April 26, 2017

BY HAND DELIVERY

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

Re: Petition for Global Safeguard Relief Pursuant to Sections 201-202 of the Trade Act of 1974 - Crystalline Silicon Photovoltaic Cells and Modules

Dear Secretary Barton:

On behalf of Suniva, Inc. ("Suniva" or "petitioner"), we respectfully file with the U.S. International Trade Commission ("the Commission") the enclosed petition for global safeguard relief from imports of crystalline silicon photovoltaic ("CSPV") cells and modules. This is a petition under sections 201-202 of the Trade Act of 1974 and Subpart B of part 26 of the rules of practice and procedure of the Commission.¹

Suniva is representative of the domestic industry producing CSPV cells and modules, and, therefore, pursuant to 19 U.S.C. § 2252(a)(l) and 19 C.F.R. § 206.13, may file this petition.

¹ 19 C.F.R. § 206.2.

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Pursuant to 19 C.F.R. § 201.6 of the Commission’s regulations, Suniva requests proprietary treatment for certain information in this petition which we designate by placing it within brackets. The nature of the information, and the basis for this request is as follows:

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All of the above information is proprietary and not otherwise available to the public. Any disclosure to the public of such proprietary information would result in serious and substantial harm to the competitive position of the source of the information and would impair the ability of the Commission to obtain information necessary to fulfill their statutory functions. A public version of this petition has been prepared and is being filed simultaneously with this submission pursuant to section 201.8(d) of the Commission's regulations.

Also, attached to this cover letter is a counsel certification regarding the completeness and accuracy of the information contained in the petition, as required by 19 C.F.R. § 206.8.
If you have any questions regarding this petition, please contact the undersigned.

Respectfully submitted,

Matthew McConkey
CERTIFICATION OF COUNSEL

City of Washington ) ss
District of Columbia )

In accordance with section 206.8 of the Commission’s rules, I, Matthew McConkey, of Mayer Brown LLP, counsel to petitioner, Suniva, Inc., certify that (1) I have read the attached submission, and (2) based on the information made available to me by petitioner, I have no reason to believe that this submission contains any material misrepresentation or omission of fact, and (3) the information contained in this submission is accurate and complete to the best of my knowledge.

I, further certify that pursuant to 19 C.F.R. § 201.6(b)(3)(iii) of the Commission's rules, that to the best of my knowledge and belief, information substantially identical to that for which proprietary treatment has been requested in this submission is not available to the general public.

Matthew McConkey

Subscribed and sworn to before me on this 26th day of April 2017.

Notary Public
NON-CONFIDENTIAL VERSION

BEFORE THE
UNITED STATES INTERNATIONAL TRADE COMMISSION

PETITION FOR RELIEF PURSUANT TO SECTIONS 201-202 OF THE TRADE ACT OF 1974, ON BEHALF OF SUNIVA, INC. REGARDING CRYSTALLINE SILICON PHOTOVOLTAIC CELLS AND MODULES

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April 26, 2017
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I. INTRODUCTION

Pursuant to sections 201-202 of the Trade Act of 1974 and Subpart B of part 206 of the rules of practice and procedure of the United States International Trade Commission (the "Commission"), we hereby submit this petition for a global safeguard action against foreign-manufactured crystalline silicon photovoltaic ("CSPV") cells and modules. While this action is not undertaken lightly, the fact is the American CSPV cells and modules industry is disintegrating. This industry simply cannot survive in a market where foreign CSPV cell and module imports into the United States have unexpectedly exploded and prices have collapsed. At least eight domestic CSPV cell and module producers have been forced to file for bankruptcy, shut down production facilities, or lay off employees since 2012. Indeed, shortly before the filing this petition, Suniva laid off nearly 200 employees in March and subsequently filed for Chapter 11 bankruptcy. Without relief, Suniva certainly will be out of business permanently, and further closures affecting the remaining domestic production are anticipated in 2017.

The global imbalance in supply and demand has resulted in distressed prices for CSPV cells and modules and rising imports into the United States. This imbalance is expected to continue as global capacity of CSPV cells has been forecasted to reach over 100 GW by 2018, with global demand only reaching 63-72 GW in the same period. Without temporary relief, there will likely be no existing American CSPV cells or modules industry within a short period of time. Indeed, from 2015 to 2016, U.S. production of CSPV modules declined by 10.5 percent, while U.S. production of CSPV cells fell even more drastically by 37.6 percent. This has caused the domestic industry, including Suniva, to suffer devastating financial losses. As noted by IBIS World:

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2 See 19 C.F.R. § 206.2.
3 Exhibit 1, Credit Suisse Report, JA Solar Holdings (Mar. 16, 2017).
The Solar Panel Manufacturing industry has experienced rapid decline over the five years to 2016. The industry has been plagued with high competition from low-cost Asian manufacturers, which has decreased the price of solar panels and cells over the period.\(^4\)

To save this important American industry from elimination, Suniva, as petitioner, files this global safeguard petition. Petitioner seeks a determination by the Commission that serious injury is occurring, and that imports are a substantial cause of that injury. The President’s authority under the law to formulate and implement a remedy in response to such an injury determination by the Commission is broad and sweeping. The statute authorizes a range of actions that the President may take including imposing tariffs and tariff rate quotas, negotiating agreements with foreign countries to limit their exports to the United States and to address the underlying cause of injury, and taking “any other action which may be taken by the President under the authority of law and which the President considers appropriate and feasible” to facilitate efforts by the domestic industry to adjust to import competition.\(^5\) Thus, petitioner seeks a recommendation to the President of four years of relief of an initial duty rate on cells of $0.40/watt, along with an initial floor price on modules of $0.78/watt. Petitioner also seeks other equitable remedies that will effectively assist the domestic industry to make a positive adjustment to import competition. Finally, petitioner seeks a recommendation from the Commission to the President that the United States negotiate with trading partners to address the global supply imbalance and overcapacity in CSPV cells and modules. The massive excess capacity overhang that characterizes the world CSPV cells and modules sector today prevents a proper functioning of markets and results in

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imports entering at extremely depressed prices. Indeed, the purpose of the suggested relief is to allow the domestic industry to survive long enough that it can benefit from actions of the U.S. government, and foreign governments and producers to address the massive excess global capacity that has depressed global CSPV cells and modules prices to unsustainable levels. To be clear, none of this supply imbalance is due to actions by U.S. producers. As noted by IBIS World:

Due to the intense competition from Asian manufacturers both on the US and international markets, as well as a rise in the TWI, which hindered exports, many manufacturers have been unable to compete and have therefore exited the industry. Consequently, the number of industry enterprises decreased at an annualized rate of 12.1 percent over the five-year period to an estimated 33 companies in 2016. As the number of enterprises declined over the period, employment fell at an annualized rate of 12.6 percent to 3,955 workers.\(^6\)

Relief is necessary to prevent the permanent loss of a competitive domestic industry while the global imbalance is addressed.

It is important to note that this is not the first time that imports have caused injury to the domestic industry. In fact, the Commission has already found the U.S. industry to be injured by reason of imports in two antidumping and countervailing duty investigations\(^7\) and the degree of injury in those cases easily merits a subsequent finding of serious injury. Indeed, there is no injury that can be more serious than the existential threat to the U.S. industry. It is not the purpose of this petition to re-evaluate the affirmative determinations in CSPV AD/CVD 1 and CSPV AD/CVD 2 against those particular countries (China and Taiwan). Rather, this petition

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\(^6\) Exhibit 2, IBIS World at 7.

\(^7\) A-570-979 (Crystalline Silicon Photovoltaic Cells, Whether Or Not Assembled Into Modules from the People’s Republic of China), C-570-980 (Crystalline Silicon Photovoltaic Cells, Whether Or Not Assembled Into Modules from the People’s Republic of China) (collectively “CSPV AD/CVD 1”), and A-570-010 (Crystalline Silicon Photovoltaic Products from the People’s Republic of China), C-570-011 (Crystalline Silicon Photovoltaic Products from the People’s Republic of China), A-583-853 (Crystalline Silicon Photovoltaic Products from Taiwan) (collectively “CSPV AD/CVD 2”).
proposes that, based on the actions occurring over the intervening years, the remedies implemented by the CSPV AD/CVD 1 and CSPV AD/CVD 2 cases were evaded as the impacted producers have simply opened significant capacity in third countries not subject to those AD/CVD orders. One of the underlying principles of those prior Title VII cases was that implementing duties against the subject goods originating from the offending countries would create a cost basis that generates greater domestic price equity. Unfortunately, that outcome has not occurred. Rather than invest in U.S. manufacturing or charge fair market prices, Chinese and Taiwanese manufacturers, either directly through the establishment of their own facilities, or indirectly through the support of contract manufacturing operations in Southeast Asia, India, and Eastern Europe, created alternative capacity that was not subject to U.S. tariffs. In fact, the data in this petition shows a direct correlation between:

- The institution of tariffs against subject goods made in China or Taiwan;
- The reduction of imports into the United States from those countries; and
- The increase in imports from Vietnam, Thailand, Malaysia, and other third countries.

Indeed, the driving factor that caused the trade remedies established in CSPV AD/CVD 1 and CSPV AD/CVD 2 to be less effective than hoped, can be largely attributed to the very nature of bringing a Title VII action - the need for action against a specific country. The evidence clearly indicates that, given the response of the largest global manufacturers, such a “targeted-country” strategy is set up for failure. The global industry has proven, to the sum of billions of dollars of investment, that it will go to exceptional lengths to avoid investment in the United States, and that given any loophole, will prosecute against that loophole vigorously. It is for these reasons, that this action, with its request to add tariffs to subject goods made anywhere outside the United States, is the sole effective cure.
The crisis facing the domestic CSPV cells and modules industry is acute. The time remaining to protect and save the industry is very short. Section 201 relief by the President of the United States is the only remedy available to prevent the final and permanent elimination of this American industry before the end of 2017 – because the relief has to be global.

II. PRODUCT DESCRIPTION AND LIKE DOMESTIC ARTICLE

A. Product Description

This petition is filed against a single like product consisting of imports of CSPV cells and modules, which are the principal elements of solar photovoltaic power-generation systems. CSPV cells are most commonly used in solar modules, which are also known as solar panels.

The imported article covered by the petition is described as follows:

The merchandise covered by this petition 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.

This petition covers crystalline silicon photovoltaic cells of thickness equal to or greater than 20 micrometers, having a p/n junction formed by any means, whether or not the cell has undergone other processing, including, but not limited to, cleaning, etching, coating, and/or addition of materials (including, but not limited to, metallization and conductor patterns) to collect and forward the electricity that is generated by the cell.

Included in the scope of this petition are photovoltaic cells that contain crystalline silicon in addition to other photovoltaic materials. This includes, but is not limited to, passivated emitter rear contact (“PERC”) cells, heterojunction with intrinsic thin-layer (“HIT”) cells, and other so-called “hybrid” cells.

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8 See 19 C.F.R. § 206.14(a).
9 As the Commission noted in CSPV AD/CVD 1, “nearly all CSPV cells are dedicated to produce CSPV modules, that both cells and modules share the same primary physical characteristics and are sold for integration into PV solar systems that convert sunlight into electricity, that cells represent a substantial portion of the cost and value of finished modules, and that cells undergo only one major manufacturing step to become modules.” U.S. International Trade Commission, Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 & 731-TA-1190 (Final), USITC Pub. No. 4360 (Nov. 2012) at 6, fn. 39. Therefore it is appropriate that the scope of the petition considers CSPV cells and CSPV modules as one like product.
10 CSPV cells are also used in other products such as building integrated photovoltaic (“BIPV”) materials, that incorporate photovoltaic materials, including shingles, windows, and siding.
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 this petition.

Excluded from petition are thin film photovoltaic products produced from amorphous silicon (a-Si), cadmium telluride (CdTe), or copper indium gallium selenide (CIGS).

Also excluded from the scope of this petition 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.11

As this petition addresses imports from all countries, the imported article covered by this petition includes modules, laminates, and panels produced in any third-country from cells produced in any third-country but does not include modules, laminates, and panels produced in a third-country from cells produced in the United States.12

CSPV cells are the foundation of solar photovoltaic power-generation systems, which use a semiconductor device to directly convert energy from the sun into electricity. The photovoltaic ("PV") effect occurs when photons of light strike and energize the valence electrons of the semiconductor material, temporarily freeing them from their parent atoms. Due to a potential energy barrier built into the solar cell structure, the electrons flow preferentially in one direction,

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12 The proposed scope recognizes that under U.S. regulations the production of a CSPV module for export to the United States consisting of CSPV cells sourced from a third-country would not result in the CSPV module qualifying as originating from the exporting country. Therefore, it is appropriate that the scope of the petition considers CSPV cells and CSPV modules as one like product. See, e.g., U.S. Customs and Border Protection (“CBP”) Ruling HQ H261693 (Sept. 16, 2015) (finding the country of origin of a solar module based on the origin of the solar cells because “solar cells impart the essential character of the solar panels”).

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creating an electrical current. Like conventional sources of electricity, PV technology cannot store electrical energy.

CSPV cells are squares or pseudosquares, typically 5 inches or 6 inches, and are made of polysilicon, which is created by refining sand or quartz. They have a positive layer, a negative layer, and a positive-negative ("p/n" junction) and each can produce 3 to 4.5 watts of electricity. CSPV cells use one of two types of crystalline silicon to convert sunlight into electricity: mono-crystalline silicon ("mono") and multi-crystalline ("multi") (frequently called "polycrystalline") silicon. Mono silicon-based solar cells are cut from cylindrical ingots of silicon that have been grown using the same process that is used to grow electronic-grade silicon for the integrated circuit industry. Mono wafers are generally cut in a "pseudo-square" shape to balance the desire for a square form factor in the finished product against the cost of recycling the outer crescents of the original cylindrical ingot. Multi-crystalline silicon-based solar cells are made from large, square-cast ingots of silicon and have a square form factor by default. Mono-crystalline cells typically have higher conversion efficiency (i.e., the percent of sunlight converted to electricity) than multi-crystalline cells.

PV devices are also made from a variety of thin film materials, the most commercially important of which are Cadmium Telluride ("CdTe") and Copper Indium Gallium Diselenide ("CIGS"). Thin-film technologies reduce the amount of required photovoltaic material by placing that material on a layer of glass. This petition does not cover imports of thin film photovoltaic products produced from amorphous silicon (a-Si), cadmium telluride (CdTe), or copper indium gallium selenide (CIGS).

The manufacturing of CSPV starts with the crystallization of polysilicon and then moves to wafer production. Wafers are produced by shaping the crystalline silicon into ingots and then
slicing the ingots into very thin wafers using traditional semiconductor manufacturing equipment. The wafers then undergo processing steps to convert them into cells capable of generating electricity. These steps include the cleaning and coating of the wafers, and the application of an electric field and the attachment of a metal grid or pattern of electrode to the wafers.

Finished CSPV cells are assembled and strung together into modules. Modules contain 60 or 72 individual CSPV cells that are conductively-connected. The CSPV cells are mounted on a backing within a frame, usually made of aluminum. The frames are covered with special solar glass, which protects the cells and helps direct solar energy to them. Electrical junction boxes may be soldered or joined to modules. Electricity produced by the CSPV cells is routed to the junction box. CSPV modules are used in on- and off-grid applications for residential and commercial purposes.

For customs purposes, the CSPV cells covered by this petition are classified under Harmonized Tariff Schedule of the United States ("HTSUS") subheading 8541.40.6030. CSPV cells that are assembled into modules or panels are classified under HTSUS subheading 8541.40.6020. CSPV panels with inverters or batteries attached can be classified under HTSUS subheadings 8501.61.00.00 and 8507.20.80, respectively. In addition, CSPV cells covered by this petition may also be imported under subheading 8501.31.8000. Excerpts from the current HTSUS are attached as Exhibit 3. The current general rate of duty for imports of CSPV items under 8501.61.000 and 8501.31.800 is 2.5 percent, for imports under 8507.20.80 it is 3.5 percent, and for imports under 8541.40.6020 and 8541.40.6030 it is duty-free.\(^{13}\)

\(^{13}\) See Exhibit 3.
B. Like Domestic Article

The like or directly competitive domestic article is the same as the imported article subject to this petition. In determining the like domestic article in safeguard investigations, the Commission begins with the imported product included in the investigation. The Commission also considers such factors as the physical characteristics of the product, its customs treatment, the manufacturing process (i.e., where and how it is made), the product’s uses, and the marketing channels through which the product is sold. In this case, there is one domestic industry that produces the domestic like product which is identical to the scope in II.A. There are no clear dividing lines between domestic and imported CSPV cells and modules with respect to any of the factors that the Commission considers in its domestic like product analysis.

The Commission should not expand the like product in this case to include thin-film products. This is consistent with the Commission’s final determination in the antidumping and countervailing duty investigation in CSPV AD/CVD. The like product factors in Title VII cases that the Commission considers are substantially similar to the factors considered in safeguard investigations and therefore the Commission’s domestic like product finding from that antidumping and countervailing duty investigation is instructive. In that case, the Commission found that CSPV products and thin-film products are manufactured using different raw materials, manufacturing facilities, manufacturing processes, and production employees. It also found

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15 See id. at 30.
that differences in the chemical composition, weight, size, conversion efficiency, output, inherent properties and other factors between the two products limit the interchangeability and their overlap in distribution channels.\textsuperscript{18} These differences between CSPV and thin-film products still exist and therefore thin-film products should not be a domestic like article for purposes of the safeguard investigation.

\textbf{III. PETITIONER’S REPRESENTATIVENESS}\textsuperscript{19}

A petition must set forth “[t]he percentage of domestic production of the like or directly competitive domestic article that such represented firms and/or workers account for and the basis for claiming that such firms and/or workers are representative of an industry.”\textsuperscript{20} The regulations do not require a specific percentage threshold to establish “representativeness.”\textsuperscript{21}

The names and addresses for each company and location of all U.S. producers of CSPV cells and modules from 2012 through 2016 known to the petitioner are provided in Exhibit 4.\textsuperscript{22}

Based on both production and capacity, Suniva, a private, Georgia-based manufacturer of high-efficiency crystalline silicon solar cells and panels, is representative of the domestic industry and therefore may file this petition.\textsuperscript{23} \url{http://www.suniva.com/} The company currently has two manufacturing facilities, one in Michigan and the other in Georgia. The company was founded in 2007 by Professor Ajeet Rohatgi, a leading solar researcher from the Georgia

\textsuperscript{18} \textit{Id.}

\textsuperscript{19} \textit{See} 19 C.F.R. § 206.14(b).

\textsuperscript{20} 19 C.F.R. § 206.14(b).

\textsuperscript{21} Global safeguards petitions have been filed by companies and industry associations representing a range of total domestic production, from 33 percent to 100 percent. \textit{See}, e.g., Petition, Crabmeat from Swimming Crabs, Inv. No. TA-201-71 (filed Mar. 2, 2000) (the petitioner, Blue Crab Coalition (“BCC”), represented 33% of domestic production). Although the Commission ultimately did not find that imports were causing serious injury to the domestic crabmeat industry, it did not question BCC’s representativeness of the domestic industry.

\textsuperscript{22} Extensive efforts have been made to obtain information about the industry and trends in the market that are relevant to the factors enumerated in the Commission’s rules to be addressed in a petition of this type. Best estimates are provided to the extent actual information could not be obtained.

\textsuperscript{23} \textit{See} 19 U.S.C. § 2252(a)(1) and 19 C.F.R. § 206.13.
Institute of Technology. As such, Suniva’s research team works closely with the university’s solar research organization on developing new technology. Unlike other major players, Suniva has been moving manufacturing capabilities from East Asia to the United States, which has benefited the company’s industry-relevant revenue. In 2016, 100 percent of the company’s manufacturing capabilities were located in the United States and that is still the case today.

At Exhibit 5, Suniva provides six charts – charts estimating domestic CSPV cell production as well as domestic CSPV cell capacity, charts estimating domestic CSPV module production as well as domestic CSPV module capacity, and charts that combine CSPV cell and CSPV modules (both production and capacity). As demonstrated in those charts, Suniva represented 44.2 percent of the domestic production and 50.6 percent of domestic capacity of CSPV cells in 2016. In terms of CSPV cells and CSPV modules combined, Suniva represented 20.6 percent of domestic production and 23.6 percent of domestic capacity in 2016. Given the brutal impact of imports on the domestic industry, which has forced unprecedented declines in domestic production, the Commission should take into account capacity when looking at representativeness. Relying solely or even primarily on domestic production for determining representativeness creates an illogical fact pattern in which a domestic industry could be denied standing to file a petition because imports forced significant reductions in domestic production. Suniva is thus representative of the domestic industry producing CSPV cells and modules.

24 At Exhibit 6 we provide an affidavit that describes the data (estimates and actual) used to produce these charts.

25 While the Commission’s regulations request the percentage of domestic production represented by the petitioner, 19 C.F.R. § 206.14(b)(2), capacity information is also relevant to this analysis.

IV. CSPV CELLS AND MODULES ARE BEING IMPORTED IN INCREASED QUANTITIES

A. Increased Import Quantities

The statute requires the Commission to determine whether CSPV cells and modules are being imported into the United States at increased quantities. The Commission may find that import quantities have increased either in actual terms or relative to domestic production. As detailed below, without question, imports of CSPV cells and modules have increased dramatically from 2012 to 2016.

In absolute terms, the quantity and value of imports of CSPV cells and modules have surged over the last five years. The quantity of imports rose from 111,053,315 units in 2012 to 168,330,149 units in 2016, an increase of 51.6 percent. The value of imports rose from $5.1 billion in 2012 to $8.3 billion in 2016, an increase of 62.8 percent. Exhibit 7 provides the year-by-year import figures throughout the period. Imports jumped up significantly from 2015 to

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27 See 19 C.F.R. § 206.14(c) & (i).
29 See, e.g., Steel 201 at 27.
30 Import volume and value are based on imports for consumption reported in the USITC Interactive Tariff and Trade Dataweb under HTSUS subheading 8541.40.60 (statistical reporting numbers 8541.40.6020 ("solar cells, assembled into modules or made up into panels") and 8541.40.6030 ("solar cells, other"). CSPV cells and modules may also be imported as parts or subassemblies of goods provided for in subheadings 8501.31.8000, 8501.61.0000 and 8507.2080 and the scope of the petition also includes these three subheadings. However, CSPV cells and modules are generally imported under subheading 8541.40.60. See U.S. International Trade Commission, Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 & 731-TA-1190 (Final), USITC Pub. No. 4360 (Nov. 2012) at 1-8.
31 In its final injury determination in Crystalline Silicon Photovoltaic Cells and Modules from China, the Commission noted that import volumes based on official import statistics may not accurately reflect the total volume of imported cells because the trade statistics under HTS 8541.40.6020 (modules) most likely report the number of modules and not the number of cells imported into the United States. The Commission, therefore, relied on U.S. import volume data using "kilowatts" compiled from U.S. importer questionnaire responses. See U.S. International Trade Commission, Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 & 731-TA-1190 (Final), USITC Pub. No. 4360 (Nov. 2012) at 20 & I-3, fn.7. The Commission should follow the same practice in this safeguard investigation and use import data collected from importer questionnaires.
2016, with the quantity of imports rising by 68 percent and the value of imports rising by 40 percent in that period alone.\(^{32}\)

Indeed, the volume of imports continued to grow over the 2012-16 period even in the face of the imposition of antidumping and countervailing duty orders on imports from China and Taiwan (CSPV AD/CVD 1 and CSPV AD/CVD 2). The relative duty rates in those investigations and subsequent administrative reviews have been high. Specifically:

**Crystalline Silicon Photovoltaic Cells Whether or Not Assembled into Modules, from the People’s Republic of China**

**Date Petition Filed: October 19, 2011**

<table>
<thead>
<tr>
<th>Segment</th>
<th>AD Range (%)</th>
<th>CVD Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Investigation</td>
<td>Companies: 18.32 – 31.73, PRC – Wide Rate: 249.96(^{33})</td>
<td>Companies: 14.78 – 15.97, All Others Rate: 15.24(^{34})</td>
</tr>
<tr>
<td>First Review</td>
<td>Companies: 0.79 – 33.08, PRC – Wide Rate: 238.95(^{35})</td>
<td>Companies: 15.43 – 23.28, All Others Rate: 20.94(^{36})</td>
</tr>
<tr>
<td>Second Review</td>
<td>Companies: 6.12 – 12.19, PRC – Wide Rate: 238.95(^{37})</td>
<td>Companies: 19.20(^{38})</td>
</tr>
</tbody>
</table>

\(^{32}\) The temporary import declines in 2013 and 2014 were due to the antidumping/countervailing duty orders discussed below.

\(^{33}\) [Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 77 Fed. Reg. 73018 (Oct. 17, 2012) (AD final deter.).]

\(^{34}\) [Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 77 Fed. Reg. 63788 (Oct. 17, 2012) (CVD final deter.).]

\(^{35}\) [Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 80 Fed. Reg. 40998 (July 14, 2015) (12/13 AD final admin. review).]


\(^{37}\) [Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 81 Fed. Reg. 69905 (June 20, 2016) (13/14 AD final admin. review).]

\(^{38}\) [Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 81 Fed. Reg. 46904 (July 17, 2016) (2013 CVD final admin. review).]
<table>
<thead>
<tr>
<th>Third Review</th>
<th>Companies: 7.72-30.42</th>
<th>PRC – Wide Rate: 238.95&lt;sup&gt;39&lt;/sup&gt;</th>
<th>Companies: 12.48 – 20.98</th>
<th>Non-Selected Companies: 16.69&lt;sup&gt;40&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Review</td>
<td>On-going&lt;sup&gt;41&lt;/sup&gt;</td>
<td>On-going&lt;sup&gt;42&lt;/sup&gt;</td>
<td></td>
<td></td>
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</tbody>
</table>

Certain Crystalline Silicon Photovoltaic Products from the People’s Republic of China  
Date Petition Filed: December 31, 2013

<table>
<thead>
<tr>
<th>Segment</th>
<th>AD Range (%)</th>
<th>CVD Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Investigation</td>
<td>Companies: 26.71 – 78.42</td>
<td>Companies: 27.64 -49.79</td>
</tr>
<tr>
<td></td>
<td>PRC – Wide Rate: 165.04&lt;sup&gt;43&lt;/sup&gt;</td>
<td>All Others Rate: 38.72&lt;sup&gt;44&lt;/sup&gt;</td>
</tr>
<tr>
<td>First Review</td>
<td>Companies: 14.70</td>
<td>Companies: 13.93&lt;sup&gt;45&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>PRC – Wide Rate: 165.04&lt;sup&gt;46&lt;/sup&gt;</td>
<td>Non-Selected Companies: 13.93&lt;sup&gt;47&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Certain Crystalline Silicon Photovoltaic Products from Taiwan  
Date Petition Filed: December 31, 2013

<table>
<thead>
<tr>
<th>Segment</th>
<th>AD Range (%) (No Companion CVD case)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Investigation</td>
<td>Companies: 11.45 – 27.55</td>
</tr>
<tr>
<td></td>
<td>All Others Rate: 19.50&lt;sup&gt;48&lt;/sup&gt;</td>
</tr>
<tr>
<td>First Review</td>
<td>Companies: 3.50 – 4.20</td>
</tr>
<tr>
<td></td>
<td>Non- Selected Companies: 4.09&lt;sup&gt;49&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>39</sup> The Final Results of the 14-15 administrative review have not been published at this time. These ranges have been taken from Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 81 Fed. Reg. 93888 (Dec. 22, 2016) (14/15 AD prelim. admin. review).

<sup>40</sup> The Final Results of the 2014 administrative review have not been published at this time. These ranges have been taken from Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 82 Fed. Reg. 2317 (Jan. 9, 2017) (2014 CVD prelim. admin. review).

<sup>41</sup> The Preliminary Results for the 15-16 administrative review have not been published at this time.

<sup>42</sup> The Preliminary Results for the 2015 administrative review have not been published at this time.

<sup>43</sup> Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 79 Fed. Reg. 76970 (Dec. 23, 2014) ( AD final deter.).

<sup>44</sup> Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules From the People’s Republic of China, 79 Fed. Reg. 76962 (Dec. 23, 2014) (CVD final deter.).

<sup>45</sup> The Final Results of the 14-16 administrative review have not been published at this time. These ranges have been taken from Certain Crystalline Silicon Photovoltaic Products From the People’s Republic of China, 82 Fed. Reg. 12793 ( Mar. 7, 2017) (14/16 AD prelim. admin. review).

<sup>46</sup> The Final Results for the 14-15 administrative review have not been published at this time. These ranges have been taken from Certain Crystalline Silicon Photovoltaic Products From the People’s Republic of China, 82 Fed. Reg. 12562 (Mar. 6, 2017) (CVD 14/15 prelim admin review).

<sup>47</sup> Certain Crystalline Silicon Photovoltaic Products From Taiwan, 79 Fed. Reg. 76966 (Dec. 23, 2014) (AD final deter.).
What is striking is that even with these relatively high duties against two of the world’s largest CSPV cell and module countries, imports continue to flood into the United States. Also striking is the quantity of Chinese and Taiwanese product that continues to enter the United States—despite these dumping and subsidy duties. What these AD/CVD cases have also done is push production into new countries—meaning that they have led to increased global production and capacity. Consider:

- In a March 21, 2017, article in the Financial Post, it was reported about Canadian Solar that: “The company said it has also increased production from its manufacturing facilities in Southeast Asia and Taiwan to serve the U.S. market and avoid import duties.”

- In a January 10, 2017, article in Taiyang News, the following is stated about Chinese producer Solar Trina: “Trina Solar has begun production of solar panels at its newly opened Vietnam factory. The facility with capacity of 800 MW annually is located in Quang Chau Industrial Park in Viet Yen district, northern Ban Giang province, reported The Voice of Vietnam.” The article continues: “After Malaysia, Vietnam is now coming up as one of the most sought after locations for Chinese solar power companies to set up their manufacturing units. Some of the biggest names, including Trina Solar, JinkSolar and the like have voluntarily withdrawn from the European Commission’s minimum import price (MIP) undertaking which slaps anti-dumping and anti-subsidy duties on solar panels produced in China. Most of them are keen to operate from locations beyond China to be able to circumvent these duties and even more the customs in the much larger US solar market.”

- In a March 29, 2016, article in PV Magazine, it is reported that “Trina Solar reports that it has begun production at its PV cell and module factory in Rayong Thailand, which has the capacity to produce 700 MW of cells and 500 MW of PV modules annually.” It continues “Southeast Asia has become a major destination for Chinese and Taiwanese PV cell and module makers seeking to avoid U.S. and EU import duties on their products.”

- In an October 26, 2015, press release, it is announced that Chinese producer JA Solar Holdings, Co., Ltd. opened a 400MW cell manufacturing facility in Penang,

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48 The Final Results for the 14-16 administrative review have not been published at this time. These ranges have been taken from Certain Crystalline Silicon Photovoltaic Products From Taiwan, 82 Fed. Reg. 12802 (Mar. 7, 2017) (14/16 AD prelim admin review).
49 See Exhibit 8, Financial Post, “Donald Trump’s Shadow Looms Large Over Canadian Solar’s Prospects” (Mar. 21, 2017).

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Malaysia. As stated in the release: “These cells will primarily be used to manufacture JS Solar Modules outside of China to provide competitive product solutions to certain overseas markets.”

- In an October 6, 2016, PV Magazine article, it was noted that JA Solar further expanded its Malaysian operations. The article further notes: “The expansion comes in the face of falling module prices around the world, as an oversupply seems to be taking hold of the industry.”

- In a July 24, 2016, CLEANTECHIES article, it is reported that JA Solar is planning a $1 billion dollar module factory in Vietnam. As noted in the article: “The company already operates 8 factories across the {sic} Europe, the US and Japan. JA Solar, like several other module manufacturers, facing import restrictions and duties in developed markets like the US and Chinese {sic}. Several Chinese and Taiwanese companies have opened factories in overseas locations to bypass these restrictions.”

- A January 25, 2016, China Daily article discusses Chinese panel producers moving operations to Thailand because “solar panels made in the kingdom do not invite heavy duties in the US and Europe.”

In short, an unforeseen development of CSPV AD/CVD 1 and CSPV AD/CVD 2 has been the proliferation of CSPV cell and module manufacturing across the globe. This further supports the use of this global safeguard action. Without global relief, the domestic industry will be playing “whack-a-mole” against CSPV cells and modules from particular countries.

In short, imports have clearly “increased” within the meaning of the statute. Indeed, the increase has been massive, and the recent surge has been highly debilitating to the market structure. The way that the world’s largest producers have reacted to antidumping and countervailing duty claims demonstrates that global relief is required.

B. Imports from NAFTA Countries

The statute also requires the Commission to determine whether imports from a NAFTA country (Canada and Mexico), considered individually: (1) account for a significant share of total

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imports; and (2) contribute importantly to the serious injury, or threat thereof, caused by imports. With regard to the first factor, such imports “normally” shall not be considered to account for a substantial share if the NAFTA country concerned is not among the top five suppliers in terms of import share during the most recent three-year period. With regard to the second factor, the Commission is directed to consider the change in import share of the NAFTA country, and will “normally” make a negative finding if the growth rate of imports from the NAFTA country is “appreciably lower” than the growth rate of imports from all other sources.

1. Mexico

As demonstrated below, Mexico accounts for a significant share of total imports, and the growth rate of imports from Mexico is significantly higher than the growth rate of imports from all other sources, demonstrating that imports from Mexico have contributed importantly to the serious injury suffered by the domestic industry and the further threat of serious injury caused by imports.

**Imports of CSPV Cells and Modules from Mexico and the World**

(US Dollars)

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>482,223,225</td>
<td>439,245,330</td>
<td>505,966,991</td>
<td>911,464,269</td>
<td>854,257,684</td>
<td>77.1</td>
</tr>
<tr>
<td>Rest of World</td>
<td>4,621,093,920</td>
<td>3,188,996,810</td>
<td>3,682,218,303</td>
<td>5,030,191,589</td>
<td>7,452,287,017</td>
<td>61.3</td>
</tr>
<tr>
<td>Total</td>
<td>5,103,317,145</td>
<td>3,628,242,140</td>
<td>4,188,185,294</td>
<td>5,941,655,858</td>
<td>8,306,544,701</td>
<td>62.8</td>
</tr>
</tbody>
</table>

Mexico’s Share (%) | 9.4% | 12.1% | 12.1% | 15.3% | 10.3% |

Over the most recent three year period, Mexico was the number four source of imports in 2014, the number three source of imports in 2015, and the number four source of imports in 2016.

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59 Imports are imports for consumption in dollars under HTSUS 8541.40.60.30 (cells) and 8541.40.60.20 (modules). Import data by country is attached at Exhibit 7.
Over the same period, imports from Mexico averaged over $757 million and accounted for over 12 percent of all imports from the world. Imports from Mexico also grew rapidly in absolute terms, from nearly $506 million in 2014 to $854 million in 2016. Mexico therefore easily satisfies the criterion of accounting for a significant share of subject imports.

In addition, the growth rate of imports from Mexico during the period of investigation is larger than that of imports from other countries. While imports from Mexico grew by 77 percent from 2012 to 2016, imports from all other sources increased by only 61.3 percent, a difference of 16 percentage points. Not only are imports from Mexico growing, they are growing at a substantially faster rate than imports from the rest of the world and imports overall. Imports from Mexico clearly satisfy the test for contributing importantly to the serious injury suffered by domestic producers.

2. Canada

The situation with respect to imports of CSPV cells and modules from Canada warrants special consideration by the Commission and requires treatment outside that which would occur "normally."

**Imports of CSPV Cells and Modules from Canada and the World**

(US Dollars)

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Canada</td>
<td>47,568,793</td>
<td>5,324,043</td>
<td>18,770,136</td>
<td>76,565,294</td>
<td>88,385,378</td>
<td>85.8</td>
</tr>
<tr>
<td>Rest of World</td>
<td>5,055,748,352</td>
<td>3,622,918,097</td>
<td>4,169,415,158</td>
<td>4,953,626,295</td>
<td>8,218,159,323</td>
<td>62.6</td>
</tr>
<tr>
<td>Total</td>
<td>5,103,317,145</td>
<td>3,628,242,140</td>
<td>4,188,185,294</td>
<td>5,941,655,858</td>
<td>8,306,544,701</td>
<td>62.8</td>
</tr>
<tr>
<td>Canada's Share (%)</td>
<td>0.9%</td>
<td>0.1%</td>
<td>0.4%</td>
<td>1.3%</td>
<td>1.1%</td>
<td></td>
</tr>
</tbody>
</table>

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60 Imports are imports for consumption in U.S. dollars under HTSUS 8541.40.60.30 (cells) and 8541.40.60.20 (modules). Import data by country is attached at Exhibit 7.
Over the most recent three-year period, Canada was the 11th largest source of imports in 2014 and 2015, and was the 12th largest source of imports in 2016. Imports from Canada nearly doubled in absolute terms from just over $18.5 million in 2014 to $88.4 million in 2016.

However, while Canada’s current market share is not in the top five, the rate of growth of Canada’s imports is a major cause of concern. Imports from Canada during the period of investigation are growing significantly faster than the rate of growth for imports from all other sources. From 2012 to 2016 the growth rate for imports from Canada was 85.8 percent, while the rate of growth for imports from the rest of the world was only 62.6 percent, a difference of more than 23 percentage points. Over the most recent three year period, Canada’s import growth has exploded, growing at a rate of 371 percent between 2014 and 2016. The rapid acceleration in the growth of imports from Canada in the last three years means that Canada is on track to become a top five source of imports in only a couple of years.

The rapid growth in Canada’s imports of solar cells and modules is of special concern because of the close relationship between Canada’s largest solar company, Canadian Solar, and China. Of particular concern is evidence that Canadian Solar is apparently transshipping Chinese-made cells through Canada to circumvent the antidumping order on products from China. The origin of solar modules is usually determined by the origin of cells.\(^{61}\) Canadian Solar’s manufacturing supply chain is vertically integrated and, while the company manufactures CSPV modules in Canada, its only CSPV cell manufacturing capacity is in China.\(^{62}\) Canadian Solar imports Chinese CSPV cells into Canada, assembles them into modules, and exports them

\(^{61}\) Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled into Modules, from the People’s Republic of China, 77 Fed. Reg. 63791, Issues & Dec. Memo at 5-9 (Oct. 17, 2012) (AD final determ.). (N.B., under the NAFTA rules of origin for HTS subheading 8541, substantial transformation can occur without a tariff shift, meaning that Chinese cells can be assembled into modules in Canada and the resulting modules will receive duty-free entry into the United States under NAFTA.)

to the United States. Transshipment of Chinese-origin CSPV cells through Canada would explain the rapid growth in imports of CSPV cells and modules from Canada in recent years.

Canada’s import and export data confirms the trend of increasing transshipment of Chinese goods to the United States.

**Canadian Imports from China and Exports to US**
(Canadian $)

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Imports from China</strong></td>
<td>156,417,230</td>
<td>277,536,644</td>
<td>305,254,776</td>
<td>188,701,545</td>
<td>170,753,244</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Re-exports of Foreign Goods to US</strong></td>
<td>16,584,902</td>
<td>19,941,678</td>
<td>59,838,041</td>
<td>187,305,911</td>
<td>131,625,396</td>
<td>694%</td>
</tr>
<tr>
<td><strong>Total Exports to US</strong></td>
<td>80,871,763</td>
<td>36,037,386</td>
<td>59,583,341</td>
<td>143,147,142</td>
<td>171,772,863</td>
<td>112%</td>
</tr>
</tbody>
</table>

Source: Innovation, Science and Economic Development Canada, Trade Data Online (HTS 8541.40)

Canada’s re-exports of foreign origin goods to the United States have increased nearly 700 percent in the last five years. Re-exports of foreign origin product accounted for over three-quarters of Canada’s total imports of photovoltaic cells and other photosensitive articles to the United States in 2016.

China’s past willingness to go to great lengths to circumvent antidumping orders generally, and the antidumping order on CSPV cells and modules specifically, means that the current situation regarding imports of CSPV cells and modules from Canada is not “normal.” If Canadian Solar is using Chinese-made CSPV cells in its Canadian production, imports from Canada must be addressed in this investigation.

For the above reasons, the Commission should find that Canada accounts for a significant share of total imports and that imports from Canada have contributed importantly to the serious injury suffered by the domestic industry and the further threat of serious injury caused by imports.
V. **THE DOMESTIC INDUSTRY IS SUFFERING SERIOUS INJURY AND IS THREATENED WITH FURTHER SERIOUS INJURY**

The sharp increase in imports of CSPV cells and modules that has occurred since 2012 has seriously injured the domestic industry and is threatening further serious injury. Increasing imports have taken a large share of the market from domestic producers and have led to bankruptcies, plant shutdowns, layoffs and a severe deterioration of the financial performance of the domestic industry. Indeed, Suniva itself filed for Chapter 11 bankruptcy on April 17, 2017. There can be no injury more serious than an existential threat to the domestic industry itself. The harm is widespread as noted by the Congressional Research Service:

Domestic PV manufacturers operate in a dynamic, volatile, and highly competitive global market now dominated by Chinese and Taiwanese companies. China alone accounted for nearly 70% of total solar module production in 2013. Some PV manufacturers have expanded their operations beyond China to places like Malaysia, the Philippines, and Mexico. Overcapacity has led to a precipitous decline in module prices, which have fallen 65% -70% since 2009, causing significant hardship for many American manufacturers. Some PV manufacturers have closed their U.S. operations, some have entered bankruptcy, and others are reassessing their business models.

As further explained by IBIS World:

High import competition has been the primary threat to the industry over the five-year period. In 2016, imports are expected to satisfy 90.3% of domestic demand. The United States is a net importer of solar cells and panels. In the beginning of the period, China was the top producer of US-imported solar cells and panels. However, due to high import penetration, multiple claims of dumping were filed against China. After analyzing the accusations, the US Department of Commerce (DOC) implemented tariffs against the country. Even with the enactment of tariffs against China, other countries, such as Malaysia, Korea and Mexico continue to export large amounts of solar products to the United States due to their low production costs. Consequently, imports as a percentage of domestic

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63 See 19 C.F.R. § 206.14(d) & (e).


demand rose over the period and caused many players that could not compete with the intense competition to exit the industry. 66

Absent import relief, the continuing import surge poses an immediate threat to the viability of the U.S. industry.

Section 202(b)(1)(A) of the Trade Act provides that the Commission shall “determine whether an article is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or a threat thereof, to the domestic industry producing an article that is like or directly competitive with the imported article.” 67 The term “domestic industry” is defined to mean “the producers as a whole of the like or directly competitive article or those producers whose collective production of the like or directly competitive article constitutes a major proportion of the total domestic production of such article.” 68 The term “serious injury” means “a significant overall impairment in the position of a domestic industry,” 69 while the term “threat of serious injury” means “serious injury that is clearly imminent.” 70

The statute sets out a list of economic factors which the Commission must consider when determining whether serious injury or the threat of serious injury exists. The legislative history notes that the identified “factors are not intended to be exclusive. It is important to note that the Commission is directed to take into account all economic factors it considers relevant.” 71

The “serious injury” factors are:

(A) with respect to serious injury-

66 Exhibit 2, IBIS World at 4.
70 19 U.S.C. § 2252(c)(6)(D).
(i) the significant idling of productive facilities in the domestic industry, (ii) the inability of a significant number of firms to carry out domestic production operations at a reasonable level of profit, and (iii) significant unemployment or underemployment within the domestic industry.\footnote{19 U.S.C. § 2252(c)(1)(A).}

The statute defines “significant idling of productive facilities” as including “the closing of plants or the underutilization of production capacity.”\footnote{19 U.S.C. § 2252(c)(6)(B).} In determining whether the threat of serious injury exists, the Commission must similarly consider certain non-exclusive economic factors:\footnote{19 U.S.C. § 2252(c)(1)(B). With respect to the “threat of serious injury” factors, the legislative history notes:}

(B) with respect to threat of serious injury -
(i) a decline in sales or market share,\footnote{A decline in market share is relevant because it signals that the domestic industry’s market position relative to foreign competitors is deteriorating.” S. Rep. No. 100-71, at 50 (1987).} a higher and growing inventory (whether maintained by domestic producers, importers, wholesalers, or retailers), and a downward trend in production, profits, wages, productivity, or employment (or increasing underemployment) in the domestic industry, (ii) the extent to which firms in the domestic industry are unable to generate adequate capital to finance the modernization of their domestic plants and equipment, or are unable to maintain existing levels of expenditures for research and development,\footnote{“The maintenance of research and development activities are, for many industries, crucial for future business operations and profitability.” S. Rep. No. 100-71, at 50 (1987).} (iii) the extent to which the United States market is the focal point for the diversion of exports of the article concerned by reason of restraints on exports of such article to, or on imports of such article into, third country markets.\footnote{“Diversion of foreign exports to the U.S. market implies that there is greater supply in the U.S. market, and therefore increased pressure on United States producers, than would occur in the absence of such diversion.” S. Rep. No. 100-71, at 50 (1987).}
In determining whether serious injury or threat of serious injury to the domestic industry exists, the Commission must "consider the condition of the domestic industry over the course of the relevant business cycle." The statute further provides that "the presence or absence of any factor which the Commission is required to evaluate ... is not necessarily dispositive of whether an article is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry." In assessing whether serious injury or the threat of serious injury is present, the Commission's practice has been to examine record facts regarding the relevant factors and to reach its conclusion on the totality of those facts.

A. Domestic Industry

As stated in Section II.B, the like domestic article is the same as the imported article subject to this petition – CSPV cells and modules. The Commission should therefore find that the single domestic industry consists of all domestic producers of CSPV cells and domestic firms that assemble CSPV cells into modules. This is consistent with the Commission's final determination in the antidumping and countervailing duty investigation of CSPV Cells and Modules from China. The statutory definition of domestic industry for Title VII cases is the same as in safeguard investigations and therefore the Commission's domestic industry finding

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79 19 U.S.C. § 2252(c)(3).
80 See, e.g., Steel 201 at 281 (Separate Views on Injury of Commissioner Lynn M. Bragg) ("The Commission has developed no set formula for determining whether an industry is seriously injured or threatened with serious injury, but instead has examined the relevant facts in the record of each investigation and made its determination on the basis of the totality of these facts.").
82 The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product." U.S. International Trade Commission, Crystalline Silicon Photovoltaic Cells and Modules from China, Inv. Nos. 701-TA-481 & 731-TA-1190 (Final), USITC Pub. No. 4360 (Nov. 2012) at 12.
from that antidumping and countervailing duty investigation should apply here. In that case, the Commission found based on the evidence on the record that “U.S. firms assembling CSPV cells into modules engage in sufficient production-related activities to include these firms in the domestic industry....”\textsuperscript{83} The production-related activities that domestic firms undertake to assemble CSPV cells into modules has not changed since that investigation and therefore the Commission should find the domestic industry in this safeguard investigation to consist of domestic producers of CSPV cells and domestic firms that assemble CSPV cells into modules.

\textbf{B. Serious Injury}

All of the factors the Commission considers in assessing serious injury—capacity reductions and idling of capacity, price trends, profitability, and employment—support an affirmative determination that the domestic CSPV cells and modules industry has suffered serious injury over the period. Indeed, the injury suffered is so severe that it threatens the very existence of the U.S. industry.

\textbf{1. Significant Idling of Productive Facilities in the Domestic Industry}\textsuperscript{84}

As imports rose, prices fell, and imports drove down market share, production, and profits, the domestic industry was forced to idle significant amounts of capacity, and, as imports continued to increase and prices continued to fall, to permanently close numerous facilities. Exhibit 17 lists seven different domestic producers of CSPV cells and modules that have closed, gone bankrupt, or engaged in large scale layoffs between 2012 and 2016.

Capacity utilization generally has been exceedingly low throughout most of the period of investigation. While there were temporary improvements to capacity utilization immediately after the imposition of the AD/CVD orders on imports from China and Taiwan, these

\textsuperscript{83} \textit{Id.} at 13.

\textsuperscript{84} \textit{See} 19 C.F.R. § 206.14(e)(1)(i).
improvements were fleeting at best as imports from these two countries remained high and imports from other countries surged.\textsuperscript{85} Capacity utilization for CSPV cell operations fell from 81.7 percent in 2014 to 62.6 percent in 2015 and fell drastically to 28.9 percent in 2016. CSPV module production utilization fell from a peak of 66.7 percent in 2013 to 40.9 and 48.2 percent, respectively in 2014 and 2015, before a precipitous decline to only 32.9 percent in 2016.\textsuperscript{86} The below chart shows the combined utilization rates of both CSPV cells and modules:

The severe underutilization of production capacity reflects the sharp declines in domestic production as a result of import competition. U.S. production of modules recovered somewhat in 2015, likely as a result of the imposition of the antidumping and countervailing duty orders on China and Taiwan, however, that recovery was short lived as domestic production declined in 2016 by 10.5 percent. Domestic production of solar cells fell even more drastically, 37.6

\textsuperscript{85} Indeed, as noted by IBIS World: "Over the five-year period, imports from China have fallen due to increased antidumping duties placed on Chinese manufacturers. The decrease in imports from China has made room for other countries like Malaysia and Korea to substantially increase their exports to the United States." Exhibit 2, IBIS World at 17.

\textsuperscript{86} Exhibit 18.
percent, from 2015 to 2016. The cause of this scaling down of production was “intense
competition from international manufacturers.” With Suniva’s declaration of bankruptcy and
subsequent shut down of production at both Suniva facilities, U.S. capacity utilization and
production have fallen even further in 2017.

2. Inability of a Significant Number of Firms to Carry Out Domestic
Production Operations at a Reasonable Level of Profit

As a result of the surge in volume of low-priced imports, domestic producers have been
unable to generate any profit. Publicly available data clearly show that the domestic industry is
in dire and worsening financial straights. Suniva and SolarWorld AG account for the vast
majority of domestic production and capacity and therefore are representative of the domestic
industry and are also representative of a significant number of firms in the domestic industry.
SolarWorld AG reported operating losses in every year of the 2012-16 period except 2014 and
reported an average operating loss of nearly 27 percent. Suniva’s net profit/loss [ ]

]. Indeed, as noted by IBIS World:

Over production by foreign manufacturers threatens to create a glut of solar
panels and modules and hinder industry revenue and profit. These extraordinary losses clearly threaten the continued viability of those remaining firms
competing with surging imports. Indeed it is the fact that Suniva has been unable to carry out

87 Exhibit 2, IBIS World at 14.
89 See Exhibit 2, IBIS World.
90 Id. at 26.
91 See Exhibit 19, Suniva Financial Results.
92 Exhibit 2, IBIS World at 8.
domestic production operations at a reasonable level of profit that led to Suniva’s filing of bankruptcy. Other firms besides Suniva and SolarWorld AG are also unable to operate at a reasonable level of profit as shown by the extent of bankruptcies in the domestic industry.93

3. Significant Unemployment or Underemployment Within the Domestic Industry94

As explained in this petition, rising imports, falling prices, and low capacity utilization have plagued the domestic CSPV industry over the period of investigation. Eight domestic producers of CSPV cells and modules filed for bankruptcy, had large layoffs, or shut down factories. As a result, over 1,200 manufacturing jobs in the United States were eliminated. As noted above, shortly before filing this petition, Suniva terminated nearly 200 employees in March and subsequently filed for Chapter 11 bankruptcy in response to injury caused by imports.95 A detailed list of bankruptcies, closures, and layoffs by company is provided as Exhibit 17, and make no mistake, these are good jobs:

While a significant part of the manufacturing process is automated, this industry is also labor intensive. Skilled workers are required to assemble panels and operate software and machinery. For example, workers are required to cut protective glass sheets that cover solar panels, as well as for research and development.96

In addition, another approximately 3,500 jobs in related solar technologies (e.g., production of wafers and modules or cells using other PV technologies (e.g., thin film, CPV) have been lost to bankruptcies, closures and layoffs.97 These job losses are directly related to the falling price of

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93 See Exhibit 20, Table of Bankruptcies, Closures, and Layoffs (Other Solar Products).
96 Exhibit 2, IBIS World at 21.
97 See Exhibit 20, Table of Bankruptcies, Closures, and Layoffs (Other Solar Products).
CSPV cells and modules because there is less demand for these more efficient technologies when the price for the less-efficient CSPV cells and panels is low.

In sum, over 4,800 jobs in the solar sector have been impacted by bankruptcies, closures and layoffs since 2012. In total over 2.4 gigawatts of domestic production and nearly $3 billion in investments in these products has been lost.

As jobs in the production of CSPV cells and modules have been lost, workers at several facilities have applied for and been granted assistance under the Trade Adjustment Assistance (“TAA”) program. Under TAA, the Department of Labor certifies workers for job search, retraining, and other support programs when, inter alia, “increased imports contributed importantly to worker group separation.” The Department of Labor has certified workers at 11 domestic facilities engaged in the production of CSPV cells and modules. In certifying these workers for TAA, the U.S. Government has confirmed that increased imports are causing job losses at these facilities. Action under this petition is needed to prevent the loss of additional domestic manufacturing jobs in the solar sector.

This substantial job loss represents a significant loss of wages for workers in the domestic industry. From 2012 to 2016, wages fell by more than 25 percent. Wages have fallen at an annualized rate of 10.3 percent as manufacturers try to compete with low-cost imports and are estimated to account for 33.2 percent of revenue in 2016, despite falling wage costs.

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98 One additional petition for TAA has been filed, but the request is still pending. See, Exhibit 21, Table of TAA certifications.
99 See Exhibit 2, IBIS World, Key Statistics at 36.
100 Exhibit 2, IBIS World at 21.
US Solar Industry Wages 2012-2016  
(Inflation adjusted US$ 2016)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>544.4</td>
<td>363</td>
<td>305.9</td>
<td>397</td>
<td>396.3</td>
<td>-27%</td>
</tr>
<tr>
<td>($million)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Annual Change (%)</td>
<td>-20.3</td>
<td>-33.3</td>
<td>-15.7</td>
<td>29.8</td>
<td>-0.2</td>
<td></td>
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</table>

Source: IBIS World

The above facts demonstrate significant unemployment and underemployment of the men and women who CSPV produce solar cells and modules in the United States.

4. **Price Trends**

Prices for CSPV cells and modules declined dramatically throughout the 2012-16 period as imports surged. As the following chart shows, Suniva has seen its average selling prices for cells and modules steadily decline.

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102 The break in the price data for cells reflects a period of time where Suniva made no sales of CSPV cells and therefore had no prices to report.
The price declines experienced by Suniva are a result of the flood of imports and reflect trends throughout the domestic industry. As market analysts have noted, the domestic industry "has been plagued with high competition from low-cost Asian manufacturers, which has decreased the price of solar panels and cells" over the last five years.\textsuperscript{103} Another publication blames the price declines on a supply surplus.\textsuperscript{104} Thus, as import volumes increased throughout the period, domestic prices fell significantly.\textsuperscript{105}

Together with rising import volumes, falling prices caused serious injury to the domestic industry. As noted above, the rapidly falling prices made it impossible for the industry to generate a reasonable level of profit from their domestic production operations and forced some domestic companies to close, go bankrupt, or engage in large scale layoffs.

5. Market Share\textsuperscript{106}

As imports of CSPV cells and modules increased over the period, they seized market share from domestic producers – even though domestic market demand remains strong.\textsuperscript{107} One independent market analysis from December 2016 noted that in the United States, "imports will satisfy an estimated 90.3 percent of domestic demand in 2016 due to their extremely low

\textsuperscript{103} Exhibit 2, IBIS World at 4. As noted on page 22 of IBIS World: "Foreign producers are expected to maintain substantial price advantages over US operators due to lower labor costs, which will sustain high levels of international competition."

\textsuperscript{104} Exhibit 22, National Solar Jobs Census 2016 at 7.

\textsuperscript{105} Industry observers reported in 2014 average module and cell prices fell 11 percent and 16 percent, respectively. See David Feldman, Robert Margolis, and Daniel Boff, Q3/Q4 '14 Solar Industry Update, January 20, 2015 at 32 cited at Exhibit 16, Congressional Research Service, U.S. Solar Photovoltaic Manufacturing: Industry Trends, Global Competition, Federal Support at 1, fn. 2.


\textsuperscript{107} Exhibit 22, National Solar Jobs Census 2016 at 23.
Although domestic demand expanded over the last five years, domestic producers’ share of the market shrank due to imports. (“Widespread availability of internationally manufactured solar panels in the domestic market reduces demand for this industry’s products.”) As a result, the domestic industry’s share of the market dwindled from 21 percent of the market in 2012 to 11 percent in 2016.

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</thead>
<tbody>
<tr>
<td>U.S. Revenue</td>
<td>1,300</td>
<td>1,338</td>
<td>1,143</td>
<td>1,209</td>
<td>1,192</td>
</tr>
<tr>
<td>U.S. Exports</td>
<td>494</td>
<td>366</td>
<td>208</td>
<td>170</td>
<td>140</td>
</tr>
<tr>
<td>U.S. Imports</td>
<td>5,382</td>
<td>3,765</td>
<td>4,275</td>
<td>6,026</td>
<td>9,792</td>
</tr>
<tr>
<td>U.S. Market Size</td>
<td>6,188</td>
<td>4,737</td>
<td>5,209</td>
<td>7,066</td>
<td>10,844</td>
</tr>
<tr>
<td>Domestic Market Share</td>
<td>21.0%</td>
<td>28.2%</td>
<td>21.9%</td>
<td>17.1%</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

Source: IBIS World, Key Statistics at 35.

This decline in market share is even more noteworthy when it is understood that demand has been increasing. Indeed, as noted in the National Solar Jobs Census 2016:

In 2016, the global solar market experienced another strong year. Installed capacity is expected to have grown by 45% or 74 GW. With a 19% share of global growth, the U.S. is second only to China’s 38% (28 GW) share of new installed capacity.

As imports increased and captured market share from the domestic industry, domestic producers were forced to cut production. From 2015 to 2016, U.S. production of CSPV modules declined by 10.5 percent while U.S. production of CSPV cells fell even more drastically by 37.6 percent.

In short, domestic producers were not only blocked from participating in demand growth, they were forced to make significant reductions in production as imports increased.

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108 Exhibit 2, IBIS World at 4. On that same page, IBIS World also states “However, rising imports are expected to take up a significant percentage of the newly generated demand.”
109 Exhibit 2, IBIS World at 24.
110 Exhibit 2, IBIS World at 14.
6. **Conclusion on Serious Current Injury**

As noted above, the domestic industry has suffered significant declines in market share, production, profits, and employment from 2012 to 2016. The industry also appears to have suffered massive declines in capital expenditures over the 2012 to 2016 period, consistent with its idling and shedding of significant amounts of capacity. The sharp increase in imports and the resulting decline in domestic output establish that imports have displaced domestic production to a significant extent.

**C. Threat of Serious Injury**

In addition to current serious injury caused by imports, the domestic industry is threatened with serious injury by these very same imports. As set forth above, in determining whether the threat of serious injury exists, the Commission must similarly consider certain non-exclusive economic factors.\(^{112}\) We address each of those factors, in turn, below.

1. **The Market Share Held by the Domestic Industry Has Dropped Significantly\(^{113}\)**

As noted above, the market share held by the domestic industry has dropped significantly from 28.2 percent in 2013 to only 11 percent in 2016. Further, independent market analysts expect the market share held by the domestic industry to continue to decline. Specifically, market analysts forecast that the share of the market to increase by approximately one percentage point per year from each year over the next five years.\(^{114}\)

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\(^{112}\) 19 U.S.C. § 2252(c)(1)(B).

\(^{113}\) See 19 C.F.R. § 206.14(e)(2)(i).

\(^{114}\) See Exhibit 2, *IBIS World* at 35. In addition, on page 8 of that same publication, it states “Consequently, imports are expected to rise over the period to an annualized rate of 15.8% to an estimated $20.4 billion and continue to account for a rising portion of domestic demand.”
2. Domestic Producers Have Higher and Growing Inventories\textsuperscript{115}

There is a large and growing inventory of domestic CSPV cells and modules. Domestic inventory as a percentage of assets stood at 27.6 percent in the period April 2012 to March 2013 and it grew to 28.3 percent by the period April 2015 to March 2016.\textsuperscript{116} Thus, the domestic industry faces growing inventories in the face of continually rising imports.

3. Domestic Producers have Experienced a Decline in Profits and Profitability\textsuperscript{117}

As noted above, the domestic industry has reported large and sustained losses. These persistent losses leave the domestic industry extremely vulnerable to the threat of further serious injury by reason of the surge in low-priced imports.\textsuperscript{118}

4. Domestic Producers Have Experienced Declines in Employment and Wages\textsuperscript{119}

As noted above, the domestic industry has suffered a significant decline in both employment and wages from 2012 to 2016. These same factors demonstrate that the industry continues to be threatened with serious injury from increasing imports. Workers in the domestic CSPV cell and module sector will continue to be subject to lower wages, layoffs, and reductions in hours as domestic producers fight to compete with the flood of imports.

If imports succeed in continuing to drive even more U.S. producers out of business, it would result in the loss of hundreds of additional good U.S. manufacturing jobs. Indeed, it is estimated that manufacturing constitutes approximately 15 percent of all U.S. solar jobs.\textsuperscript{120} It is

\textsuperscript{115} See 19 C.F.R. § 206.14(e)(2)(i).
\textsuperscript{116} See Exhibit 2, IBIS World at 36.
\textsuperscript{117} See 19 C.F.R. § 206.14(e)(2)(i).
\textsuperscript{118} See Exhibit 23, which is a March 16, 2017, article regarding JA Solar’s financial situation – and which references “rapidly falling cell and module prices.”
\textsuperscript{119} See 19 C.F.R. § 206.14(e)(2)(i).
\textsuperscript{120} Exhibit 22, National Solar Jobs Census 2016 at 12.
difficult to overstate the threat that rising imports pose to the U.S. industry, as noted by the National Solar Jobs Census 2016:

Manufacturing provides the foundation for an innovative, high technology economy. Approximately 70% of private sector U.S. research & development fulfills manufacturing needs. When technologies shift overseas, their R&D capacity often shifts as well. For example, the shift of semiconductor manufacturers to Asia resulted in a relative decline of U.S. thin-film-deposition knowledge—expertise needed in the manufacture of photovoltaic cells. A loss such as this can weaken U.S. competitiveness in solar cell development.\textsuperscript{121}

The threat is real.

5. Domestic Producers are Unable to Generate Adequate Capital for Investment and Research and Development\textsuperscript{122}

As noted above, the large and sustained losses experienced by the domestic industry starve it for capital necessary to support investment and research and development. Although the domestic industry has made investments in production capacity, these investments represent the minimum investment necessary in order to reach production scales that, absent the serious injury caused by imports, should enable the domestic industry to effectively compete. However, even these investments have been insufficient to enable the domestic industry to compete against the surge in low-priced imports.

The negative impact of imports on the ability of the domestic industry to generate adequate capital is further demonstrated by the exit of numerous domestic producers from the industry. See Exhibit 17. As a result of the impact of the surge in imports, domestic producers have been unable to generate adequate capital necessary to remain viable competitors in the U.S. market. Indeed this is exactly why Suniva has been forced to declare bankruptcy.

\textsuperscript{121} Exhibit 22, National Solar Jobs Census 2016 at 23 (citations omitted).

\textsuperscript{122} See 19 C.F.R. § 206.14(e)(2)(ii).
6. Exports are Driven to the U.S. Market

As noted above, demand in the United States remains very strong, and as with many manufactured goods, while prices in the U.S. are declining, the prices that can be demanded, combined with the size of the U.S. market – make the United States a very attractive destination for CSPV cells and assembled modules. This fact, combined with the exploding growth in global production capacity, results in exports being driven to the U.S. market. Indeed, as noted in the National Solar Jobs Census 2016:

India led all countries in announced manufacturing capacity expansion in 2016, followed by China (13 GW), Vietnam, (5.2 GW), Malaysia (3.5 GW), Thailand (2.7 GW), Taiwan (2.3 GW), and the U.S. (1.3 GW). The 17 GW announced by India is over twice the country’s 2015 announcement; however, given that 7.8 GW of the 2015 announcement remains unrealized, India’s ability to complete the announced expansions are uncertain. While expansion is slowing in China, much of the other Asian capacity additions are from Chinese companies. The top seven countries, all from Asia, represent 46 GW or 94% of total announced expansions.\(^{124}\)

Indeed, this increased expansion is forecast to lead to overcapacity. As noted by a March 16, 2017, Credit Suisse report:

We now forecast 100+ GW of cell supply vs. demand of 63/72 GW in 2017/18. Expansion announcements are becoming the norm this earnings season (JKS preceded JASO) and it remains to be seen whether others will follow suit.\(^{125}\)

Much of this product will head to the United States – unless some sort of relief is granted via this 201 process.\(^{126}\)

\(^{123}\) See 19 C.F.R. § 206.14(e)(2)(iii).

\(^{124}\) Exhibit 22, National Solar Jobs Census 2016 at 23.

\(^{125}\) Exhibit 1, Credit Suisse Report.

\(^{126}\) Indeed, while the Chinese domestic market used to be substantial, demand there has dropped, while production in China continues to increase. As noted on page 33 of the National Solar Jobs Census 2016: “Manufacturing companies were hit by a supply glut that materialized during the second half of the year. China cut its feed-in tariff, reducing demand while manufacturers like JA Solar, JinkoSolar, and Canadian Solar continued to add capacity.” See also Exhibit 23, which is a March 16, 2017, article regarding growing JA Solar capacity.
While it would be beneficial to the domestic industry if it were able to export its products globally, U.S. exports are exceedingly modest. As noted by IBIS World:

While imports have been on the rise, depressing industry prices and increasing competition, US manufacturers have found little relief by exporting their products abroad. Despite rising focus on solar energy from foreign countries, US exports fell at an annualized rate of 34.0% to an estimated $140.3 million. Exports have been hampered by a rising trade-weighted index (TWI), which measures the strength of the US dollar against the currencies of its trading partners. As the TWI rises, US exports become more expensive to foreign nations and hinder exports. US exports have also been hurt by the high prevalence of Asia-produced solar panels and modules on the international market. Consequently, US manufacturers have been able to find little relief from intense competition through exports.\(^{127}\)

As such, the United States will remain a net importer of CSPV cells and panels, and as IBIS World forecasts \{"o\}ver the five years to 2021, competition from imports is expected to remain strong."\(^{128}\)

7. Conclusion on Threat of Serious Injury

As this industry stands on the precipice, with no hope without relief, it is important to note that it is very difficult for companies to “get back into” this industry once they leave:

Barriers to entry in the Solar Panel Manufacturing industry are high. Capital costs, regulation and proprietary technology all present obstacles to entry for prospective manufacturers. Companies participate in this industry mass-produce panels and research new technology. As a result, new entrants must construct manufacturing, and often, research facilities, both of which require significant capital investments.\(^{129}\)

As such, the existing current threat is very real.

\(^{127}\) Exhibit 2, IBIS World at 6-7.

\(^{128}\) Exhibit 2, IBIS World at 8. Indeed, on that same page, it also states: “Additionally, low-cost panels manufactured in Asia will continue to limit international demand for US-made solar panels.”

\(^{129}\) Exhibit 2, IBIS World at 23.
D. Changes in Levels of Prices, Production, and Productivity\textsuperscript{130}

As noted above, prices for CSPV cells and modules dropped steadily throughout the 2012-16 period as imports surged. Sharp declines in domestic production and capacity utilization were also a result of import competition.

E. Conclusion on Injury (Current and Threat)

The rapidity with which imports of CSPV cells and modules are increasing and taking market share from domestic producers and forcing cutbacks in domestic production and idling and closing of facilities constitutes clear evidence that increased imports are a cause of serious injury and threat of serious injury and that delay in taking action would cause damage to the industry that would be difficult to repair. Already, production facilities have been closed down in response to the surge in imports. Absent the relief permitted and needed by the circumstances now present, there will be unnecessary losses of jobs and revenues to both companies and their local communities and the very existence of the U.S. industry is in question.

VI. IMPORTS ARE A SUBSTANTIAL CAUSE OF SERIOUS INJURY AND THREAT THEREOF\textsuperscript{131}

The sharp increase in imports of CSPV cells and modules, that has occurred since 2012 is the cause of serious industry to the domestic industry and is threatening to cause further serious injury.\textsuperscript{132} In a safeguard proceeding, the statute directs the Commission to “determine whether an article is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article.”\textsuperscript{133} The term “substantial cause” is

\textsuperscript{130} See 19 C.F.R. § 206.14(e)(3).

\textsuperscript{131} This section satisfies the requirements of 19 C.F.R. § 206.14(f).

\textsuperscript{132} 19 C.F.R. § 206.14(f).

\textsuperscript{133} 19 U.S.C. § 2252(b)(1)(A).
defined as "a cause which is important and not less than any other cause." In order to make its determination, the Commission is required to "take into account all economic factors which it considers relevant." The factors identified by the statute include (but are not limited to) an increase in the absolute or relative volumes of imports during the period of investigation, and a decline in the domestic industry's market share during the period of investigation.

Under the statute, the Commission is also required to consider any changes in the condition of the industry over the course of the relevant business cycle, and to examine "factors other than imports which may be a cause of serious injury, or the threat of serious injury, to the domestic industry." The statute's legislative history indicates that the purpose of the "other factors" provision "is to assure that all factors injuring the domestic industry are identified." In order for the Commission to reach an affirmative determination, "increased imports must be both an important cause of the serious injury or threat and a cause that is equal to or greater than any other cause." In applying the statute, the Commission has generally conducted a two-step causation analysis.

First, the Commission examines relevant economic data, focusing on volume and price changes in imports and trends in financial and trade data for the industry, in the context of its conditions of competition. As discussed above, imports have increased significantly over the

137 19 U.S.C. § 2252(c)(2)(A) & (B).
139 Steel 201 at 34. See also S. Rep. No. 93-1298, at 120 (1974) ("Substantial cause is defined in the bill to mean a cause which is important and not less than any other cause. This requires that a dual test be met - increased imports must constitute an important cause, and be no less important than any other single cause.").
140 Steel 201 at 32-34.
141 Id. at 56-63.
last five years and prices have been declining. Despite an increase in domestic demand, domestic producers have been unable to generate any profit, cut their production, lost market share, and filed for bankruptcy, had large layoffs or shut down factories. Imports are undoubtedly a substantial cause of the serious injury that the domestic industry and its workers have experienced.

Second, the Commission considers to what extent other factors may be contributing to the industry’s serious injury. In Steel 201, with respect to certain carbon flat-rolled steel, the Commission noted: “Respondents have suggested several alternate sources of injury to the domestic industry, including declining domestic demand, intra-industry competition, domestic capacity increases, buyer consolidation, excess leverage of domestic producers, and legacy costs.” For individual product categories, claims were also made about the existence of Title VII trade remedies on imports from certain countries. The Commission considered each of these suggested causes and concluded that none of them was a source of injury to the domestic industry greater than increased imports.

In its evaluation of imports and other potential causes of injury, the Commission does not, and is not required to, quantify the amount of injury caused by various factors. Instead, the Commission examines the data relevant to the injury caused by imports and any alternative factors, and qualitatively assesses how much the industry’s serious injury is attributable to imports, on the one hand, and to alternative factors, on the other. In this way, the Commission is able to assess whether increased imports contributed as importantly to serious injury as any other factor.

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142 Id. at 63.
143 Id. at 63-65.
144 See S. Rep. No. 93-1298, at 120 (1974) (“The Committee recognizes that ‘weighing’ causes in a dynamic economy is not always possible. It is not intended that a mathematical test be applied by the Commission.”).
Petitioner does not believe that there are any causes other than imports that have contributed importantly to serious injury.

Indeed, as summarized in IBIS World:

The Solar Panel Manufacturing industry is declining. Industry value added, which measures an industry’s contribution to the overall economy, is forecast to decrease at an annualized rate of 2.3 percent in the 10 years to 2021. During the same period, US GDP is projected to grow at an annualized rate of 2.0 percent. As a result, this industry’s importance to the overall economy is decreasing, indicating a declining industry.

While government assistance to industry manufacturers and downstream customers has fueled the growth of solar power, most gains have been made in solar installation and solar power generation. Domestic manufacturers have performed poorly due to competition from imports, especially those from low-cost Asian countries like Malaysia and China. As a result, US manufacturers are anticipated to exit this industry. Over the 10 years to 2021, the number of enterprises is forecasted to fall at an annualized rate of 4.7 percent.  

Although the Commission has found in some cases that declining domestic demand is a more important causal factor that an increase in imports, that is not the case here. To the contrary, domestic demand has been increasing. However, despite growing demand, the domestic industry’s market share has been dwindling. Indeed, domestic producers were not only blocked from participating in demand growth, they were forced to make significant reductions in production as imports increased.

VII. THE INCREASE IN IMPORTS AND THE SERIOUS INJURY CAUSED BY THE INCREASE IN IMPORTS WAS AN UNFORESEEN DEVELOPMENT

As already shown, imports of CSPV cells and modules are being imported into the United States in such increased quantities as to cause and threaten to cause serious injury to the

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145 Exhibit 2, IBIS World at 11 (emphasis supplied).
146 See, e.g., U.S. International Trade Commission, Certain Metal Castings, Inv. No. TA-201-58, USITC Pub. 1849 (June 1986) at 22-23 (compressor housings), 29-30 (axle parts), 30 (levers), 34 (drive sprockets), 38 (beam hanger brackets), 42 (sockets and suspension brackets), 45 (parts of valves) (decline in domestic demand more important cause of injury than increased imports); U.S. International Trade Commission, Unalloyed, Unwrought Zing, Inv. No. TA-201-31, USITC Pub. 894 (June 1978) at 8 (decline in domestic demand/consumption more important cause of injury than increased imports).
U.S. industry. The surge in imports and the attendant injurious impact of such imports was clearly unforeseen by the U.S. industry. First, as already established, the completely uneconomic decision by foreign producers to add additional production capacity and increase production to such a degree that the supply of CSPV cells and modules would drastically exceed demand could not have been foreseen. Indeed, such a decision by foreign producers is not economically rationale and therefore could not have been foreseen or otherwise anticipated.

Further, the U.S. industry could not have foreseen that foreign producers, in response to CSPV AD/CVD 1 and CSPV AD/CVD 2, would move so rapidly and drastically to open new production facilities in third-countries resulting in no relief for the U.S. industry from the application of the orders in CSPV AD/CVD 1 and CSPV AD/CVD 2. As shown by the import data presented in Exhibit 7, the surge in imports from third-countries after the imposition of the AD and CVD orders is completely unprecedented and unforeseeable. For example, between 2014 and 2016, imports from Malaysia surged 67 percent while overtaking China as the largest source of imports. In addition, imports from Korea surged by 827 percent while increasing to become the third largest source of imports. Imports from Mexico, now the fourth largest source of imports, surged 77 percent. Imports from Thailand, now the fifth largest source of imports, surged over 76,000 percent. Such a rapid and significant increase in imports from third-countries is an unprecedented and completely unforeseen development.

VIII. EFFORTS TO COMPETE\footnote{See 19 C.F.R. § 206.14(h).}

The domestic industry has expended considerable time, effort and money to make a positive adjustment to import competition. Indeed, among the efforts by Suniva alone to improve its competitiveness are that it has:
- Sought an additional influx of capitalization, including from overseas sources – see Exhibit 25 (GTM, “Breaking: Shunfeng Acquires Majority in US Solar Manufacturer Suniva for $57 Million,” (Aug. 12, 2015)); and
- Continually invested in both R&D and technological advancements to increase the efficiency of its operations in both Georgia and Michigan.

Suniva believes in U.S. manufacturing and the U.S. worker, and will continue to fight for increased manufacturing in the United States. Indeed, over the last several years, Suniva has worked hard to increase the productivity (measured in MW/employee) of its operations. Indeed, consider the below:

Indeed, the average Suniva efficiencies of its CSPV cells has increased, which decreases manufacturing costs per watt (as the company gets more power out of the same raw materials and labor). Suniva’s efficiencies over the five year period have been:

Even with its improved manufacturing methods, better technology, lower costs, and dramatically improved efficiency rates, Suniva has suffered substantial losses due to global imports.

With respect to increasing its capacity, economies of scale are reached with increased capacity, which is key to profitability in this industry. Indeed:
In addition, PV systems are modular; to build a system to generate large amounts of power, the manufacturer essentially joins together more components than required for a smaller system. These characteristics make PV manufacturing quite different from production of most other types of generating equipment. In particular, PV systems offer little opportunity for manufacturers to make customized, higher-value products to meet unique needs. Manufacturers offer competing technological approaches to turning sunlight into electricity, but many customers have no reason to care about the technology so long as the system generates the promised amount of electricity. **Economies of scale are significant, as increasing output tends to lower a factory’s unit costs.**

As similarly summarized by IBIS World:

> Typically, small manufacturers have higher wage costs because they are focused on developing a product rather than undergoing large-scale production.

> Industry operators must be able to reduce manufacturing costs to compete against solar panel manufacturers abroad. Typically, manufacturers can reduce costs by expanding operations to achieve economies of scale savings.\(^{149}\)

Clearly, Suniva has been doing all that it can to remain competitive. Its efforts, as wide-ranging as they are, simply cannot effectively counter the onslaught of foreign product.

**IX. RELIEF SOUGHT AND THE PURPOSE THEREOF\(^{150}\)**

The above unequivocally demonstrates that the U.S. industry desperately needs relief that will provide it with the opportunity to recover. The relief must be tailored to arrest and reverse the steady march of imports over the past five years that has decimated the U.S. industry.

Indeed, the provisional relief suggested below would, at a minimum, halt the wholesale loss of sales, production, employment, and the related disruption to families and local communities that is now occurring as a result of the import surge. Domestic producers are being put in an untenable position, wherein dramatic decisions harmful to the future of the businesses and the lives of hundreds of workers are being forced upon companies by the import surge. The import

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\(^{149}\) Exhibit 2, *IBIS World* at 3.

\(^{150}\) *See* 19 C.F.R. § 206.14(g).
relief permitted under this action is necessary to permit rational, constructive long-term decisions to be properly made.

The domestic industry requests the following forms of relief to provide time for the domestic industry to enhance its competitiveness by stabilizing its financial circumstances, make the necessary investments required to effectively compete in the market, and to arrest the collapse of prices that threaten the viability of the domestic industry and the U.S. market. Petitioner suggests four forms of relief: (1) a tariff and price floor on imports; (2) an equitable distribution of antidumping and countervailing duties collected and still under suspension in CSPV AD/CVD 1 and CSPV AD/CVD 2; (3) creation of an economic investment development program funded with the tariffs collected under any resulting remedies under a safeguard action; and (4) bilateral and multilateral negotiations by the U.S. government to reduce global excess capacity and restore a supply and demand balance in the global market. We address what we hope to obtain with each, below.

With regard to the tariff remedy and price floor, petitioner seeks relief that is essential to allowing the industry to survive long enough to see the eventual benefits of a re-balanced global market. If imports continue at their current volume and price levels without tariff relief, that short-term survival is in grave jeopardy. After the final determination, petitioner believes an additional tariff of $0.40/watt per CSPV cell, with a minimum floor price of $.78/watt per module is necessary to provide the domestic industry with the breathing room necessary to start the recovery process. However, of course, the road to recovery will take much longer than a year. As such, in the following years, petitioner requests the following tariffs:

- $0.37/watt per CSPV cell, with a minimum floor price of $0.72/watt per module (year two);
- $0.34/watt per CSPV cell, with a minimum floor price of $0.69/watt per module (year three); and
$0.33/watt per CSPV cell, with a minimum floor price of $0.68/watt per module (year four).

The purpose of the per-watt CSPV cell tariff is to bring market prices back to levels that can sustain domestic production. The purpose of the minimum floor price is to prevent non-domestic producers from moving value from the CSPV cell to the module itself.

The second form of requested relief is the equitable distribution of antidumping and countervailing duties collected by, and still under suspension with, the U.S. government since the imposition of the antidumping/countervailing duty orders in CSPV AD/CVD 1\textsuperscript{151} and CSPV AD/CVD 2.\textsuperscript{152} While petitioner does not have information on the total dollar amount of antidumping and countervailing duties still under suspension pursuant to these orders, this can be obtained by the Commission from CBP. The distributions requested by petitioner are:

- 25 percent of the collected duties to be distributed on a \textit{pro rata} basis to U.S. CSPV cell manufacturers (based on production capacity as of March 1, 2017);
- 25 percent of the collected duties to be distributed on a \textit{pro rata} basis to U.S. CSPV module manufacturers (based on production capacity as of March 1, 2017);
- 10 percent of the collected duties to be distributed to U.S. polysilicon producers, as well as crystal growing and wafer facilities on a \textit{pro rata} basis (based on production capacity as of March 1, 2017); and
- 20 percent for the establishment of a fund, managed by the U.S. Department of Commerce, for the purposes of re-initiation of manufacturing capacity idled between March 1, 2013 and the date of imposition of any safeguard measures by existing U.S. CSPV cell and module manufacturers and U.S. polysilicon producers.\textsuperscript{153}

The third form of relief requested is the creation of a separate economic investment development program funded with any duties collected under a safeguard action. This fund,

\textsuperscript{151} A-570-979 (Crystalline Silicon Photovoltaic Cells, Whether Or Not Assembled Into Modules from the People’s Republic of China) and C-570-980 (Crystalline Silicon Photovoltaic Cells, Whether Or Not Assembled Into Modules from the People’s Republic of China).

\textsuperscript{152} A-570-010 (Crystalline Silicon Photovoltaic Products from the People’s Republic of China), C-570-011 (Crystalline Silicon Photovoltaic Products from the People’s Republic of China), A-583-853 (Crystalline Silicon Photovoltaic Products from Taiwan).

\textsuperscript{153} Any remaining funds would be distributed under normal U.S. government practice.
managed by the U.S. Department of Commerce, will be made available to parties who use any of
the distributed funds for the purpose of developing new or additional manufacturing capacity
relating to the CSPV cell/module supply chain, including but not limited to, polysilicon
production and wafer manufacturing.

The fourth form of requested relief is to have the President initiate international
negotiations between the United States and the exporting countries to address the underlying
causes of the increase in imports and otherwise to alleviate the injury and threat of injury. This
action is essential to the long-term viability of the domestic industry and to creating rational
market conditions that will allow it to compete once safeguard relief ends.154

Further details on recommendations as to the import relief being requested will be
developed and provided to the Commission during the course of the investigation. Indeed, what
is most important is that the relief provided halt the serious injury that is occurring. To that
extent, Petitioner is receptive to having the President implement any other action authorized
under law that is likely to facilitate positive adjustment to import competition.

X. CRITICAL CIRCUMSTANCES155

Petitioner does not allege critical circumstances at this time, and therefore, does not
request provisional relief.156 While provisional relief is not requested, Petitioner notes that time
is of the essence, and thus requests that the Commission conduct its safeguard action with as
much dispatch as possible, reducing the statutory periods for each stage of the investigation to
the extent practical. Indeed, import relief is needed to stem the flow of financial loss, the loss of

154 Indeed, the requested negotiations obviously would not provide meaningful or effective relief to the
industry, in the absence of the proposed tariffs and price floors.
156 Petitioner reserves the right to amend this petition and request such relief if circumstances warrant during
the pendency of the ITC’s investigation.
sales/market share, the decline in production, the decline in capacity utilization, and to prevent the closing of plants and the termination of hundreds of workers’ employment. Simply put, the U.S. industry cannot survive under current market conditions.

XI. CONCLUSION

The domestic CSPV cells and modules industry is in a state of acute crisis. Imports have increased dramatically since 2012, grabbing an increasingly large share of the growing domestic market. This has directly lead to dire economic conditions in the domestic industry, illustrated in no small part in Suniva’s bankruptcy finding and the closure of numerous domestic manufacturers. Imports are continuing to increase, and prices are projected to continue falling. Domestic producers have been put in an untenable position, wherein dramatic decisions harmful to the future of the businesses and the lives of hundreds of workers are being forced upon companies by the import surge. To avoid this outcome and rectify the situation, relief needs to be provided that allows the industry to survive in the short term and to compete in a more rational market environment in the years to come. As such, Suniva respectfully requests that the Commission give this domestic industry and its workers that chance by: 1) initiating an investigation; 2) making an affirmative determination that increased imports of CSPV cells and
modules are a substantial cause of serious injury, or threat thereof, to the domestic industry; 3) recommending the relief requested herein (as well any further relief deemed appropriate); and 4) reporting its findings to the President on an expedited schedule.

Respectfully submitted,

Matthew McConkey