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Circumvention
Segments: Cambodia 2022,
Malaysia 2022, Vietnam 2022
Thailand 2022
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March 25, 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: Crystalline Silicon Photovoltaic Cells, Whether or Not
Assembled Into Modules from the People's Republic of China:
Initiation of Circumvention Inquiries

I. SUMMARY

Based on a February 8, 2022, request from Auxin Solar Inc. (Auxin), a U.S. manufacturer of solar modules, and pursuant to section 781(b) of the Tariff Act of 1930, as amended (the Act), we recommend that the Department of Commerce (Commerce) initiate inquiries into whether imports of solar cells and/or modules from Cambodia, Malaysia, Thailand, and Vietnam are circumventing the antidumping duty (AD) and countervailing duty (CVD) orders on crystalline silicon photovoltaic cells, whether or not assembled into modules (solar cells and modules), from the People's Republic of China (China).¹

II. BACKGROUND

On February 8, 2022, Auxin requested that Commerce initiate country-wide inquiries into whether crystalline silicon photovoltaic cells, and modules containing such cells (solar cells and modules), that are produced/assembled in Cambodia, Malaysia, Thailand, or Vietnam using parts and components from China are circumventing the AD and CVD orders on solar cells and modules from China. In February and March 2022, parties filed letters with Commerce and met with

¹ 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); see also *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); and *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) (Orders).



Commerce officials to explain their views concerning the requested circumvention inquiries.² On March 9, 2022, we extended the deadline to initiate this circumvention inquiry by 15 days, in accordance with 19 CFR 351.226(d)(1).³

III. SCOPE OF THE ORDERS

The merchandise covered by the *Orders* is crystalline silicon photovoltaic (CSPV) 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).

² Letters containing narrative arguments that we have summarized at the end of this memorandum include Memorandum, "Letter from AES Corporation," dated March 3, 2022, which attaches the AES Corporation's Letter, "Request to Reject Auxin's Anti-Circumvention Ruling Request and to Decline Initiation," dated March 1, 2022; Hanwha Q CELLS USA, Inc. (Hanwha USA) and Hanwha Q CELLS Malaysia Sdn. Bhd.'s (Hanwha Malaysia) Letter, "re-Initiation Comments of Hanwha Q CELLS USA, Inc., and Hanwha Q CELLS Malaysia Sdn. Bhd.," dated March 3, 2022 (Hanwha's March 3, 2022, Letter); NextEra Energy Constructors, LLC and Florida Power & Light Company's (NextEra) Letter, "Request to Reject Circumvention Ruling Requests and to Decline Initiation," dated March 3, 2022; Vina Cell Technology Company Limited, Vina Solar Technology Company Limited, LONGi (HK) Trading Limited, LONGi (Kuching) Sdn. Bhd., LONGi Technology (Kuching) Sdn. Bhd., and LONGi Solar Technology US Inc.'s (LONGi) Letter "Request to Reject Auxin's Anti-Circumvention Inquiries," dated March 4, 2022 (LONGi's March 4, 2022 Letter); Silfab Solar WA Inc.'s (Silfab) Letter, "Request to Reject Auxin's Circumvention Ruling Requests and to Decline Initiation of a Circumvention Inquiry," dated March 4, 2022; Enel Green Power North America Inc.'s Letter, "Request to Reject Anti-Circumvention Inquiries," dated March 4, 2022; NextEra's Letter, "NextEra's Reply to Auxin's March 7, 2022 Letter," dated March 8, 2022; Canadian Solar's Letter, "Request to Reject Auxin's Circumvention Ruling Requests and to Decline Initiation of a Circumvention Inquiry," dated March 9, 2022; Ministry of Industry and Trade of Vietnam's Letter, "Anti-Circumvention requests regarding crystalline silicon photovoltaic (CSPV) cells and modules," dated March 9, 2022; Memorandum, Letter from Ministry of Commerce of the Kingdom of Thailand," dated March 16, 2022, which attaches the Ministry of Commerce of the Kingdom of Thailand's Letter, "Request to Reject Anti-Circumvention Ruling Request and to Decline Initiation;" Jinko Solar (U.S.) Industries Inc.'s Letter, "Request to Reject Auxin's Circumvention Ruling Requests and to Decline Initiation of a Circumvention Inquiry," dated March 17, 2022.

³ See Memorandum, "Extension of Time to Determine Whether to Initiate Anti-Circumvention Inquiry," dated March 9, 2022.

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 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 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 System 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.⁴

IV. MERCHANDISE SUBJECT TO THE CIRCUMVENTION INQUIRIES

The merchandise being examined in the circumvention inquiries is solar cells and modules that are produced and/or assembled in Cambodia, Malaysia, Thailand, or Vietnam using parts and components from China.

V. STATUTORY AND REGULATORY FRAMEWORK

Auxin alleged circumvention pursuant to section 781(b) of the Act (merchandise completed or assembled in other foreign countries).

According to section 781(b)(1) of the Act, after taking into account any advice provided by the U.S. International Trade Commission (ITC) under section 781(e) of the Act, Commerce may find merchandise imported into the United States to be covered by the scope of an order 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 antidumping and/or countervailing duty order; (B) before importation into the United States, such imported merchandise is completed or assembled in another foreign country (a third country) from merchandise which is produced in the foreign country to which the order applies; (C) the process of assembly or completion in the third

⁴ 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).

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; (B) the level of research and development (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.⁵ Commerce's practice is to evaluate each of the five factors and make its determination based on the totality of the circumstances.⁶

Moreover, pursuant to section 781(b)(3) of the Act, in determining whether to include merchandise assembled or completed in a third country within the scope of an antidumping and/or countervailing duty order, Commerce shall take into account: (A) the pattern of trade, including sourcing patterns; (B) whether the manufacturer or exporter of the merchandise that was shipped to the third country for completion or assembly is affiliated with the party that performed the completion or assembly; and (C) whether imports of the merchandise that was shipped to the third country for completion or assembly have increased after the initiation of the investigation that resulted in the order.

Section 351.226(d)(1)(ii) of Commerce's regulations provides that if Commerce "determines that a request for a circumvention inquiry satisfies the requirements of paragraph (c) of this section, {it} will accept the request and initiate a circumvention inquiry." Section 351.226(c)(1) provides that a request for a circumvention inquiry should allege the elements necessary for a circumvention determination under section 781 of the Act and be accompanied by information reasonably available to the requestor supporting the allegations. Further, 19 CFR 351.226(c)(2) provides that, to the extent reasonably available to the requestor, a request for a circumvention inquiry must include: (1) a detailed description, with a public summary, of the merchandise allegedly circumventing the order(s); (2) the name and address of the producer, exporter, and importer of the merchandise; (3) the requestor's position as to the nature of the alleged circumvention; (4) the requestor's position as to whether the circumvention inquiry, if initiated, should be conducted on a country-wide basis; and (5) factual information supporting this position.

⁵ See Statement of Administrative Action accompanying the Uruguay Round Agreements Act (SAA), H.R. Doc. No. 103-316 (1994) at 893.

⁶ 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 Chinese Blends Containing CCC Components*, 85 FR 61930 (October 1, 2020), and accompanying Issues and Decision Memorandum (IDM) at 20.

VI. ANALYSIS

Pursuant to 19 CFR 351.226(c)(2)(i) and (ii), Auxin provided a detailed description, with a public summary, of the merchandise allegedly circumventing the orders. According to Auxin, solar cells and modules that are produced/assembled in Cambodia, Malaysia, Thailand, or Vietnam using parts and components from China are circumventing the AD and CVD orders on solar cells and modules from China. Auxin also provided detailed descriptions of the stages of, and identified where various inputs were consumed in, producing solar cells and solar modules.⁷ Pursuant to 19 CFR 351.226(c)(2)(iii), (iv),(v) and (vi), Auxin also provided the names and address of the producers, exporters, and importers of the relevant merchandise,⁸ explained its position as to the nature of the alleged circumvention, made a country-wide circumvention allegation, and provided supporting factual information.⁹ Pursuant to 19 CFR 351.301(c)(1), Auxin alleged the necessary elements for a circumvention determination and provided reasonably available information supporting its allegations. Below, pursuant 19 CFR 351.226(c)(iv), we have examined Auxin's statement of position as to the nature of the alleged circumvention in the context of the statutory requirements for finding circumvention.

A. Whether the Imported Merchandise is of the Same Class or Kind of Merchandise as Subject Merchandise

Auxin claims that the solar cells and modules allegedly circumventing the *Orders* are identical to the merchandise subject to the *Orders* except that they were completed in Cambodia, Malaysia, Thailand, and Vietnam. Auxin provided shipping data indicating that companies in Cambodia, Malaysia, Thailand, and Vietnam exported merchandise to the United States which meets the description of subject merchandise. Auxin also provided evidence that the merchandise at issue from Cambodia, Malaysia, Thailand, and Vietnam was entered into the United States under the same tariff classification as subject merchandise.¹⁰

B. Whether the Imported Merchandise was Completed in a Third Country from Merchandise Produced in the Subject Country Before Importation into the United States

Auxin provided evidence that certain solar cell and module processors located in Cambodia,¹¹ Malaysia,¹² Thailand,¹³ and Vietnam¹⁴ obtained silicon wafers, silver paste, silane, solar glass, aluminum frames, junction boxes, ethylene vinyl acetate (EVA), backsheets, and other materials from China (specifically either from, or with the assistance of, their Chinese parent solar conglomerates) that are used to produce solar cells and modules. In addition, Auxin presented trade data that purportedly shows recent surges in Cambodia, Malaysia, Thailand, and Vietnam's

⁷ See Circumvention Request at 14-22.

⁸ *Id.* at Exhibit 2.

⁹ *Id.* at 1.

¹⁰ *Id.*

¹¹ *Id.* at 54-57 and Exhibits 19, 65-74.

¹² *Id.* at 32-36 and Exhibits 14-28.

¹³ *Id.* at 36-43 and Exhibits 1, 2, 12, 19, 29-49.

¹⁴ *Id.* at 43-54 and Exhibits 4, 12, 14, 16-19, 25, 27, 31-38, 50-64

imports of silicon wafers,¹⁵ silver paste, silane, solar glass, aluminum frames, junction boxes, EVA, backsheets, and other materials from China that are used to produce solar cells and modules.¹⁶ Auxin also submitted a BloombergNEF Report with the statement that “70% of the actual value of that equipment {*i.e.*, solar modules imported into the United States from Southeast Asia} accrues to China where key, pre-assembly steps in the making of the equipment take place, including production of solar-grade silicon, ingots, wafers and cells.”¹⁷ Lastly, Auxin provided evidence that China has as much as 99 percent of the worldwide solar wafer capacity, 95 percent of the worldwide solar ingot capacity, and 64 percent of solar-grade polysilicon capacity.¹⁸ According to Auxin, this demonstrates that the solar cell producers in Cambodia, Malaysia, Thailand, and Vietnam would likely obtain solar-grade silicon wafers from China.

C. Whether the Process of Assembly or Completion in the Third Countries is Minor or Insignificant

Below we have considered each of the statutory criteria noted above that are under section 781(b)(2) of the Act.

(1) Level of Investment in the Third Countries

Auxin alleges that the level of investment that is required to process silicon wafers into solar cells and assemble solar cells into solar modules is minimal compared to the level of investment that is required to produce polysilicon and silicon wafers. According to Auxin, investments in Chinese polysilicon enrichment facilities were between \$643 million to \$2.1 billion,¹⁹ whereas the Chinese solar conglomerates’ investments in solar cell and/or module facilities in the third countries ranged from as little as \$7.7 million to a maximum of \$160 million.²⁰ Auxin cited a statement in the BloombergNEF Report that “{t}echnical 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 factories can be built faster...”²¹

(2) Level of R&D in the Third Countries

Auxin claims that the level of R&D in Cambodia, Malaysia, Thailand, and Vietnam related to completing solar cells and assembling them into modules using Chinese-origin components is minimal. According to Auxin, solar cell and module processors in Cambodia, Malaysia, Thailand, and Vietnam rely on R&D performed by their owners in China, rather than developing their own technology. Auxin cited significant R&D expenditures by certain Chinese owners of subsidiaries

¹⁵ *Id.* at 28-31 and Exhibits 3, 4, and 13 where Auxin demonstrated that nearly all solar wafers consumed globally are produced in China.

¹⁶ *Id.* at 30-31 and Exhibits 8 where Auxin presented trade data concerning all inputs, including wafers.

¹⁷ See Exhibit 4, which contains Solar PV Trade and Manufacturing: A Deep Dive, Bloomberg NEF (Feb. 2021) (BloombergNEF Report).

¹⁸ *Id.* at Exhibit 13.

¹⁹ *Id.* at 60-61 and Exhibits 76-79, 84-86.

²⁰ *Id.* at 62-64 and Exhibits 15, 87-91.

²¹ *Id.* at 59 (citing BloombergNEF Report at Exhibit 4, p. 1).

in the third countries at issue and noted that these owners have obtained thousands of patents.²² By contrast, Auxin notes that financial statements either do not identify R&D as a principle business or activity of the subsidiaries in the third countries at issue or R&D expenses for them are not separately identified on the financial statements.²³ Furthermore, Auxin cited statements in BloombergNEF Report that “{c}ell manufacturing is more versatile compared to wafers and polysilicon and has lower technical hurdles”²⁴ and “{b}uilding a new module factory has low technical hurdles compared to wafer and polysilicon.”²⁵

(3) Nature of the Production Process in the Third Countries

Auxin noted the following regarding the nature of the module assembly in the third countries:

In the underlying AD investigation, Commerce evaluated the production process of solar cells and modules and “concluded that the module assembly stage of production is principally an assembly process, which consists of stringing together solar cells, laminating them, and fitting them in a glass-covered aluminum frame for protection.” In other words, Commerce has already determined that “the module assembly stage of production is a comparatively less sophisticated process than cell conversion or the production stages that precede it.”

Auxin also contends that in applying the “nature of the production process” criterion, Commerce should follow its established practice and compare the production operations of an integrated Chinese solar cell producer to the operations of the companies in the third countries that convert Chinese-origin silicon wafers into solar cells and assemble solar cells into modules. Auxin maintains that the operations in the third countries are limited compared to the operations of a Chinese solar cell producer in terms of production activities, investment, R&D, expenses, and technology. In Auxin’s view, only two of the five production stages occur in the third countries (cell production and module assembly occur in the third countries while polysilicon production, ingot production, and wafer production occur in China).

Auxin also believes that the manufacturing process and the level of investment “up through wafers, starting from the initial raw polysilicon stage, is much more substantial than the process of converting the wafers to cells and assembling modules.” As noted above in the “Level of Investment in the Third Countries” and “Level of R&D in the Third Countries” sections, Auxin provided evidence indicating that completing/assembling parts into solar cells and modules in the third countries requires less capital and limited R&D compared to producing polysilicon and wafers in China.

²² *Id.* at 65 and Exhibit 25 (citing LONGi Group’s annual report identifying \$407 million dollar R&D expenditures in 2020 alone, resulting in 1,001 patents, and indicating that the R&D took place in China). Auxin also cited many large investments in R&D by the Chinese solar conglomerates GCL, Canadian Solar, Trina Solar, Jinko Solar, and Boviet at Exhibits 12, 31, and 56).

²³ *Id.* at Exhibits 12, 31, and 56.

²⁴ *Id.* at Exhibit 4, Section 3.3.

²⁵ *Id.* at Section 3.4.

Auxin essentially characterizes the operations of certain solar cell and module producers in Cambodia, Malaysia, Thailand, and Vietnam as further processors and assemblers since there is evidence indicating that these companies process/assemble major inputs that they obtain from their Chinese owners or Chinese owners' supply chains (e.g., silicon wafers, silver paste, silane, solar glass, aluminum frames, junction boxes, EVA, backsheets) into solar cells and modules (see section VI. B. above).

(4) Extent of the Production Facilities in the Third Countries

According to Auxin, production facilities in the third countries under consideration are limited. Auxin notes that the sizes of Jinko Solar Group's solar cell and module plants in Malaysia are 8,191 square meters and 12,679 square meters. In contrast, the sizes of Jinko Solar Group's facilities in China for producing silicon ingots and wafers and silicon ingots are 68,397 square meters and 165,333 square meters, respectively. Auxin also provided evidence that JA Solar's Malaysian facility is 19,357 square meters in size while its Chinese facilities range from 38,157 square meters to 559,973 square meters in size. Canadian Solar has solar cell and module facilities in Thailand and Vietnam that are all under 30,000 square meters in size while it has a facility in China that manufactures polysilicon ingots, silicon wafers, and solar modules that has a total area of 75,527 square meters. Auxin also provided proprietary evidence regarding the gigawatt production capacities of the facilities in the third countries at issue compared to the gigawatt production capacities of Chinese facilities to demonstrate the limited extent of the operations in the third countries.²⁶

As noted above in the "Level of Investment in the Third Countries" section, Auxin provided evidence that less investment is required for solar cell and module production facilities in the third countries than for silicon processing and wafer production facilities in China. Auxin also relied on a BloombergNEF Report to show the extent of cell and module facilities in the third countries. That report contains statements that "{b}uilding a new module factory has low technical hurdles compared to wafer and polysilicon," and due to those "low technical and financial barriers, it is also easier for module companies to open shop in other countries in response to tariffs or other policy developments."²⁷

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

Although Auxin notes that it does not have access to the confidential data of producers of solar cells and modules in the third countries under consideration, it provided industry publications to demonstrate that the processing of Chinese raw materials in the third countries under consideration is a small proportion of the total value of the merchandise exported to the United States. Specifically, Auxin cites a statement in the BloombergNEF Report that "Southeast Asian nations account for just 27% of the value of a typical PV module exported to the U.S., despite those nations being most likely to be the last port of call before final, assembled equipment arrives in the U.S."²⁸ Auxin also points to a statement in the BloombergNEF Report that "the majority of

²⁶ *Id.* at 69-71 and Exhibits 14, 19, 70, 74, 96.

²⁷ *Id.* at 72 (citing BloombergNEF Report at Exhibit 4).

²⁸ *Id.*

goods the U.S. imports {i.e., solar panels} arrive from Southeast Asia post assembly,” but “70% of the actual value of that equipment {solar panels} accrues to China where key, pre-assembly steps in the making of the equipment take place, including production of solar-grade silicon, ingots, wafers and cells.”²⁹ Auxin also cites a statement in the BloombergNEF Report that “{w}hether a silicon-based module is assembled on U.S. soil or abroad, about half its total value is accounted for by non-silicon raw materials such as silver paste, glass and back sheets,” with the “vast majority of suppliers of these materials {being} concentrated in China.”³⁰ Moreover, the solar production surveys that Auxin provided that were issued by the U.S. National Renewable Energy Laboratory (NREL) and the BloombergNEF Report indicate that the combined cost of silver paste and wafers account for over half of the cost of producing solar cells.³¹

D. Whether the Value of the Merchandise Produced in China and Used in Third-Country Production is a Significant Portion of the Total Value of the Merchandise Exported to the United States³²

The cost itemizations in the BloombergNEF and NREL reports that Auxin placed on the record support its contention that the costs of silicon wafers, silver paste, solar glass, aluminum frames, junction boxes, EVA, backsheets, and other inputs supplied by China to the solar cell processors and solar module assemblers in the third-countries constitute a significant portion of the total cost of the final products in which these inputs were incorporated.³³ Auxin cited a statement in the BloombergNEF Report that “70% of the actual value of that equipment {solar panels} accrues to China where key pre-assembly steps in the making of the equipment take place, including production of solar-grade silicon, ingots, wafers and cells.”³⁴ Even though Auxin alleged that solar cell production is taking place in the third-countries, as noted above, there is evidence that many significant inputs that are used to produce solar cells in the third-countries came from China and thus their value would still accrue to China.

²⁹ *Id.* at 59 (citing BloombergNEF Report at 22).

³⁰ *Id.*

³¹ *Id.* at Exhibits 4 and 97.

³² Pursuant to section 351.226(i) of our regulations “{i}n determining the value of parts or components (including such purchases from another person) under section 781(b)(1)(D) of the Act, or of processing performed (including by another person) under section 781(b)(2)(E) of the Act, the Secretary may determine the value of the part or component on the basis of the cost of producing the part or component under section 773(e) of the Act—or, in the case of nonmarket economies, on the basis of section 773(c) of the Act.

³³ See BloombergNEF Report at Exhibit 4, containing the cost elements of a \$0.19 per-watt module (*i.e.*, \$0.09 per watt for module assembly, \$0.03 per watt for cell processing, \$0.01 per watt for wafer processing and \$0.06 per watt for polysilicon). The NREL report at Exhibit 97, iv, contains a similar cost itemization. These reports explicitly itemize the processing and material costs of each stage. Given that significant portions of module assembly and cell production costs are made up of material costs, and Auxin provided evidence that third-country processors obtained such materials from China, the cost distribution noted in the BloombergNEF Report indicates that Chinese materials may constitute a significant portion of the total cost of the final products.

³⁴ See Circumvention Request at 59 (citing BloombergNEF Report at 22). Based on the cost itemizations in the BloombergNEF Report and the NREL Report, the percentage of solar cell production costs represented by the cost of Chinese materials (*e.g.*, wafers, silver and aluminum paste, silane) would likely be higher than the percentage of solar module costs represented by the cost of Chinese materials for the solar modules shipped from the third countries under consideration to the United States. See Exhibits 4 and 57.

E. Additional Factors to Consider in Determining Whether a Circumvention Inquiry is Warranted

Below we have considered each of the statutory criteria noted above that are under section 781(b)(3) of the Act.

(1) Pattern of Trade and Sourcing Patterns

Auxin provided trade statistics from the ITC demonstrating that between 2011 (the year the petition that led to the *Orders* was filed) and 2020, the value of U.S. imports of solar cells and modules from China decreased 86 percent, from approximately \$2.8 billion to approximately \$392 million.³⁵ From January through May 2021, U.S. imports of solar cells and modules from China dropped to less than \$7.5 million.³⁶ Meanwhile, U.S. imports of solar cells and modules from Cambodia, Malaysia, Thailand, and Vietnam increased from \$150 million in 2011 to \$5.4 billion in 2020.³⁷

Auxin also provided trade statistics³⁸ and other information indicating that Chinese exports to Cambodia, Malaysia, Thailand, and Vietnam of silicon wafers and other essential direct material inputs that are necessary to convert wafers into solar modules, such as silver paste, solar glass, silane, aluminum frames, junction boxes, EVA, and backsheets, increased significantly after imposition of the *Orders*.³⁹

(2) Whether the Manufacturer or Exporter of the Merchandise That was Shipped to the Third Country for Completion or Assembly is Affiliated with the Party That Performed the Completion or Assembly

Auxin placed on the record substantial evidence that a number of the solar cell processors and solar module assemblers in Cambodia, Malaysia, Thailand, and Vietnam are subsidiaries of large Chinese solar conglomerates which supplied them with the inputs that they used to produce solar cells and/or modules. Thus, Auxin maintains that these third-country solar cell and module producers are affiliated with their Chinese suppliers.⁴⁰

Auxin also provided evidence that while Chinese producers made, and continue to make, solar cells and modules, upon imposition of the *Orders*, large Chinese solar conglomerates began building subsidiary facilities in Cambodia,⁴¹ Malaysia,⁴² Thailand,⁴³ and Vietnam⁴⁴ for processing silicon wafers into solar cells and modules.⁴⁵

³⁵ *Id.* at Exhibit 1.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.* at 32-57 and Exhibits 1, 2, 4, 14-74.

⁴⁰ *Id.*

⁴¹ *Id.* at 54-57 and Exhibits 19, 65-74.

⁴² *Id.* at 32-36 and Exhibits 14-28.

⁴³ *Id.* at 36-43 and Exhibits 1, 2, 12, 19, 29-49.

⁴⁴ *Id.* at 43-54 and Exhibits 4, 12, 14, 16-19, 25, 27, 31-38, 50-64

⁴⁵ *Id.* at 32-57 and Exhibits 1, 2, 4, 14-64.

(3) Whether Imports of the Merchandise That was Shipped to the Third Country for Completion or Assembly Have Increased After the Initiation of the Investigation That Resulted in the Order

As noted above, Auxin provided trade statistics and other information indicating that Chinese exports to Cambodia, Malaysia, Thailand, and Vietnam of silicon wafers and other essential direct material inputs that are necessary to convert wafers into solar modules, such as silver paste, solar glass, silane, aluminum frames, junction boxes, EVA and backsheets, increased significantly after imposition of the *Orders*.⁴⁶

Based on the foregoing, for purposes of initiation, we have determined that, consistent with 19 CFR 351.301(c)(1), Auxin properly alleged the elements necessary for a circumvention determination under section 781(b) of the Act and provided information reasonably available to it supporting its allegations. Also, to the extent reasonably available to Auxin, it provided the information required to be included in a request for a circumvention inquiry under 19 CFR 351.301(c)(2).

VII. COMMENTS OPPOSING INITIATION

A number of parties urged Commerce not to initiate the requested circumvention inquiries. Some of those parties claimed that Auxin's requests do not meet the regulatory and statutory criteria for initiating circumvention inquiries. We have addressed those comments below.

Certain parties claimed that Auxin failed to identify adequately the merchandise that it claims is circumventing the *Orders* (see 19 CFR 351.226(c)(2)(i) – requiring a detailed description of the merchandise allegedly circumventing the order). We disagree. Auxin provided the information required under 19 CFR 351.226(c)(2)(i)(A)-(F), and clearly identified as the subject of its request cell completion and module assembly in the third countries at issue when processors in those countries used components from China. Auxin also explained the steps required for cell production and module assembly. Auxin identified the merchandise that it claims is circumventing the *Orders* as solar cells and modules that are produced and/or assembled in Cambodia, Malaysia, Thailand, or Vietnam using parts and components from China. Therefore, Auxin satisfied the regulatory requirement to describe the merchandise allegedly circumventing the *Orders*.

Parties also claimed that Auxin incorrectly identified third-country processing as minor or insignificant. These parties argued that the third-country processing involves significant production steps that require major investment and are technologically sophisticated. However, consistent with 19 CFR 351.226(c)(iv), Auxin described its position as to the nature of the alleged circumvention under section 781(b) of the Act (merchandise completed or assembled in other foreign countries) and provided information to support its allegation. Specifically, Auxin described certain situations, supported with information reasonably available to it, where the extent of the key inputs that the third-country processors obtained from China, including research and development performed in China, indicated that a small portion of the value of the final product accrued to the third countries. Thus, Auxin provided a reasoned explanation for its

⁴⁶ *Id.* at 32-57 and Exhibits 1, 2, 4, 14-74.

characterization of the third-country processing, and it supported its explanation with information reasonably available to it, including information regarding each factor listed in section 781(b)(2) of the Act. As Auxin noted, it does not have access to the confidential data of companies that produce/process solar cells and modules in the third countries at issue. Consequently, we determined that the information provided by Auxin regarding third-country processing provides a basis for initiation. During the course of the circumvention inquiries, parties may comment on whether the requirement in section 781(b)(1)(c) of the Act (whether the process of assembly or completion in the foreign country is minor or insignificant) has been met for purposes of determining whether or not circumvention exists.

Another party claimed that the *Orders* under consideration expressly exclude modules assembled from solar cells produced in a third country and the United States Court of Appeals for the Federal Circuit (CAFC) held that a product specifically excluded from the scope of an order may not be brought within the scope of that order in the context of a circumvention inquiry.⁴⁷ We disagree that the CAFC's decision in *Wheatland Tube* precludes initiation of these circumvention inquiries. *Wheatland Tube* pertains to the "minor alterations" provision of the circumvention statute, not the third-country processing provision of the statute.⁴⁸ The CAFC was concerned about using the minor alterations provision of the circumvention statute to include a product expressly excluded from the scope of an order within the class or kind of merchandise covered by the order.⁴⁹ *Wheatland Tube* did not address the third-country processing provision of the Act or the application of the third-country processing provision to products not expressly excluded in the literal language of the scope of an order.

Circumvention inquiries by their nature necessarily concern merchandise that is not covered by the scope of an existing AD/CVD order. The argument that solar cells and modules that are outside of the scope cannot be included within the scope of the *Orders* through a circumvention proceeding ignores the express reason for the circumvention provisions of the Act, which is to address situations where parties manipulate certain practices to avoid AD and CVD measures that were intended to cover such trade. As Commerce previously explained, it:

conducts a scope inquiry to determine whether a product is within the scope of an order, relying on its regulations, 19 CFR 351.225(k)(1) and (2). As recognized by the courts, {Commerce} conducts an anti-circumvention proceeding to determine whether it may lawfully include within the scope of an AD or CVD order merchandise which falls outside the literal scope of the order.⁵⁰

⁴⁷ See LONGi's March 4, 2022 Letter at 15 (citing *Wheatland Tube Co. v. United States*, 161 F.3d 1365 (CAFC 1998) at 1371 (affirming the CIT's determination in *Wheatland Tube Co. v. United States*, 973 F. Supp. 149 (CIT 1997))).

⁴⁸ See *Wheatland Tube*, 161 F.3d at 1369-70; see also *Deacero S.A. de C.V. v. United States*, 817 F.3d 1332, 1338-39 (Fed. Cir. 2016).

⁴⁹ See *Wheatland Tube*, 161 F.3d at 1371.

⁵⁰ See *Aluminum Extrusions from the People's Republic of China: Affirmative Final Determination of Circumvention of the Antidumping and Countervailing Duty Orders and Rescission of Minor Alterations AntiCircumvention Inquiry*, 82 FR 34630 (July 26, 2017), and accompanying IDM at 8.

Similarly, the CAFC explained, that:

In order to effectively combat circumvention of antidumping duty or countervailing duty orders, “a domestic interested party may allege that changes to an imported product ... constitutes circumvention under {section 781 of the Act}.” 19 C.F.R. § 351.225(a) (2020). When such issues arise, Commerce may initiate an anti-circumvention inquiry and issue “scope rulings” that “clarify the scope of an order or suspended investigation with respect to particular products.” *Id.* See also *id.* § 351.225(g) – (j). As we noted in *Deacero S.A. de C.V. v. United States*, Commerce may then “determine that certain types of articles are within the scope of a duty order, even when the articles do not fall within the order’s literal scope.”⁵¹

Another party claimed that Auxin failed to satisfy section 781(b)(1)(E) of the Act, which requires a demonstration that action is appropriate under the circumvention provisions to prevent evasion of an order or finding. However, section 781(b)(1)(E) of the Act requires Commerce to determine that action is appropriate under the circumvention provisions to prevent evasion of an order before it includes the merchandise at issue within the scope of such order. Section 781(b)(1)(E) of the Act is not a requirement that the requestor must meet for initiation, but rather describes a determination that Commerce must make in the course of the circumvention proceeding.

VIII. COUNTRY-WIDE CIRCUMVENTION INQUIRIES

Pursuant to 19 CFR 351.226(m)(1), in conducting a circumvention inquiry, Commerce shall consider, based on the available record evidence, the appropriate remedy to address circumvention and to prevent evasion of the order, including application of its determination on a producer-specific basis, exporter-specific basis, importer-specific basis, or some combination thereof, or application of its determination on a country-wide basis to all products from the same country as the product at issue with the same, or similar, relevant physical characteristics, (including chemical, dimensional and technical characteristics), regardless of the producer, exporter, or importer of those products.

Pursuant to 19 CFR 351.226(c)(2), a request for a circumvention inquiry should include:

- (v) A statement of the requestor’s position as to whether the circumvention inquiry, if initiated, should be conducted on a country-wide basis.
- (vi) Factual information supporting this position, including import and export data relevant to the merchandise allegedly circumventing the antidumping or countervailing duty order.

Auxin requests that Commerce conduct country-wide inquiries with respect to the production of solar cells and modules in Cambodia, Malaysia, Thailand, and Vietnam. According to Auxin, the factual information in its request, “including but not limited to the trade flow of raw materials from China to these subject countries, establishes that the use of key Chinese inputs including

⁵¹ See *Tai-Ao Aluminium (Taishan) Co., TAAL America Ltd., Regal Ideas, Inc., v. United States*, 983 F.3d 487, 490 (Fed. Cir. 2020).

polysilicon, wafers, ingots, framing, glass, wires, EVA, silver paste, backsheets, silicone sealant, junction boxes, and inverters, is widespread.”

Information provided by Auxin indicates that multiple companies in Cambodia, Malaysia, Thailand, and Vietnam, rather than a single company, have the facilities necessary to conduct the processing in question and that subsidiaries of Chinese companies that are located in these countries source numerous solar cell and panel inputs from China.⁵² Auxin provided trade statistics showing significant increases in U.S. imports of solar cells and modules from the third-countries in question,⁵³ and indications of surges in Cambodia, Malaysia, Thailand, and Vietnam’s imports that may include materials from China that are used to produce solar cells and modules.⁵⁴

Because Auxin explained that the circumvention inquiries should be conducted on a country-wide basis and it adequately supported such an action with factual information, it has met the requirements under 19 CFR 351.226(c)(2)(v) and (vi) and we are initiating the requested circumvention inquiries on a country-wide basis.⁵⁵

Hanwha Q CELLS USA, Inc., and Hanwha Q CELLS Malaysia Sdn. Bhd. (collectively Hanwha), contend that if Commerce initiates a circumvention inquiry with respect to Malaysia, it should do so on a company-specific basis, rather than a country-wide basis, because Auxin’s request only focuses on a subset of potential respondents (*i.e.*, Malaysian companies that are integrated with their upstream Chinese affiliates and use inputs from them to assemble cells and modules), not the entire industry in Malaysia.⁵⁶ However, Auxin did not request circumvention inquiries on the subset of companies identified by Hanwha. Rather, Auxin requested that:

Commerce promptly initiate an anti-circumvention inquiry concerning CSPV cells and modules assembled and completed in Malaysia, Thailand, Vietnam, and Cambodia using Chinese-produced inputs.⁵⁷

Because Hanwha has not demonstrated that Auxin failed to meet the requirements under 19 CFR 351.226(c)(2)(v) and (vi), as noted above, we are initiating the requested circumvention inquiries, including the inquiry requested with respect to Malaysia, on a country-wide basis.

Consistent with Commerce’s approach in other country-wide circumvention inquiries, we intend to issue questionnaires to solicit information from companies in Cambodia, Malaysia, Thailand,

⁵² See Circumvention Request at 32-57 and Exhibits 1, 2, 4, 9, 14-74.

⁵³ *Id.* at Exhibit 1.

⁵⁴ *Id.* at 30-31 and Exhibits 8 where Auxin presented trade data concerning all inputs, including wafers.

⁵⁵ See, e.g., *Certain Corrosion-Resistant Steel Products from the Republic of Korea and Taiwan: Initiation of Anti-Circumvention Inquiries on the Antidumping Duty and Countervailing Duty Orders*, 83 FR 37785 (August 2, 2018); *Carbon Steel Butt-Weld Pipe Fittings from the People’s Republic of China: Initiation of Anti-Circumvention Inquiry on the Antidumping Duty Order*, 82 FR 40556, 40560 (August 25, 2017) (stating at initiation that Commerce would evaluate the extent to which a country-wide finding applicable to all exports might be warranted); and *Certain Corrosion-Resistant Steel Products from the People’s Republic of China: Initiation of Anti-Circumvention Inquiries on the Antidumping Duty and Countervailing Duty Orders*, 81 FR 79454, 79458 (November 14, 2016) (stating at initiation that Commerce would evaluate the extent to which a country-wide finding applicable to all exports might be warranted).

⁵⁶ See Hanwha’s March 3, 2022 Letter at 5 (citing Circumvention Request at 5 and 87).

⁵⁷ See Circumvention Request at 88.

and Vietnam concerning their shipments of solar cells and modules to the United States and the origin of inputs that they used to produce the solar cells and modules. A company's failure to respond completely to Commerce's requests for information may result in the application of partial, or total facts available, pursuant to section 776(a) of the Act, which may include adverse inferences, pursuant to section 776(b) of the Act.

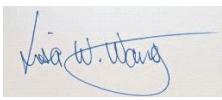
IX. RECOMMENDATION

Pursuant to section 781(b) of the Act and 19 CFR 351.226(d), we recommend initiating country-wide inquiries into whether solar cells and modules that are produced/assembled in Cambodia, Malaysia, Thailand, or Vietnam using parts and components from China are circumventing the AD and CVD orders on solar cells and modules from China.

Agree

Disagree

3/25/2022

X 

Signed by: LISA WANG

Lisa W. Wang

Assistant Secretary

for Enforcement and Compliance