

### Overview

This issue brief provides a detailed description and analysis of the new tariff on imported solar crystalline silicon photovoltaic (CSPV) cells and modules that took effect on Feb. 7, 2018. The tariffs begin at 30 percent for the first year and will step down five percent annually for the ensuing three years. They were announced on Jan. 23 by President Trump in response to a case brought by two foreign-owned, bankrupt companies under the U.S. “global safeguard” law, Section 201 of the Trade Act of 1974.

Market anticipation of these tariffs began affecting development in the U.S. solar sector months before President Trump’s decision. Now that the tariffs have been imposed, global and domestic solar manufacturers and developers will need to make quick investment decisions informed by the transformed solar economic landscape. While the level of the tariff selected by President Trump is well below the worst case “remedy” available, it will still have a measurable deleterious impact on the growing solar industry over the next several years.

### Background

On April 26, 2017, Georgia-based solar manufacturer Suniva filed a petition with the International Trade Commission (ITC) seeking tariffs on foreign-made CSPV solar cells and minimum prices for solar modules made with foreign CSPV cells. Suniva’s petition, joined by SolarWorld Americas (SolarWorld), was brought pursuant to Section 201 of the Trade Act of 1974. This law allows for temporary import relief (such as tariffs, minimum prices and quotas) in situations where increased imports of specific “fairly traded” products are causing “serious injury” to an American industry. The original intent of this law was to provide temporary relief to industries as they adjust to freer international trade and competition,<sup>1</sup> and the law is authorized by Article XIX of the Global Agreement on Trade and Tariffs (GATT) treaty of 1994.<sup>2</sup> Notably, safeguard actions do not require a finding of unfair trade practices as is required in anti-dumping cases.

In response to Suniva’s petition, the ITC determined that there had been a serious injury to the U.S. CSPV manufacturing industry from the import of foreign-made CSPV cells (whether or not these are partially or fully assembled into other products) and modules. On Aug. 15, 2017, the ITC held a hearing on this issue, which was followed by a [formal finding of injury](#) on Sep. 22, 2017. On Nov. 13, 2017 the ITC submitted to President Trump their [findings and recommended remedies](#). The proposed remedies varied including quotas, tariffs and licensing fee arrangements. On Nov. 27, 2017, the U.S. Trade Representative (USTR) Robert Lighthizer [requested additional information](#) from the ITC on any

<sup>1</sup> Senate Finance Committee. (1974). *Report on the Trade Reform Act of 1974*. Page 119. Retrieved from <https://www.finance.senate.gov/imo/media/doc/trade10.pdf>

<sup>2</sup> World Trade Organization. (2017). *Technical Information on Safeguard Measures*. Retrieved from [https://www.wto.org/english/tratop\\_e/safeg\\_e/safeg\\_info\\_e.htm](https://www.wto.org/english/tratop_e/safeg_e/safeg_info_e.htm).

unforeseen developments that led to increased imports of solar CSPV cells and modules. On Dec. 27, 2017, the ITC submitted a [supplemental report](#) to the USTR finding that China implemented policies in violation of World Trade Organization (WTO) and GATT trade agreements to the detriment of the U.S. solar manufacturing industry, and that these actions could not have been foreseen by the U.S. Such a finding is not required under Section 201 but it is required by the WTO. On Jan. 22, 2018 President Trump announced a [final decision](#) to impose tariffs on certain imported crystalline silicon PV cells.

## Tariff Structure

President Trump’s proclamation imposes a 30 percent ad valorem tariff on imported CSPV solar cells and modules, which steps down by 5 percentage points each year over the next three years and then phases out in 2022. The proclamation also provides a 2.5 gigawatt exemption from the tariff for imported solar cells (not modules) each year for the four-year period. This tariff took effect at 12:01 a.m. eastern standard time on February 7, 2018.

	2018	2019	2020	2021
Cell/Module Tariff	30%	25%	20%	15%
Cell Quota Exemption	2.5 GW	2.5 GW	2.5 GW	2.5 GW

The final “global safeguard” remedy adopts the tariff structure similar to that proposed by ITC Commissioners Williamson and Johanson, but contains a higher imported cell exemption quota.<sup>3</sup> The imported cell exemption has a large effect on existing domestic module assembly, which saw less than 2.5 GW of U.S. production in recent years. The raised quota will likely provide an adequate safe harbor to those companies that currently import, or have historically imported, foreign cells and assemble modules in the U.S. At this writing, the details regarding how the cell quota will be administered have not yet been announced.

**Countries subject to the tariff:** The tariff will apply to all imported solar cells and modules, whether partially or fully assembled into other products, regardless of origin, with minor exemptions. Pursuant to the North American Free Trade Agreement (NAFTA) Implementation Act, the ITC made a determination that Mexico accounted for a substantial share of cell and module imports and contributed to serious injury or offered threat of injury, but that Canada did not. Despite the findings of the ITC report, President Trump determined that both Mexico and Canada contribute importantly to the serious injury and therefore are subject to the import tariff.

The tariff does not apply to imported CSPV products from “developing countries” that are members of the WTO, provided that the country’s share of total imports, based on imports during a recent “representative period” does not exceed three percent of total imports. Additionally, all such exempted countries cannot cumulatively exceed more than nine percent of total CSPV imports. How a country’s percentage of imports will be measured (i.e. cost versus capacity), the definition of a “representative period,” and the process for imposition of tariffs once a country exceeds three percent, are still unclear. A list of the exempted countries is included in Annex I to the President’s proclamation. Some notable “developing countries” with existing solar manufacturing capacity that could be quickly scaled up in response to the exemption include India, Turkey and Brazil. Thailand and

<sup>3</sup> Williamson and Johanson proposed a 1.0 GW cell quota increasing by 0.2 GW per year.

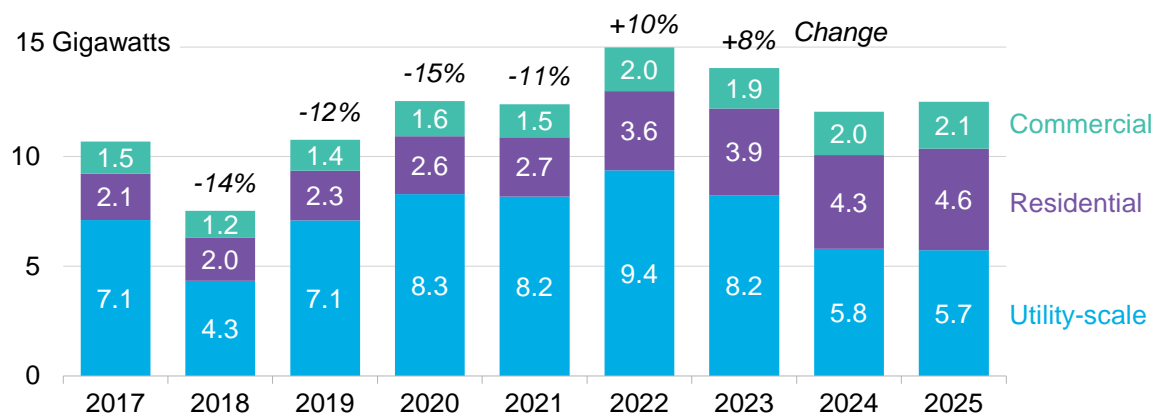
the Philippines, both WTO developing countries, already exceed 3% of US solar imports and therefore are subject to the tariff.

**Product-specific exemptions:** The tariff does not apply to thin-film solar PV products or to smaller CSPV cells, such as those used in solar power lamps, electronic devices, or portable chargers. However, the USTR may determine at any time during the four-year remedy period to exempt additional products from the tariff. Specialized high-efficiency solar panels typically have a significantly higher price tag than standard modules used in most commercial and utility solar deployments, and therefore are subject to a larger tariff amount. Manufacturers of such panels believed there would be an exemption included in the tariff, and will likely attempt to utilize the exemption procedure to remove tariffs on their products.

## Projected Tariff Impacts

While the 30% incrementally decreasing tariff is not the worst-case scenario for the Section 201 trade case, it is still expected to have a measurable negative impact, slowing a growing industry that saw nearly \$20 billion in U.S. investment<sup>4</sup> and employed over 260,000 American workers<sup>5</sup> in 2016. Module prices have been hitting all-time lows nearing \$0.33 per watt and falling. At these prices, the 30% tariff would result in approximately a ten cent per watt price increase in the first year and will step down to a four cent per watt tariff in 2021 on average.<sup>6</sup>

Industry analysts project there will be 7.6 GW less solar deployed as a result of the new tariffs, an amount greater than total U.S. solar deployment in 2015 (7.4 GW). The Solar Energy Industries Association estimates that the tariff will result in the loss of 23,000 American jobs in 2017.<sup>7</sup> The heaviest losses will be felt in the first two years immediately following President Trump’s decision when the tariff is highest. The industry is expected to rebound after the tariff ends, with a flood of delayed projects.



Source: Bloomberg New Energy Finance

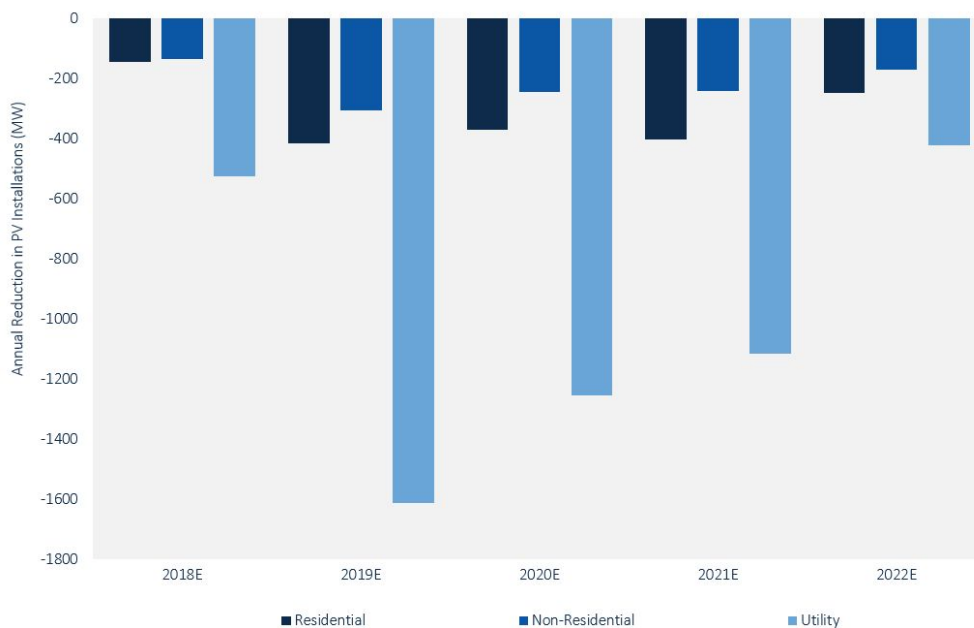
<sup>4</sup> *Clean Energy Investment Trends*, Bloomberg New Energy Finance. Retrieved January 26, 2018.

<sup>5</sup> *2016 National Solar Jobs Census*, The Solar Foundation (2017). Available at <https://www.thesolarfoundation.org/national/>.

<sup>6</sup> *New Tariffs to Curb US Solar Installations by 11% Through 2022*, Julia Pyper, Greentech Media Research. Available at <https://www.greentechmedia.com/articles/read/tariffs-to-curb-solar-installations-by-11-through-2022#gs.1z6iljg>. (Retrieved January 26, 2018).

<sup>7</sup> *President’s Decision on Solar Tariffs is a Loss for American*, Solar Energy Industries Association (Jan 22, 2018). Available at <https://www.seia.org/news/presidents-decision-solar-tariffs-loss-america>.

In many markets, solar power has just recently hit the level where it can compete economically with natural gas and traditional electricity generators as the cheapest source of new energy. The increase of ten cents per watt will likely place the strongest downward pressure on deployment in these markets, which include Southern states such as Florida, Georgia and South Carolina, as well as emerging markets in the Midwest.<sup>8</sup> Many of the hardest hit states also lack strong state renewable goals and portfolio standards that will help drive growth in other states over the next four years. Utility-scale PV developers are especially price sensitive and will see the largest loss in projected deployment under the new tariff. The full effects of the tariff are projected to be delayed due to 2 to 3 gigawatts of stockpiled panels that were brought in prior to the imposition of the tariff.<sup>9</sup>



Source: Greentech Media Research

It remains uncertain whether the tariffs will lead to meaningful long-term investment in U.S. CSPV manufacturing. Potential market entrants must weigh the time and capital investments needed to scale meaningful CSPV manufacturing with the benefits provided by a diminishing tariff rate that ends in four years. There is also uncertainty associated with the potential that a WTO challenge could prematurely end the tariff. While some domestic cell and module manufacturers have announced efforts to ramp up production in response to the tariff<sup>10</sup>, most industry experts believe that the chilling affect the tariffs will have on domestic solar deployment, U.S. solar jobs and strained international trade relationships will outweigh the potential for increased investment in U.S. manufacturing.

<sup>8</sup> New Tariffs to Curb US Solar Installations by 11% Through 2022, Julia Pyper, Greentech Media Research (2018).

<sup>9</sup> Id.

<sup>10</sup> JinkoSolar Signs 1.75 GW Solar Module Supply Agreement in the U.S. and Advances Plans for Construction of Manufacturing Facility in the U.S., Jinko Press Release (2018). Available at, [https://www.jinkosolar.com/press\\_detail\\_1419.html?lan=en](https://www.jinkosolar.com/press_detail_1419.html?lan=en).