:

1) Off-grid CSPV panels in rigid form with a glass cover, with each of the following physical characteristics, whether or not assembled into a fully completed off-grid hydropanel whose function is conversion of water vapor into liquid water:

- (A) A total power output of no more than 80 watts per panel;
- (B) A surface area of less than 5,000 square centimeters (cm2) per panel;
- (C) Do not include a built-in inverter;
- (D) Do not have a frame around the edges of the panel;
- (E) Include a clear glass back panel; and
- (F) Must include a permanently connected wire that terminates in a two-port rectangular connector.

Modules, laminates, and panels produced in a third country from cells produced in China are covered by the *Orders*; however, modules, laminates, and panels produced in China from cells produced in a third country are not covered by the *Orders*.

Merchandise covered by the *Orders* is currently classified in the Harmonized Tariff Schedule of the United States (HTSUS) under subheadings 8501.71.0000, 8501.72.1000, 8501.72.2000, 8501.72.3000, 8501.72.9000, 8501.80.1000, 8501.80.2000, 8501.80.3000, 8501.80.9000, 8507.20.8010, 8507.20.8031, 8507.20.8041, 8507.20.8061, 8507.20.8091, 8541.42.0010, and 8541.43.0010. These HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope of the *Orders* is dispositive.²⁸

IV. MERCHANDISE SUBJECT TO THE CIRCUMVENTION INQUIRY

This circumvention inquiry covers: (A) crystalline silicon photovoltaic cells that meet the physical description of crystalline silicon photovoltaic cells in the scope of the underlying AD/CVD orders, subject to the exclusions therein, whether or not partially or fully assembled into other products, that were produced in Malaysia from wafers produced in China; and (B) modules, laminates, and panels consisting of crystalline silicon photovoltaic cells, subject to the exclusions for certain panels in the scope of the underlying orders, whether or not partially or fully assembled into other products, that were produced in Malaysia from wafers produced in China and where more than two of the following components in the module/laminate/panel were produced in China: (1) silver paste; (2) aluminum frames (3) glass; (4) backsheets; (5) ethylene vinyl acetate sheets; and (6) junction boxes. If modules, laminates, and panels consisting of crystalline silicon photovoltaic cells do not meet both of the conditions in item (B) above, then this circumvention inquiry does not cover the modules, laminates, and panels, or the crystalline silicon photovoltaic cells within the modules, laminates, and panels, even if those crystalline silicon photovoltaic cells were produced in Malaysia from wafers produced in China. Wafers produced outside of China with polysilicon sourced from China are not considered to be wafers produced in China for purposes of this circumvention inquiry.

V. PERIOD OF THE CIRCUMVENTION INQUIRY

The period of the inquiry is January 1, 2008, through December 31, 2021.

²⁸ See Orders; see also Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China: Final Results of Changed Circumstances Reviews, and Revocation of Antidumping and Countervailing Duty Orders, in Part, 86 FR 71616-71617 (December 17, 2021) (excluding certain off-grid CSPV).

VI. NON-MARKET ECONOMY METHODOLOGY FOR VALUING MATERIAL INPUTS FROM CHINA

In this circumvention inquiry, Commerce must determine whether Chinese-produced merchandise that is assembled and completed in a third country and then sold to the United States is circumventing the *Orders*. As part of that analysis, as explained below, section 781(b)(1)(D) of the Act requires Commerce to determine whether the value of the merchandise that is produced in the foreign country to which an order applies, which, in these proceedings, is China, and that is assembled and completed in a third country, is a significant portion of the total value of the final product exported from the third country to the United States.

Commerce considers China to be a non-market economy (NME) country.²⁹ Pursuant to section 771(18) of the Act, "the term "nonmarket economy country" means any foreign country that {Commerce} determines does not operate on market principles of cost or pricing structures" Consequently, valuing the China-produced parts and components for purposes of section 781(b)(1)(D) of the Act falls under the purview of Commerce's NME methodology, which by statute presumes that NME costs and prices are inherently unreliable and requires Commerce to value Chinese-produced material inputs using surrogate values from one or more market economy countries. While Commerce may use the prices paid for China-produced inputs in market economy proceedings, as noted above, this circumvention inquiry involves AD and CVD orders on China, which is an NME country, and we are attempting to determine whether Chinese-produced merchandise that is completed and assembled in a third country is circumventing those orders.

In accordance with section 773(c)(4) of the Act, Commerce's NME methodology involves valuing factors of production, including material inputs, to the extent possible, based on the prices or costs in one or more market economy countries that are: (1) at a level of economic development comparable to that of the NME country; and (2) significant producers of comparable merchandise. In this circumvention inquiry, Commerce identified Bulgaria, Chile, Costa Rica, Malaysia, Romania, and Turkey as countries economically comparable to China.³⁰

Commerce preliminarily selected Malaysia as the primary surrogate country for valuing Chineseproduced parts and components because record evidence indicates that: (1) Malaysia is at a level of economic development comparable to that of China; (2) Malaysia is a significant producer of merchandise comparable to the merchandise subject to the *Orders*; (3) we have reliable surrogate value data from Malaysia on the record covering nearly all of the parts and components from China that need to be valued (which is not the case for any of the other potential surrogate countries);³¹ and (4) there is no record evidence calling into question the reliability of the

²⁹ See Antidumping Duty Investigation of Certain Aluminum Foil from the People's Republic of China: Affirmative Preliminary Determination of Sales at Less-Than-Fair Value and Postponement of Final Determination, 82 FR 50858, 50861 (November 2, 2017), and accompanying Preliminary Decision Memorandum (PDM) (citing Memorandum, "China's Status as a Non-Market Economy," dated October 26, 2017), unchanged in Certain Aluminum Foilfrom the People's Republic of China: Final Determination of Sales at Less Than Fair Value, 83 FR 9282 (March 5, 2018).

³⁰ See Request for Comments on Surrogate Countries at Attachment 1.

³¹ While we selected Malaysia as the primary surrogate country for China, because of unit of measure issues, we used surrogate value data from Romania and Bulgaria to value solar glass.

Malaysian surrogate value data. Therefore, except for solar glass, we calculated the value of Chinese-produced parts and components using Malaysian prices. Specifically, we valued Chinese-produced material inputs using the average unit value of imports into Malaysia during 2021 as reported by Global Trade Atlas.³²

VII. STATUTORY AND REGULATORY FRAMEWORK FOR THE CIRCUMVENTION INQUIRY

Circumvention inquiries are conducted pursuant to section 781 of the Act and 19 CFR 351.226.³³ With respect to merchandise assembled or completed in a third country, section 781(b) of the Act provides that Commerce may find circumvention of AD and CVD orders when merchandise imported into the United States was assembled or completed in a foreign country other than the country to which the order applies and the merchandise is of the same class or kind as the merchandise subject to the orders. Section 781(b)(1) of the Act provides that, after taking into account any advice provided by the U.S. International Trade Commission (ITC) under section 781(e) of the Act, Commerce may include imports of merchandise assembled or completed in a third country within the scope of an order at any time the order is in effect if:

(A) the merchandise imported in the United States is of the same class or kind as any merchandise produced in a foreign country that is the subject of an AD and/or CVD order;

(B) before importation into the United States, such imported merchandise is completed or assembled in another foreign country from merchandise which (i) is subject to such order, or (ii) is produced in the foreign country with respect to which such order applies;

(C) the process of assembly or completion in the foreign country is minor or insignificant;

(D) the value of the merchandise produced in the foreign country to which the antidumping and/or countervailing duty order applies is a significant portion of the total value of the merchandise exported to the United States; and

(E) Commerce determines that action is appropriate to prevent evasion of an order.

In determining whether the process of assembly or completion in a third country is minor or insignificant under section 781(b)(1)(C) of the Act, section 781(b)(2) of the Act directs Commerce to consider:

(A) the level of investment in the foreign country;

³² See Memorandum, "Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic of China - Circumvention Inquiries with Respect to Cambodia, Malaysia and Thailand: Factor Valuation Memorandum," dated concurrently with this memorandum.

³³ The legislative history to section 781(b) of the Act indicates that Congress intended Commerce to make determinations regarding circumvention on a case-by-case basis, in recognition that the facts of individual cases and the nature of specific industries are widely variable. *See* S. Rep. No. 103-412 (1994) at 81-82.

(B) the level of R&D in the foreign country;

(C) the nature of the production process in the foreign country;

(D) the extent of production facilities in the foreign country; and

(E) whether the value of the processing performed in the foreign country represents a small proportion of the value of the merchandise imported into the United States.

No single factor, by itself, controls Commerce's determination of whether the process of assembly or completion in a third country is minor or insignificant.³⁴ Accordingly, it is Commerce's practice to evaluate each of five factors in section 781(b)(2) of the Act, as they exist in the third country, and consider the totality of our analysis of those factors in making a determination.³⁵ The importance of any one of the factors listed under section 781(b)(2) of the Act can vary from case to case based on the particular circumstances unique to each circumvention inquiry.³⁶

Moreover, Commerce's substantial transformation analysis under 19 CFR 351.225(j) and the test for determining whether a product was completed or assembled in other foreign countries under section 781(b) of the Act (19 CFR 351.226(i)) are two distinct analyses used for different purposes. Commerce's substantial transformation analysis is used in scope rulings and other proceedings, to determine a particular product's country-of-origin, while the factors that it considers when determining whether merchandise is being completed or assembled into a product in a third country are specific to a circumvention analysis under section 781 of the Act to determine if the product is circumventing an AD or CVD order. Because these analyses are distinct and serve different purposes, Commerce's application of a substantial transformation analysis does not preclude it from also applying an analysis based on the statutory criteria established in section 781(b) of the Act.³⁷ Additionally, Commerce has noted that "there is nothing contradictory in finding an input to be substantially transformed into a finished product, in terms of its physical characteristics and uses, while also finding the process of effecting that transformation to be minor {vis-à-vis} the manufacturing process of producing a finished product."³⁸

Finally, section 781(b)(3) of the Act sets forth additional factors to consider in determining whether to include merchandise imported into the United States that was assembled or completed

³⁴ See Statement of Administrative Action Accompanying the Uruguay Round Agreements Act, H.R. Doc. No. 103-316, Vol. I (1994) (SAA), at 893.

³⁵ See Hydrofluorocarbon Blends from the People's Republic of China: Final Negative Scope Ruling on Gujarat Fluorochemicals Ltd.'s R-410A Blend; Affirmative Final Determination of Circumvention of the Antidumping Duty Order by Indian Blends Containing Chinese Components, 85 FR 61930 (October 1, 2020) (HFC Blends from China), and a ccompanying Issues and Decision Memorandum (IDM), at 20. ³⁶ Id.

³⁷ See Bell Supply Co., LLC v. United States, 888 F.3d 1222, 1231 (Fed. Cir. 2018) ("{E} ven where an article is substantially transformed, Commerce can still find that it is subject to an AD or CVD order a fter conducting a circum vention inquiry.").

³⁸ See Regulations To Improve Administration and Enforcement of Antidumping and Countervailing Duty Laws, 86 FR 52300, 52343 (September 20, 2021).

in a third country within the scope of an AD and/or CVD order. Specifically, Commerce shall take into account such factors as:

(A) the pattern of trade, including sourcing patterns;

(B) whether the manufacturer or exporter of the subject merchandise, or the merchandise produced in the order country, that is completed or assembled in a third country, is affiliated with the person who performs the completion or assembly in order to produce the merchandise that is subsequently imported into the United States; and

(C) whether imports into the third country of the merchandise that is completed or assembled in the third country, have increased after the initiation of the investigation that resulted in the issuance of an order.

VIII. USE OF FACTS AVAILABLE WITH ADVERSE INFERENCES

As noted above, Commerce received timely responses to its Q&V questionnaire from only 14 of the 19 companies which received the Q&V questionnaire. With respect to the five companies that failed to timely respond to the Q&V questionnaire,³⁹ for the reasons explained below, Commerce is preliminarily basing its circumvention analysis on the facts available, pursuant to sections 776(a)(2)(A)-(C) of the Act, with an adverse inference (adverse facts available or AFA), pursuant to section 776(b) of the Act.

A. Legal Standard

Section 776(a)(1) and 776(a)(2) of the Act provide that Commerce shall, subject to section 782(d) of the Act, apply facts otherwise available in reaching the applicable determination if necessary information is not on the record, or if an interested party: (A) withholds information requested by Commerce; (B) fails to provide such information by the deadlines for submission of the information, or in the form and manner requested, subject to subsections (c)(1) and (e) of section 782 of the Act; (C) significantly impedes a proceeding; or (D) provides such information but the information cannot be verified as provided in section 782(i) of the Act.

Section 782(c)(1) of the Act states that Commerce shall consider the ability of an interested party to provide information upon a prompt notification by that party that it is unable to submit the information in the form and manner required, and that party also provides a full explanation of the difficulty and suggests an alternative form in which the party is able to provide the information. Section 782(e) of the Act states further that Commerce shall not decline to consider submitted information if all of the following requirements are met: (1) the information is submitted by the established deadline; (2) the information can be verified; (3) the information is not so incomplete that it cannot serve as a reliable basis for reaching the applicable determination; (4) the interested party has demonstrated that it acted to the best of its ability; and (5) the information can be used without undue difficulties.

³⁹ See the appendix to this memorandum under "Companies That Failed to Respond to the Q&V Questionnaire" for a list of these companies.

Section 776(b) of the Act provides that, if Commerce finds that an interested party has failed to cooperate by not acting to the best of its ability to comply with a request for information, Commerce may use an inference that is adverse to the interests of that party in selecting from among the facts otherwise available.⁴⁰ In addition, the SAA explains that Commerce may employ an adverse inference "to ensure that the party does not obtain a more favorable result by failing to cooperate than if it had cooperated fully."⁴¹ The U.S. Court of Appeals for the Federal Circuit, in *Nippon Steel*, explained that the ordinary meaning of "best" means "one's maximum effort," and that the statutory mandate that a respondent act to the "best of its ability" requires the respondent to do the maximum it is able to do.⁴² Furthermore, affirmative evidence of bad faith on the part of a respondent is not required before Commerce may make an adverse inference.⁴³ It is Commerce's practice to consider, in employing adverse inferences, the extent to which a party may benefit from its own lack of cooperation.⁴⁴

B. Use of Facts Available with an Adverse Inference for Non-Responsive Companies

With respect to the five companies that failed to respond to the Q&V questionnaire,⁴⁵ Commerce is preliminarily basing its circumvention analysis on the facts available, pursuant to sections 776(a)(2)(A)-(C) of the Act, because these companies withheld information requested by Commerce, failed to provide timely information in the form and manner requested, and significantly impeded this circumvention inquiry. Furthermore, Commerce preliminarily determines that, by failing to provide the requested information, the non-responsive companies did not cooperate to the best of their abilities to comply with a request for information in these inquiries.⁴⁶ The non-responsive companies neither indicated that they were having difficulty providing the requested information, nor did they suggest alternative forms for submitting the information. Because the non-responsive companies failed to cooperate to the best of their abilities, in accordance with section 776(b) of the Act, that an adverse inference is warranted, in selecting from among the facts otherwise available, when analyzing the circumvention criteria below with respect to these uncooperative companies.

As AFA, we preliminarily find that the non-responsive companies produced and/or exported solar cells and modules subject to these inquiries and, as explained below, that the criteria for finding circumvention with respect to these companies have been met. In addition, as part of our application of AFA, we preliminarily determine that the non-cooperative companies listed in the appendix to this memorandum are not eligible to certify that specific entries of merchandise were

⁴⁰ See 19 CFR 351.308(a).

⁴¹ See SAA at 870.

⁴² See Nippon Steel Corp. v. United States, 337 F.3d 1373, 1382 (Fed. Cir. 2003) (Nippon Steel).

⁴³ *Id.*, 337 F.3d at 1382-83; *see also Antidumping Duties; Countervailing Duties; Final Rule*, 62 FR 27296, 27340 (May 19, 1997).

⁴⁴ See, e.g., Steel Threaded Rod from Thailand: Preliminary Determination of Sales at Less Than Fair Value and Affirmative Preliminary Determination of Critical Circumstances, 78 FR 79670 (December 31, 2013), and accompanying PDM at 4, unchanged in Steel Threaded Rod from Thailand: Final Determination of Sales at Less Than Fair Value and Affirmative Final Determination of Critical Circumstances, 79 FR 14476 (March 14, 2014). ⁴⁵See the appendix to this memorandum under "Companies That Failed to Respond to the Q&V Questionnaire" for a list of these companies.

⁴⁶ See Nippon Steel, 337 F.3d at 1383-84.

not manufactured using certain components produced in China.⁴⁷ See the "Certification" section below and the accompanying *Federal Register* notice for details regarding certifications. The non-cooperative companies must comply with the cash deposit requirements in the accompanying *Federal Register* notice.

IX. STATUTORY ANALYSIS FOR THE CIRCUMVENTION INQUIRY

Section 781(b) of the Act directs Commerce to consider the criteria described in the "Statutory and Regulatory Framework for the Circumvention Inquiry" section of this memorandum above, to determine whether merchandise completed or assembled in a third country is circumventing an order. Below we analyze those statutory criteria based on record evidence.

Merchandise of the Same Class or Kind

Section 781(b)(1) of the Act provides that Commerce may include imports of merchandise assembled or completed in a third country within the scope of an order at any time the order is in effect if, among other things, the merchandise imported in the United States is of the same class or kind as any merchandise produced in a foreign country that is the subject of an AD and/or CVD order.

Hanwha and Jinko reported that they produced solar cells and modules during the inquiry period and that these products are of the same class or kind as the solar cells and modules subject to the *Orders*. Further, Hanwha and Jinko reported that they exported these products to the United States during the inquiry period.⁴⁸

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that these companies exported inquiry merchandise to the United States of the same class or kind as the class or kind of solar cells and modules subject to the *Orders*.

Based on the foregoing, in accordance with section 781(b)(1)(A) of the Act, we find that available information indicates that the inquiry merchandise imported into the United States from Malaysia is of the same class or kind of merchandise as the merchandise subject to the *Orders*.

Whether, Before Importation into the United States, Such Merchandise is Completed or Assembled in Malaysia from Merchandise that is Subject to the *Order* or Produced in China

Section 781(b)(1) of the Act provides that Commerce may include imports of merchandise assembled or completed in a third country within the scope of an order at any time the order is in effect if, among other things, before importation into the United States, such imported

⁴⁷ See, e.g., Anti-Circumvention Inquiry of the Antidumping Duty Order on Certain Pastafrom Italy: Affirmative Preliminary Determination of Circumvention of the Antidumping Duty Order, 63 FR 18364, 18366 (April 15, 1998) (Pasta 1998 Preliminary Circumvention Determination), unchanged in Anti-Circumvention Inquiry of the Antidumping Duty Order on Certain Pastafrom Italy: Affirmative Final Determination of Circumvention of the Antidumping Duty Order, 63 FR 54672, 54675-76 (October 13, 1998) (Pasta 1998 Final Circumvention Determination).

⁴⁸ See Jinko Part II IQR at 1 and Exhibit PS-1; see also Hanwha Part II IQR at 2 and Exhibit 1.a.

merchandise is completed or assembled in another foreign country from merchandise which: (i) is subject to such order, or (ii) is produced in the foreign country with respect to which such order applies.

Hanwha reported that it produced solar cells and modules from inputs sourced from Malaysia and China during the period of inquiry.⁴⁹ Hanwha purchased Chinese-origin wafers and other raw material inputs from unaffiliated producers in China.⁵⁰ In addition, Hanwha provided sample sales and shipping documentation demonstrating how the company determined the country of origin for the parts/components purchased during the period of inquiry.⁵¹ Thus, Hanwha produces inquiry merchandise using Chinese parts and components before importation into the United States.

Jinko reported that it produced solar cells and modules from inputs sourced from China during the period of inquiry.⁵² Jinko obtained Chinese-origin wafers from affiliated producers in China, and it also purchased other raw material inputs from China.⁵³ In addition, Jinko provided sample documentation demonstrating how the company determined the country of origin for the parts/components purchased during the period of inquiry.⁵⁴ Thus, Jinko produces inquiry merchandise using Chinese parts and components before importation into the United States.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that these companies also completed or assembled Chinese parts and components in Malaysia to produce the merchandise that was subsequently imported into the United States.

Whether the Process of Assembly or Completion in Malaysia is Minor or Insignificant

Section 781(b)(1) of the Act provides that Commerce may include imports of merchandise assembled or completed in a third country within the scope of an order at any time the order is in effect if, among other things, the process of assembly or completion in the third country is minor or insignificant.

Under section 781(b)(2) of the Act, Commerce considers five factors to determine whether the process of assembly or completion of merchandise in a foreign country is minor or insignificant: (1) the level of investment in the foreign country in which the merchandise is completed or assembled; (2) the level of research and development in the foreign country in which the merchandise is completed or assembled; (3) the nature of the production process in the foreign country in which the merchandise is completed or assembled; (4) the extent of production facilities in the foreign country in which the merchandise is completed or assembled; (5)

⁴⁹ See Hanwha Part II IQR at 13-14 and Exhibit 8.

⁵⁰ *Id.* at 19 and Exhibit 10. These inputs included additive, Ag front screen, Ag back screen, Al back screen, backsheet, cell connector, cross connector, ethyl vinyl a cetate (EVA), front busbar (silver paste), flux, frame, solar glass, NHO3_68 (nitric acid), junction box, paper roll, rear BSF (a luminum paste), silicone (plotting), silicone (sealant), and squeegee.

⁵¹ See Hanwha Part IIIQR at 24 and Exhibits 10, FOP-7c, FOP-9, FOP-10, and FOP-11.

⁵² See Jinko Part II IQR at 6.

⁵³ *Id.* at 15.

⁵⁴ *Id.* at 15, Exhibit M-4E.1, and M-5.

whether the value of the processing performed in the foreign country in which the merchandise is completed or assembled represents a small proportion of the value of the merchandise imported into the United States.

The SAA explains that no single factor listed in section 781(b)(2) of the Act will be controlling.⁵⁵ Accordingly, Commerce's practice is to evaluate each of the factors in section 781(b)(2) of the Act as it exists in the third country and consider the totality of our analysis of those factors in making a determination.⁵⁶ The importance of any one of the factors listed under section 781(b)(2) of the Act can vary from case to case depending on the particular circumstances unique to each circumvention inquiry.

In this inquiry, Commerce based its analysis on both qualitative and quantitative factors in determining whether the process of assembly or completion in Malaysia is minor or insignificant, in accordance with the criteria of section 781(b)(2) of the Act. This approach is consistent with our analysis in prior circumvention inquiries.⁵⁷ Additionally, in evaluating these factors, we compared the production of inquiry merchandise by the Malaysian respondents to that of the respondents' affiliated producers in China.

As discussed in detail below, Commerce preliminarily finds, based on AFA, that the process of assembly or completion of inquiry merchandise is minor or insignificant with respect to the companies listed in the appendix to this memorandum that did not respond to the Q&V questionnaire and not minor or insignificant for Hanwha and Jinko. With respect to the latter companies, much of the information used to determine whether the process of assembly or completion in Malaysia is minor or insignificant is business proprietary in nature; therefore, where necessary, we discussed this information in company-specific preliminary analysis memoranda.⁵⁸

(1) Level of Investment in Malaysia

Hanwha was established in 2008 and commenced operations in 2009. Hanwha obtained its initial start-up capital from a loan from the government of Malaysia and a capital infusion from a related

⁵⁵ See SAA at 893.

⁵⁶ See HFC Blends from China IDM at 20.

⁵⁷ See Anti-Circumvention Inquiry of the Antidumping and Countervailing Duty Orders on Certain Pasta from Italy: Affirmative Preliminary Determination of Circumvention of Antidumping and Countervailing Duty Orders, 68 FR 46571, 46575 (August 6, 2003), unchanged in Anti-Circumvention Inquiry of the Antidumping and Countervailing Duty Orders on Certain Pasta from Italy: Affirmative Final Determinations of Circumvention of Antidumping and Countervailing Duty Orders, 68 FR 54888 (September 19, 2003); see also Certain Corrosion-Resistant Steel Products from the People's Republic of China: Affirmative Preliminary Determination of Circumvention Involving the United Arab Emirates, 85 FR 8841 (February 18, 2020), unchanged in Certain Corrosion-Resistant Steel Products from the People's Republic of China: Affirmative Final Determination of Circumvention Involving the United Arab Emirates, 85 FR 41957 (July 13, 2020) (CORE from China).

⁵⁸ See Memoranda, "Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic from China – Circumvention Inquiry with Respect to Malaysia: Preliminary Analysis Memorandum for Hanwha," dated concurrently with this memorandum (Hanwha Preliminary Analysis Memorandum); and "Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, from the People's Republic from China – Circumvention Inquiry with Respect to Malaysia: Preliminary Analysis Memorandum for Jinko (Malaysia)," dated concurrently with this memorandum (Jinko Preliminary Analysis Memorandum).

party outside of Malaysia (but not in China).⁵⁹ Hanwha sourced inputs solely from unaffiliated suppliers. Thus, Hanwha had no affiliates who made investments in China related to inquiry merchandise. Hanwha provided information regarding the total capital expenses in Malaysia, including production facilities broken out by the production of cells and modules.⁶⁰ Based on the reported investment expenses, we preliminarily find that Hanwha's investments in Malaysia were not minor or insignificant, and thus, weigh against a finding of circumvention. For a complete analysis of Hanwha's level of investments in Malaysia, *see* the Hanwha Preliminary Analysis Memorandum.

Jinko began its Malaysian investments in 2015⁶¹ using capital provided by its parent company, Jinko Solar Co., Ltd., which owns 100 percent of Jinko.⁶² During the inquiry period, Jinko sourced inputs from China from various affiliates that are engaged in the production and sale of ingots, wafers and other raw materials, as well as solar cells and modules.⁶³ Jinko provided the total investment information required to construct and start up its facilities for itself and its Chinese affiliates who produced ingots and wafers; Jinko classified these investments into the following production stages: production of solar modules, solar cells, wafers, and ingots.⁶⁴ Based on a comparison of Jinko's investments related to the production of inquiry merchandise in Malaysia to the reported investments made by Jinko's affiliates in China, we preliminarily find that Jinko's investments in Malaysia were not minor or insignificant, and thus, weigh against a finding of circumvention. For a complete analysis of Jinko's level of investments, *see* the Jinko Preliminary Analysis Memorandum.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that these companies' levels of investment in Malaysia are minor relative to their levels of investment in China, which weighs in favor of finding circumvention.

(2) Level of Research and Development in Malaysia

Hanwha's R&D activities in Malaysia concentrate on the optimization of the manufacturing process, such as lowering the production costs per watt by increasing the conversion efficiency rate of its products and reducing silicon usage by reducing the thickness of photovoltaic cells – as well as the successful implementation of the new products or processes developed at the R&D Center in Germany.⁶⁵ Because Hanwha's R&D during the inquiry period was conducted in Malaysia and it did not source inputs from affiliated companies who conducted R&D related to inquiry merchandise in China we preliminarily find that Hanwha's R&D activities in Malaysia were not minor or insignificant, and thus, weigh against a finding of circumvention. For a complete analysis of Hanwha's level of research and development, *see* the Hanwha Preliminary Analysis Memorandum.

 $^{^{59}}$ See Hanwha Part I IQR at 26-27. According to Hanwha, in 2012, Hanwha re-negotiated the terms of its loan with the government of Malaysia. *Id*.

⁶⁰ See Hanwha 1st SQR at Exhibit S-9.

⁶¹ See Jinko Part I IQR at 2.

⁶² Id. at 15.

⁶³ *Id.* at 7-12 and 17-18.

⁶⁴ See Jinko 1st SQR at Exhibit SQ-9.

⁶⁵ *Id*. at 35.

Jinko reported R&D information for its Malaysian activities, as well as for its affiliates located in China that produce polysilicon blocks, rods, ingots and wafers for 2019 through 2021.⁶⁶ Jinko reported each affiliate which incurred R&D expenses, and provided audited reports which show the R&D expenses incurred.⁶⁷ Jinko states that it did not sign any consulting or production service contracts with its Chinese affiliates, however, Jinko exchanges technical issues with its Chinese affiliates.⁶⁸ We find that Jinko's R&D expenses in solar cells and modules production in Malaysia, compared to its affiliates' R&D in the production of ingots and wafers in China, from which Jinko sourced these inputs, is not minor. The R&D expenses for the stages of the solar cell and module production process (*i.e.*, processing a wafer into a solar cell, and assembling solar cells into solar modules) are not minimal when compared to the R&D expenses of the Chinese ingot and wafer producers that begins by producing ingots, and the wafer. Based on the comparison between respondents' R&D expenses in their production facilities in Malaysia, we preliminarily determine that the R&D investment required for a solar cell and module facility is not minor compared to that of a Chinese polysilicon enrichment/wafer production facility. Therefore, in accordance with section 781(b)(2)(B) of the Act, we preliminarily find that this factor does not weigh in favor of finding circumvention.

With respect to the non-responsive companies listed in Appendix I, as AFA (*see* section VII of this memorandum above), we have determined that these companies' respective levels of R&D in Malaysia are minor relative to R&D levels in China, and thus, weigh in favor of finding circumvention.

(3) Nature of the Production Process in Malaysia

Because the respondents treated certain production processes as business proprietary information,⁶⁹ we did not associate the production processes described below with a particular respondent. However, we find our all-inclusive description of the production processes below covers the range of production scenarios applicable to various respondents and covers the comparisons required to reach a determination with respect to the nature of production.

According to the ITC, to produce ingots, polysilicon rocks are placed into a quartz crucible along with a small amount of boron, which is used to provide a positive electric orientation. The crucible is then heated in a furnace to approximately 2,500 degrees Fahrenheit to produce monocrystalline silicon, currently the most common form of polysilicon used in producing solar cells. Once the polysilicon is melted, a seed crystal is lowered into the material and rotated, with the crucible rotated in the opposite direction. The melt starts to solidify on the seed and the seed is slowly raised out of the melt—creating a single long crystal. The crystal is then cooled before it is moved onto the next step. The process of growing the crystal takes approximately 2.5 days.⁷⁰

⁷⁰ See Crystalline Silicon Photovoltaic Cells, Whether or Not Partially or Fully Assembled Into Other Products: Monitoring Developments in the Domestic Industry, Investigation No. TA-201-075 (Monitoring), Publication 5021 (February 2020), at I-62.

⁶⁶ See Jinko Part I IQR at 20; and Jinko 4th SQR at 1.

⁶⁷ Id.

⁶⁸ See Jinko Part I IQR at 21.

⁶⁹ In the preliminary analysis memorandum for each respondent, we identify the inputs that the respective respondent's Chinese a ffilia tes produced/provided.

To produce wafers, the top and tail of the ingot are cut off and the remaining portion is cut into equal length pieces and then squared. A wire saw is used to slice the ingots into wafers. Typically, diamond wire saws are used for monocrystalline wafer slicing. The wafers are then cleaned, dried, and inspected.⁷¹

Solar cell production typically involves phosphorus being diffused into a thin layer on the wafer surface at high heat, which gives the surface of the wafer its negative potential electrical orientation. The combination of that layer, and a boron-doped layer below, creates the positive-negative (p/n), junction. A thin layer of silicon is removed from the edge of the solar cell to separate the positive and negative layers. A silicon nitride antireflective coating is then added to the solar cell to increase the absorption of sunlight and metals are printed on the solar cell to collect electricity. Aluminum and silver layers are applied, and then the solar cell is placed in a furnace, where the high temperature causes the silver paste to become imbedded in the surface of the silicon layer, forming a reliable electrical contact. The final step in the process is testing and sorting the solar cells based on their characteristics and efficiency.⁷²

To assemble solar cells into solar modules, a piece of glass is placed on the production line, and EVA or another encapsulant is placed on top of the glass. Then a group of solar cells is placed in a line and soldered together, creating a string. The strings are then placed on top of the encapsulant, and the string interconnections are soldered together. After this, another layer of EVA and a backsheet are added, and the product is laminated and cured. Usually a frame is added, and a junction box is attached to the back of the module.⁷³

As noted above, the process for producing monocrystalline silicon ingots requires melting polysilicon then forming the crystal and pulling it into an ingot. These processes utilize extremely expensive furnaces that consume enormous amounts of electricity,⁷⁴ and despite the few steps, it typically takes approximately four days to grow an ingot from raw polysilicon.⁷⁵ The diamond saws that are used to slice ingots into thinner than paper wafers are also expensive and technologically advanced. In in a market survey, Bloomberg NEF, a prominent research provider for the solar industry, found that:

"{w}afer factories required high upfront capital expenditure and bear many technical hurdles, which makes it difficult for new factories to be built outside of China."⁷⁶

Technical hurdles are highest for plants that make polysilicon and wafers. These plants are also costly to build and take longest to construct. Cell and module

⁷¹ *Id.* at I-64.

⁷² *Id.* at I-65 to I-66.

⁷³ *Id.* at I-67.

⁷⁴ See Memorandum, "Meeting with the Department of Energy," dated June 3, 2022, at Attachment 2 (containing Solar Photovoltaics: Supply Chain Deep Dive Assessment. U.S. Department of Energy Response to Executive Order 14017, "America's Supply Chains," dated July 29, 2022 (DOE Solar Report), at 31). ⁷⁵ Id. at 29.

⁷⁶ See Circumvention Request at Exhibit 4 ("Solar PV Trade and Manufacturing: A Deep Dive February 2021, BloombergNEF," dated February 2021, at "Executive Summary").

factories can be built faster and can respond quicker to technological trends and policy developments like import tariffs.⁷⁷

Thus, the process in China for producing ingots and wafers requires significant technological expertise. Meanwhile, record evidence indicates that the labor demands of ingot and wafer production are slightly less than the labor required to produce solar cells and modules.⁷⁸

However, relative to ingot and wafer production, solar cell and module production involves a greater number of stages, each requiring a high level of technological sophistication. Specifically, the process for turning wafers into solar cells requires an expensive, multi-stage assembly line requiring high-technological machinery and workers with strong technological knowledge. While ingot and wafer production require large amounts of upfront capital and technical capabilities, the ITC found solar cell production to be the "most capital intensive part of the manufacturing process," and "a highly automated, capital intensive, and technologically sophisticated process, requiring skilled technicians and employees with advanced degrees."⁷⁹

Moreover, module production also involves a large number of varied inputs consumed in a complex, multi-step production process that requires precision, highly skilled workers, and accurate quality-testing equipment at multiple stages.⁸⁰ Furthermore, the physical transformation of polysilicon rocks into wafers (*i.e.*, the portion of the production process occurring in China) is less extensive than the transformation of wafers into solar modules (*i.e.*, the portion of the production process occurring in third countries).⁸¹ Only a handful of inputs are used to convert polysilicon rocks into wafers, whereas converting a solar cell into a solar module requires approximately 100 different inputs.

Additionally, Commerce previously noted that cell production is where the essence of a solar module is realized. Specifically, Commerce noted that:

once a wafer is doped and an opposite electrical orientation is imparted on the surface, it results in the creation of a p/n junction. When sunlight strikes the cell, the positive and negative charge carriers are released, causing electrical current to flow. It is at this point that the cell is capable of generating electricity from sunlight.⁸²

⁷⁷ *Id.* at PDF page 15.

⁷⁸ See DOE Solar Report at 12.

⁷⁹ See Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 and 731-TA-1190 (Final), USITC Pub. No. 4360 (November 2012), at I-18.

⁸⁰ See Auxin's Letter, "Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules from the People's Republic of China: Submission of Investment and Research and Development Information," dated July 29, 2022, at Exhibit 1.

 $^{^{81}}$ For example, a typical solar module requires 72 wa fers to produce a solar module. Further, the weight of 72 wa fers is approximately 0.72 grams, while a module weighs approximately 20 kilograms (kg); thus, the nature of the resulting solar modules is 30,000 times heavier than the original input into the process.

⁸² See NextEra's Letter, "Pre-Preliminary Determination Comments," dated October 20, 2022, at Attachment 22 (Memorandum, "Antidumping and Countervailing Duty Orders on Crystalline Silicon Photovoltaic Cells from the People's Republic of China, and Certain Crystalline Silicon Photovoltaic Products from Taiwan: The Solaria Corporation Scope Ruling (A-570-979, C-570-980, A-583-853)," dated April 8, 2021, at 10-11.)

Therefore, Commerce has determined that it is only when the p/n junction is created that a wafer is no longer just a wafer, but is a solar cell that is subject to the *Orders*.⁸³ Commerce also noted in the underlying investigation that, "{t}he 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."⁸⁴

Moreover, if we disregarded the polysilicon-to-ingot part of the production process in China and started with the production of wafers from ingots in China, the relative proportion of the production process that takes place in the third country when producing solar cells and modules from wafers would be even greater compared to the production in China. Thus, we find that the nature of the production performed by the respondents in the third country is not minor or insignificant compared to either processing polysilicon into wafers, or ingots into wafers, in China, which does not weigh in favor of finding circumvention.

(4) Extent of Production Facilities in Malaysia

Hanwha and Jinko provided information regarding the cost of the land, equipment, and buildings of, the square footage of, the number of production workers employed in, and the capacity of, their Malaysian solar cell and module production facilities. Jinko also provided the same information for its affiliated wafer and/or ingot producers in China. We preliminarily find that the extent of Jinko's production facilities in Malaysia are minor or insignificant, compared to the extent of its affiliates' production facilities in China, and thus, weighs in favor of finding circumvention. Because Hanwha did not source inputs from an affiliated producer in China, we preliminarily find that the extent of Hanwha's production facilities in Malaysia is not minor or insignificant. For a complete analysis of the extent of their production facilities, *see* the Hanwha and Jinko Preliminary Analysis Memoranda.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that the extent of their production facilities in Malaysia are minor relative to the extent of their production facilities, if any, in China, and thus, weighs in favor of finding circumvention.

(5) Whether the Value of Processing in Malaysia Represents a Small Proportion of the Value of the Merchandise Imported into the United States

To determine the percentage of the value of imported inquiry merchandise represented by third country processing, we summed the per-unit costs incurred in the third country by each mandatory respondent for non-Chinese material inputs, labor, fixed and variable overhead, selling, general, and administrative items, and interest and divided the sum by the per-unit weighted-average value of the respondent's U.S. sales of inquiry merchandise during 2021. Based on our calculations, we

⁸³ See NextEra's Letter, "Request to Reject Anti-Circumvention Ruling Requests and to Decline Initiation," dated September 15, 2021, at Attachment 14 (citing Memorandum, "SunSpark Technology Inc. Scope Ruling," dated October 23, 2020, at 6).

⁸⁴ See Next Era's Letter, "Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled into Modules, from the People's Republic of China: NextEra Comments on Auxin's Circumvention Ruling Request," dated May 2, 2022, at 14-15 (citing Memorandum, "Scope Clarification Memorandum," dated March 19, 2012, at 6).

preliminarily find that the value of the processing performed in Malaysia by Jinko and Hanwha is not a small proportion of the value of the inquiry merchandise imported into the United States, and thus weighs against finding circumvention. For a complete analysis of the value of processing in Malaysia, *see* the Jinko and Hanwha Preliminary Analysis Memoranda.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that the value of their processing performed in Malaysia is a small proportion of the value of the inquiry merchandise imported into the United States, which weighs in favor of finding circumvention.

Whether the Value of the Merchandise Produced in China is a Significant Portion of the Total Value of the Merchandise Exported to the United States

Section 781(b)(1) of the Act provides that Commerce may include imports of merchandise assembled or completed in a third country within the scope of an order at any time the order is in effect if, among other things, the value of the merchandise produced in the foreign country to which the AD and/or CVD order applies is a significant portion of the total value of the merchandise exported to the United States.

To determine the percentage of the value of exported inquiry merchandise represented by the parts and components produced in China that were used to produce the merchandise, for each respondent we summed the per-unit value of each Chinese part and component and divided the sum by the per-unit weighted-average value of the respondent's U.S. sales of inquiry merchandise during 2021. Because China is an NME country, we valued the parts and components produced in China using surrogate values. Based on our calculations, we preliminarily find that the value of the merchandise produced in China that was used by Jinko and Hanwha to produce inquiry merchandise is a significant portion of the total value of the merchandise exported to the United States, and thus weighs in favor of finding circumvention. For a complete analysis of the value of the merchandise produced in China, *see* the Hanwha and Jinko Preliminary Analysis Memoranda.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that the percentage of the value of exported inquiry merchandise represented by the parts and components produced in China that were used to produce the merchandise is a significant proportion of the value of the inquiry merchandise exported to the United States, and thus weighs in favor of finding circumvention.

Other Factors to Consider

Section 781(b)(3) of the Act directs Commerce to consider additional factors in determining whether to include merchandise assembled or completed in a foreign country within the scope of an order, such as:

(A) the pattern of trade, including sourcing patterns; (B) whether the manufacturer or exporter of the merchandise ... is affiliated with the person who uses the merchandise ... to assemble or complete in the foreign country the merchandise that is subsequently imported into the United States; and (C) whether imports into

the foreign country of the merchandise ... have increased after the initiation of the investigation which resulted in the issuance of such order.

(1) Pattern of Trade and Sourcing Patterns

We analyzed patterns of trade by comparing publicly available U.S. import statistics for imports of solar cells and solar modules from 2011 (the year of initiation of the investigations which resulted in the *Orders*) to 2021.⁸⁵ Based on U.S. import data, the value of U.S. imports of solar cells and solar modules from Malaysia dramatically increased during this period, from \$562,810,729 in 2011 to \$1,672,904,267 in 2021 (*i.e.*, an increase of nearly 200 percent). In contrast, the value of U.S. imports of solar cells and solar modules from \$2,803,830,639 in 2011 to \$21,320,358 in 2021 (*i.e.*, a decrease of more than 99 percent). This pattern of trade indicates a shift in exports of solar cells and solar modules to the United States from China to Malaysia, and thus weighs in favor of finding circumvention.⁸⁶

We also analyzed patterns of trade with respect to the mandatory respondents. Each of the mandatory respondents reported the value and volume of its, and its Chinese affiliates', shipments of solar cells and solar modules to customers in the domestic market, the U.S. market, and other third country markets from 2008 through 2021. The data provided by Jinko indicate a pattern of trade that weighs in favor of finding circumvention. The data provided by Hanwha indicate a pattern of trade that does not weigh in favor of finding circumvention. For a complete analysis of the patterns of trade with respect to the mandatory respondents, *see* the Jinko and Hanwha Preliminary Analysis Memoranda.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we have determined that the patterns in trade noted above weigh in favor of finding circumvention for these companies.

(2) Affiliation

Generally, Commerce considers circumvention to be more likely to occur when the manufacturer of the subject merchandise or of inputs from the order country that are completed or assembled in a third country is affiliated with the entity in the third country that performs the completion or

⁸⁵ We obtained publicly-available U.S. import data from the Global Trade Atlas for Harmonized Tariff Schedule (HTS) subheadings 8541.40.6020 ("Solar Cells Assembled Into Modules Or Panels") and 8541.40.6030 ("Solar Cells, Not Assembled Into Modules Or Made Up Into Panels") for 2011 through 2018, and HTS subheadings 8541.40.6015 ("Solar Cells, Crystalline Silicon Photovoltaic Cells Of A Kind Described In Stat Note 11 To This Chapter, Assembled Into Modules Or Panels") and 8541.40.6025 ("Solar Cells, Crystalline Silicon Photovoltaic Cells Of A Kind Described In Stat Note 11 To This Chapter, Nesoi") for 2018 through 2021.

⁸⁶ See, e.g., CORE from China; see also Certain Uncoated Paper from Brazil: Affirmative Preliminary Determination of Circumvention of the Antidumping Duty Order for Uncoated Paper Rolls, 86 FR 7261 (January 27, 2021), unchanged in Certain Uncoated Paper from Brazil, the People's Republic of China, and Indonesia: Affirmative Final Determinations of Circumvention of the Antidumping Duty Orders and Countervailing Duty Orders for Certain Uncoated Paper Roll, 86 FR 71025 (December 14, 2021); and Oil Country Tubular Goods from the People's Republic of China: Preliminary Affirmative Determinations of Circumvention, 86 FR 43627 (August 10, 2021), unchanged in Oil Country Tubular Goods from the People's Republic of China: Final Affirmative Determinations of Circumvention, 86 FR 67443 (November 26, 2021).

assembly. As described above, in analyzing the "minor or insignificant" factors in section 781(b)(2) of the Act, we found that certain of the selected respondents sourced parts and components from affiliated suppliers. These affiliations are described in more detail below.

Jinko is a subsidiary of Jinko Solar Co., Ltd. (which is in China), and is part of the Jinko Group, which includes Chinese producers of solar cells, solar modules, and inputs used to manufacture solar cells and solar modules. During the inquiry period, Jinko was affiliated with entities in China that provided parts and components used by Jinko to produce solar cells and solar modules. Thus, Jinko's affiliations weigh in favor of finding circumvention.

Hanwha is a subsidiary of Hanwha Solutions Corporation (which is in the Republic of Korea) and is part of the Hanwha Group, which includes Korean producers of solar cells, solar modules, and inputs used to manufacture solar cells and solar modules. During the inquiry period, Hanwha was not affiliated with entities in China that provided parts and components used by Hanwha to produce solar cells and solar modules. This factor weighs against finding circumvention.

For a complete analysis of affiliations, *see* the Jinko and Hanwha Preliminary Analysis Memoranda.

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we determine that these companies have affiliates in China and that these affiliations weigh in favor of finding circumvention for these companies.

(3) Whether Shipments of Inputs from China to the Third Country Increased

To determine whether shipments of the inputs from China that were used to complete or assemble the final product in the third country increased, we examined the mandatory respondents' purchases of Chinese-produced inputs from 2008 to 2021 that they used to manufacture solar cells and modules. Both Jinko and Hanwha reported purchasing wafers and other parts and components from China and used those inputs to manufacture solar cells and modules. Proprietary information indicates that purchases of such inputs increased since initiation of the investigations that resulted in the *Orders*, which weighs in favor of finding circumvention.⁸⁷

With respect to the non-responsive companies listed in the appendix to this memorandum, as AFA (*see* section VII of this memorandum above), we determine that they purchased inputs from China and that their purchases of inputs from China weigh in favor of finding circumvention for these companies.

X. SUMMARY OF STATUTORY ANALYSIS

As discussed above, to make an affirmative determination of circumvention, all the criteria under section 781(b)(1) of the Act must be satisfied, taking into account the factors listed under section 781(b)(2) of the Act for determining whether completion or assembly in the third country is minor or insignificant. Moreover, pursuant to section 781(b)(3) of the Act, in determining whether to

⁸⁷ For Commerce's full analysis, including business proprietary information, *see* the Jinko and Hanwha Preliminary Analysis Memoranda. We note that Hanwha's purchases of inputs from China have declined in recent years.

include merchandise assembled or completed in a foreign country within the scope of an order, Commerce must take into account such factors as the pattern of trade, including sourcing patterns, affiliations, and whether imports into the foreign country of the merchandise described in section 781(b)(1)(B) of the Act have increased after initiation of the investigation that results in the order.

Pursuant to section 781(b)(1)(A) and (B) of the Act, Commerce preliminarily finds that the inquiry merchandise imported into the United States is within the same class or kind of merchandise as the class or kind of merchandise subject to the *Orders* and that this merchandise is being completed and assembled, in part, from parts and components produced in China, the country with respect to which the applicable *Orders* apply.

Based on the factors listed under section 781(b)(2) of the Act, pursuant to section 781(b)(1)(C) of the Act, Commerce preliminarily finds that the production of inquiry merchandise in Malaysia is not minor or insignificant for Hanwha.

Based on the factors listed under section 781(b)(2) of the Act, pursuant to section 781(b)(1)(C) of the Act, Commerce preliminarily finds that the production of inquiry merchandise in Malaysia is not minor or insignificant for Jinko. Therefore, despite the findings noted above regarding the extent of the production process in Malaysia for solar cells and modules, we preliminarily find that the totality of the factors indicates the process of assembly or completion in Malaysia is not minor and insignificant.⁸⁸

Furthermore, based on AFA, Commerce preliminarily finds that the production of inquiry merchandise in Malaysia is minor or insignificant for the non-responsive companies listed in the appendix to this memorandum.

Pursuant to section 781(b)(1)(D) of the Act, Commerce preliminarily finds that the value of the inputs produced in China that were used to produce inquiry merchandise is a significant portion of the total value of the merchandise exported from Malaysia to the United States for Hanwha and Jinko, and, based on AFA, the non-responsive companies listed in the appendix to this memorandum.

Concerning the three factors under section 781(b)(3) of the Act (*i.e.*, pattern of trade and sourcing, affiliations, and whether imports of parts and components from China increased), Commerce preliminarily finds that each of these factors supports a preliminary affirmative determination of circumvention for Jinko, and based on AFA, the non-responsive companies listed in the appendix to this memorandum. With respect to Hanwha, Commerce preliminarily finds that only the increase of imports of parts and components from China supports a preliminary affirmative finding of circumvention.

Based on an analysis of the totality of the information on the record of these circumvention inquiries related to Hanwha and Jinko, we preliminarily find that Hanwha and Jinko are not circumventing the *Orders* in accordance with section 781(b) of the Act. Thus, we preliminarily find that Hanwha's and Jinko's exports of inquiry merchandise produced with wafers exported by

⁸⁸ See Uncovered Innerspring Units from the People's Republic of China: Affirmative Preliminary Determination of Circumvention of the Antidumping Duty Order, 78 FR 41784 (July 11, 2013).

the specific parties reported in their questionnaire responses are not subject to this preliminary finding. However, we are unable to implement this preliminary finding with respect to Hanwha and Jinko because they have not disclosed for the public record the names of their exporters of wafers in China. Therefore, upon public disclosure of this information to Commerce, we will notify CBP that Hanwha's and Jinko's exports of inquiry merchandise produced using wafers from these exporters are excluded from this preliminary country-wide affirmative finding of circumvention for Malaysia. Until and unless such public disclosure is made, we will notify CBP that all entries of inquiry merchandise exported by Hanwha and Jinko will be subject to the cash deposit requirements in the accompanying *Federal Register* notice.

Based on AFA, we preliminarily find that the non-responsive firms listed the appendix to this memorandum are circumventing the *Orders* in accordance with section 781(b) of the Act. Furthermore, upon taking into consideration section 781(b)(3) of the Act, we also have preliminarily determined that action is warranted to prevent evasion of the *Orders* pursuant to section 781(b)(1)(E) of the Act.

XI. VERIFICATION

As provided by 19 CFR 351.226(f)(3), Commerce intends to verify the information relied upon in making this preliminary determination.

XII. CERTIFICATION PROCESS AND COUNTRY-WIDE AFFIRMATIVE DETERMINATION OF CIRCUMVENTION

As noted above, Commerce identified the universe of potential producers of solar cells and modules in, and exporters of solar cells and modules from, Malaysia using CBP import data. We then issued Q&V questionnaires to certain companies, invited all other companies to respond to the Q&V questionnaire, and selected, as mandatory respondents, companies that exported the largest quantity of solar cells and modules to the United States from Malaysia based on information reported in response to the Q&V questionnaire. Because certain companies failed to respond to the Q&V questionnaire, and thus, failed to cooperate by not acting to the best of their abilities to respond to a request for information, as AFA, we preliminarily conclude that these companies produced solar cells and modules subject to these circumvention inquiries. Under 19 CFR 351.226(m)(1), Commerce is authorized, based on available evidence, to take the appropriate remedy to address circumvention and prevent evasion of an order, including the application of a determination on a country-wide basis. Commerce found that these companies are circumventing the orders on solar cells and modules from Malaysia. These companies account for a significant amount of Malaysian solar cells and modules exported to the United States. Because Commerce was unable to examine all Malaysian producers of solar cells and modules, Commerce has determined that a country-wide determination is most appropriate to prevent further circumvention of the orders by non-examined producers of inquiry merchandise in Malaysia. Therefore, with the exception of shipments of inquiry merchandise from Hanwha and Jinko produced using wafers from specific exporters (and subject to the caveat above regarding the public disclosure of the names of those exporters). Commerce is applying this preliminary affirmative determination of circumvention to all shipments of inquiry merchandise from Malaysia on or after April 1, 2022, the date of publication of the Initiation Notice.

In order to administer this preliminary country-wide affirmative determination of circumvention, and the company-specific preliminary negative determinations of circumvention, and to implement the Proclamation described below, Commerce has established the following types of certifications: (1) importer and exporter certifications that specific entries meet the regulatory definition of "Applicable Entries"; (2) importer and exporter certifications that specific entries are not subject to suspension of liquidation or the collection of cash deposits based on the preliminary negative circumvention determinations with respect to Hanwha and Jinko (in combination with certain of their wafer exporters);⁸⁹ and (3) importer and exporter certifications that specific entries of inquiry merchandise are not subject to suspension of liquidation or the collection of cash deposits based on the preliminary because the merchandise was not manufactured using certain components produced in China. As noted above, the non-cooperative companies listed in the appendix to this memorandum are not eligible to use the certifications described in items (2) or (3) above.⁹⁰ For copies of each type of certification and information regarding the certification requirements, *see* the accompanying *Federal Register* notice.

Accordingly, companies that were not individually examined can certify whether their products are subject to suspension of liquidation or the collection of cash deposits based on the requirements and process described in the accompanying *Federal Register* notice.

XIII. PRESIDENTIAL PROCLAMATION

On June 6, 2022, the President of the United States signed Proclamation 10414, "Declaration of Emergency and Authorization for Temporary Extensions of Time and Duty-Free Importation of Solar Cells and Modules from Southeast Asia" (the Proclamation). In the Proclamation, the President directed the Secretary of Commerce (the Secretary) to:

⁸⁹ As noted above, these exclusions are predicated upon the public disclosure of the names of these exporters to Commerce by no later than 14 days after the publication date of this notice in the *Federal Register*.

⁹⁰ See the "Use of Facts Available with an Adverse Inference" section, *supra*; and, *e.g.*, *Pasta 1998 Preliminary Circumvention Determination*, 63 FR 18364, 18366, unchanged in *Pasta 1998 Final Circumvention Determination*, 63 FR 54672, 54675-76.

⁹¹ See Declaration of Emergency and Authorization for Temporary Extensions of Time and Duty-Free Importation of Solar Cells and Modules from Southeast Asia, 87 FR 35067 (June 9, 2022).

On September 12, 2022, Commerce added Part 362 to its regulations to implement the Proclamation. Pursuant to 19 CFR 362.103(b)(1)(i), Commerce will direct CBP to discontinue the suspension of liquidation and collection of cash deposits that were ordered based on Commerce's initiation of this circumvention inquiry. In addition, pursuant to 19 CFR 362.103(b)(1)(ii) and (iii), Commerce will not direct CBP to suspend liquidation of, and require cash deposits of estimated ADs and CVDs based on this affirmative preliminary determination of circumvention for, any "Applicable Entries." However, Commerce will direct CBP to suspend liquidation of, and collect cash deposits of estimated ADs and CVDs based on this affirmative preliminary determinative preliminary determination of circumvention for, imports of Southeast Asian-completed solar cells and solar modules that are not "Applicable Entries." For further information regarding these regulations and the definition of "Applicable Entries," *see* the accompanying *Federal Register* notice.

XV. RECOMMENDATION

We recommend finding, pursuant to 781(b) of the Act, that, with the exception of shipments of inquiry merchandise by Hanwha and Jinko, in combination with certain wafer exporters, imports of solar cells and modules, completed in Malaysia using certain parts and components manufactured in China, are circumventing the *Orders*.

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Agree	Disagree
X fria tot. thanks	

Signed by: LISA WANG Lisa W. Wang Assistant Secretary for Enforcement and Compliance

APPENDIX - Malaysia

Companies to Whom Commerce Issued a Q&V Questionnaire

- 1. Jinko Solar Technology Sdn. Bhd.
- 2. First Solar Malaysia Sdn. Bhd.
- 3. Hanwha Q Cells Malaysia Sdn. Bhd.
- 4. LONGi Kuching Sdn. Bhd.
- 5. Vina Solar Technology Co., Ltd.
- 6. LONGi Technology Co., Ltd.
- 7. Flextronic Shah Alam Sdn. Bhd.
- 8. LONGi Solar Technology
- 9. Panasonic Procurement Asia Pacific
- 10. Panasonic Logistics Asia Pacific
- 11. JA Solar Malaysia Sdn. Bhd.
- 12. AMC Cincaria Sdn Bhd
- 13. Funing Precision Component Co., Ltd.
- 14. Panasonic Solar Energy Malaysia Sdn. Bhd.
- 15. Samsung Sds Malaysia Sdn. Bhd.
- 16. Smile Power Trading Sdn Bhd
- 17. Sunmax Energy M Sdn Bhd
- 18. Sun Everywhere Sdn. Bhd.
- 19. Toenergy Solar Sdn Bhd
- 20. Xinyi Solar (Malaysia) Sdn Bhd

Companies That Failed to Respond to the Q&V Questionnaire

- 1. AMC Cincaria Sdn Bhd
- 2. Flextronic Shah Alam Sdn. Bhd.
- 3. Funing Precision Component Co., Ltd.
- 4. Samsung Sds Malaysia Sdn. Bhd.
- 5. Vina Solar Technology Co., Ltd.

Company to Which the Q&V Questionnaire Was Not Delivered

1. Smile Power Trading Sdn Bhd