

# **Crystalline Silicon Photovoltaic Cells and Modules from China**

**Inv. Nos. 701-TA-481 and 731-TA-1190 (Review)**

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Presentation at the United States International Trade Commission

*On Behalf of*

**SolarWorld Americas, Inc.**

International  
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# Overview

China's CSPV Industrial Policy

Conditions of Competition

Effects of Revocation

# The History of Government Intervention in the Chinese Solar Industry

- The government of China has targeted the solar industry since at least 2006.
- The development of the industry in China was not organic: the technology was obtained both legally and illegally from other countries.
- The government continuously intervened to keep the Chinese industry viable, which resulted in massive overcapacity.

# Chinese Government Industrial Policy

- **11<sup>th</sup> Five-Year Plan (2006-2010)**
  - Targeted the solar industry with the State Council prioritizing “low cost, mass development and utilization of renewable energy.”
  - “We will give priority to researching and developing... high – performance low-cost solar voltaic cells and technologies to use them.”
- **12<sup>th</sup> Five-Year Plan (2011-2015)**
  - Identifies the new energy industry (including solar) as a “strategic emerging industry.” Planned capacity and production increases, price level targeting, and export orientation.
- **13<sup>th</sup> Five-Year Plan (2016-2020)**
  - “We will continue to give impetus to the development of wind and photovoltaic power.”

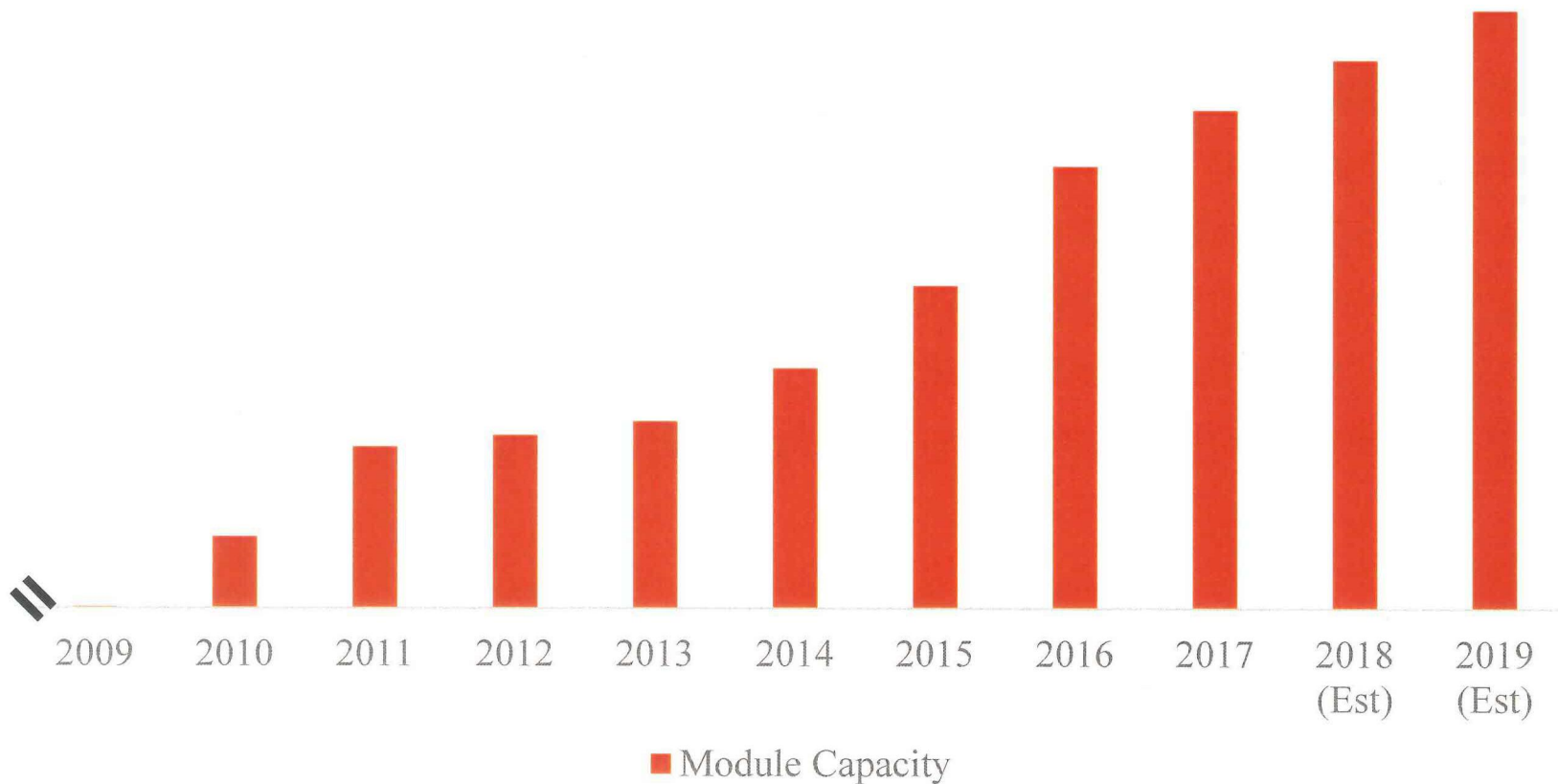
Source: Dewey & LeBoeuf LLP for the National Foreign Trade Council. China's Promotion of Renewable Electric Power Equipment Industry: Hydro, Wind, Solar, Biomass. (March 2010) at 25. 12<sup>th</sup> Five year Plan for National Economic and Social Development at section 1 of Chapter 10 part III; & 12<sup>th</sup> Five-Year Plan for the Solar Photovoltaic Industry . The 13<sup>th</sup> Five-Year Plan for Economic and Social Development of The People's Republic of China: 2016-2020, translation by Compilation and Translation Bureau of the Central Committee of the Communist Party of China.



## Industrial Policy

# Industrial Policy Has Driven the Expansion of the Chinese Industry

*Gigawatts*



Source: GTM Research, PV Pulse March 2018, 1.A – S-D Summary Metrics. Axis omitted and not set to zero to avoid disclosure of proprietary data.

# Made in China 2025

“Manufacturing is the main pillar of the national economy, the foundation of the country, tool of transformation and basis of prosperity. Since the beginning of industrial civilization in the middle of the 18th century, it has been proven repeatedly by the rise and fall of world powers that without strong manufacturing, there is no national prosperity. Building internationally competitive manufacturing is the only way China can enhance its strength, protect state security and become a world power.”

## Conditions

### Conditions of Competition

- Subject imports and the domestic like product are highly fungible and competition is based on price.
- There is significant excess and divertible capacity in China.
- The United States is an attractive market with large and growing demand.
- There are no viable 3<sup>rd</sup> country markets to absorb Chinese excess capacity.
- The U.S. industry has reorganized and is poised for growth.

## **Injury**

### **Revocation of the Orders Will Lead to a Recurrence of Injury**

- The domestic industry is vulnerable to competition with large volumes of low-priced, dumped subject imports.
- Massive Chinese excess and divertible capacity.
- The United States is the preferred market.
  - Large and increasing demand
  - Higher prices
- Other U.S. trade actions do not remove domestic vulnerability.

**Injury**

**Vulnerability**

## **The Domestic Industry Is Vulnerable**

- Domestic financial performance was poor over the POR.
- The domestic industry is just beginning to recover due to the 201 remedy and the order.
- Currency devaluation in China and increasing input costs exacerbate domestic vulnerability.
- The global safeguards and Section 301 actions do not remove the domestic vulnerability to injury by subject imports.



**Injury**

**Vulnerability**

## **Domestic Performance over the POR Demonstrates Vulnerability**

- Since January 2012, approximately 28 domestic cell and module manufacturers went bankrupt or terminated operations.
- Nearly all performance indicators declined over the POR (2012 vs. 2017) and over the interim period:
  - Net sales values
  - Capacity utilization
  - Production\*
  - Operating profits
  - Employment (workers, hours, and wages)
- Every measure of domestic profitability was negative in 2017 and the first half of 2018.

Source: USITC Pub. 4360 at III-3-4 (Table III-4); Prehearing Report at III-2-3 (Table III-1), Table C-1; see also Petitioners' Prehearing Brief Exhibit 51.

\* Cell production declined over 2012-2017 and the interim period; module production declined from 2012 to 2017 but increased over the interim period.

## Injury

### Vulnerability

## Recent Investments Would Be Rendered Uneconomic by Revocation of the Orders

**Nine** new investments totaling an estimated 4.6 gigawatts of new capacity have been announced since the 201 remedies went into effect.

Firm	Type of Investment	State
JinkoSolar	New facility	FL
Hanwha Q Cells	New facility	GA
Mission Solar	Expansion	TX
LG Electronics	New facility	AL
Heliene Inc.	Re-start and expansion	MN
SunPower	Expansion	OR
Sunpreme	New facility	TX
Seraphim	Re-start and expansion	MS

Source: Prehearing Report Table C-1, III-7-10; David Fickling, *Chinese burn Will Only Make the Solar Industry Stronger*, Bloomberg (Jun 5, 2018); investments and estimated capacities provided in Petitioners' Prehearing Brief at 21-23 . Only eight investments shown above due to BPI for one investment.

**Injury**

**Vulnerability**

## **Other U.S. Trade Actions Do Not Remove Domestic Vulnerability to Subject Imports**

The global safeguards and Section 301 actions alone are not sufficient to keep subject producers from returning to exporting injurious volumes of low-priced dumped and subsidized to the United States.

- Section 301 is discretionary and temporary.
- The global safeguards are subject to review and potential revocation.
- The safeguards remedy declines each year.
- The safeguards quota on cells is currently not binding. The *Solar I* and *II* orders are thus the only action effectively relevant to cells.

**Injury**

**Vulnerability**

## **Respondents Acknowledge Adequate Supply with AD/CVD Orders and Section 201**

“The antidumping and countervailing duties on imported solar cells and modules from China do not materially impact Recurrent’s current and future business operations.”

- Declaration of Michael Arndt, Recurrent Energy LLC

“Canadian Solar intends to continue sourcing from the U.S. market from locations other than China for at least the next two years, even if the Solar I AD/CVD orders are lifted.”

- Declaration of Vincent Ambrose, Canadian Solar Inc.



Injury

Capacity

## Significant Excess & Divertible Capacity in China

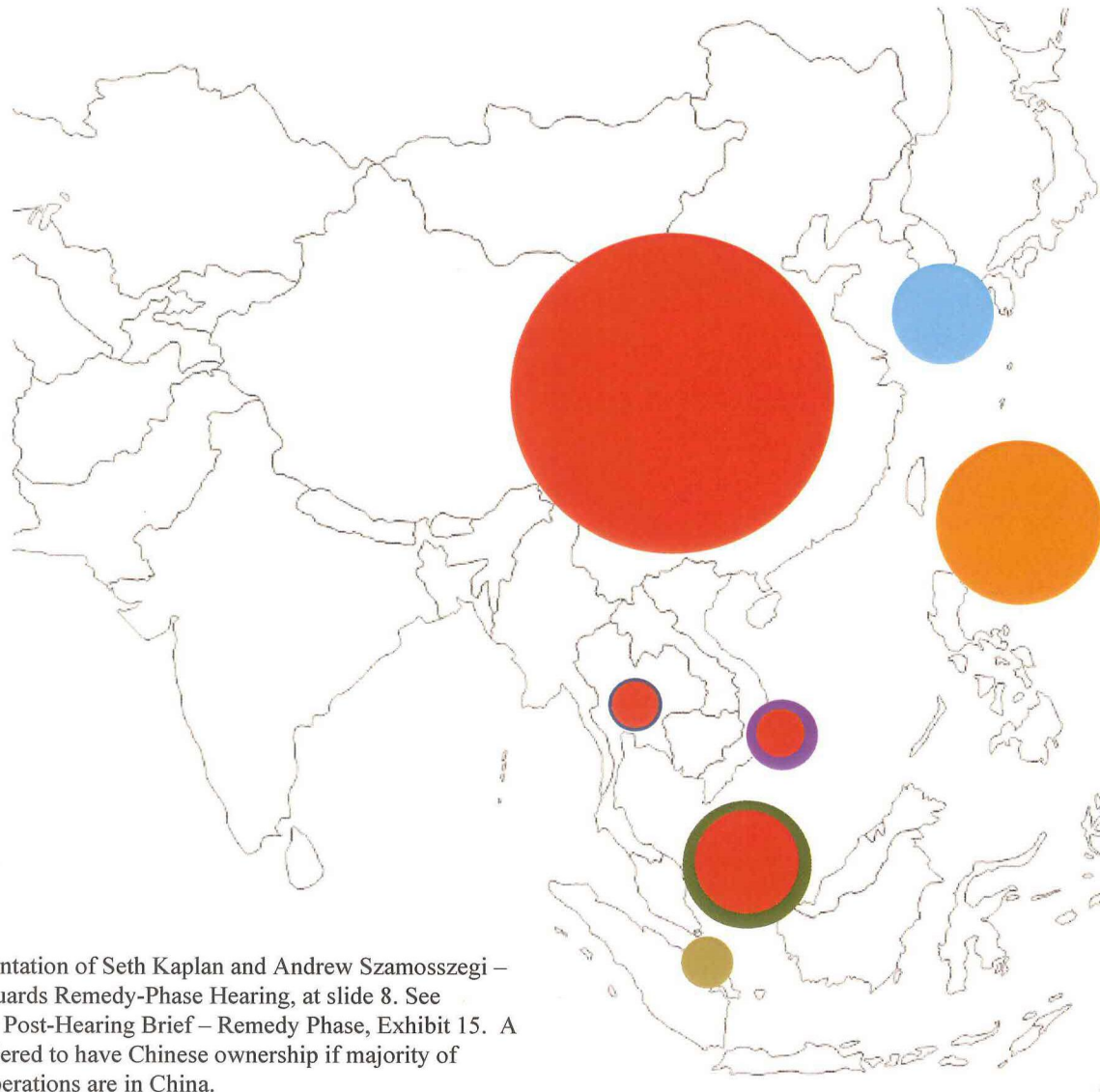
- 34 gigawatts of excess capacity in China
  - More than three times the volume of total U.S. solar installations in 2017.
  - More than a third of total global installations in 2017.
- China has enough CSPV capacity to have supplied more than 80 percent of the cells and *all* of the modules for every solar installation on Earth in 2017.



**Injury**

**Capacity**

## CSPV Production Capacity in East Asia - 2016



**China**  
**Taiwan**  
**Malaysia**  
**Korea**  
**Singapore**  
**Vietnam**  
**Thailand**

**Red circles in Malaysia, Thailand, and Vietnam represent capacities of firms whose primary production operations are in China.**

Source: Presentation of Seth Kaplan and Andrew Szamosszegi – Global Safeguards Remedy-Phase Hearing, at slide 8. See SolarWorld’s Post-Hearing Brief – Remedy Phase, Exhibit 15. A firm is considered to have Chinese ownership if majority of production operations are in China.

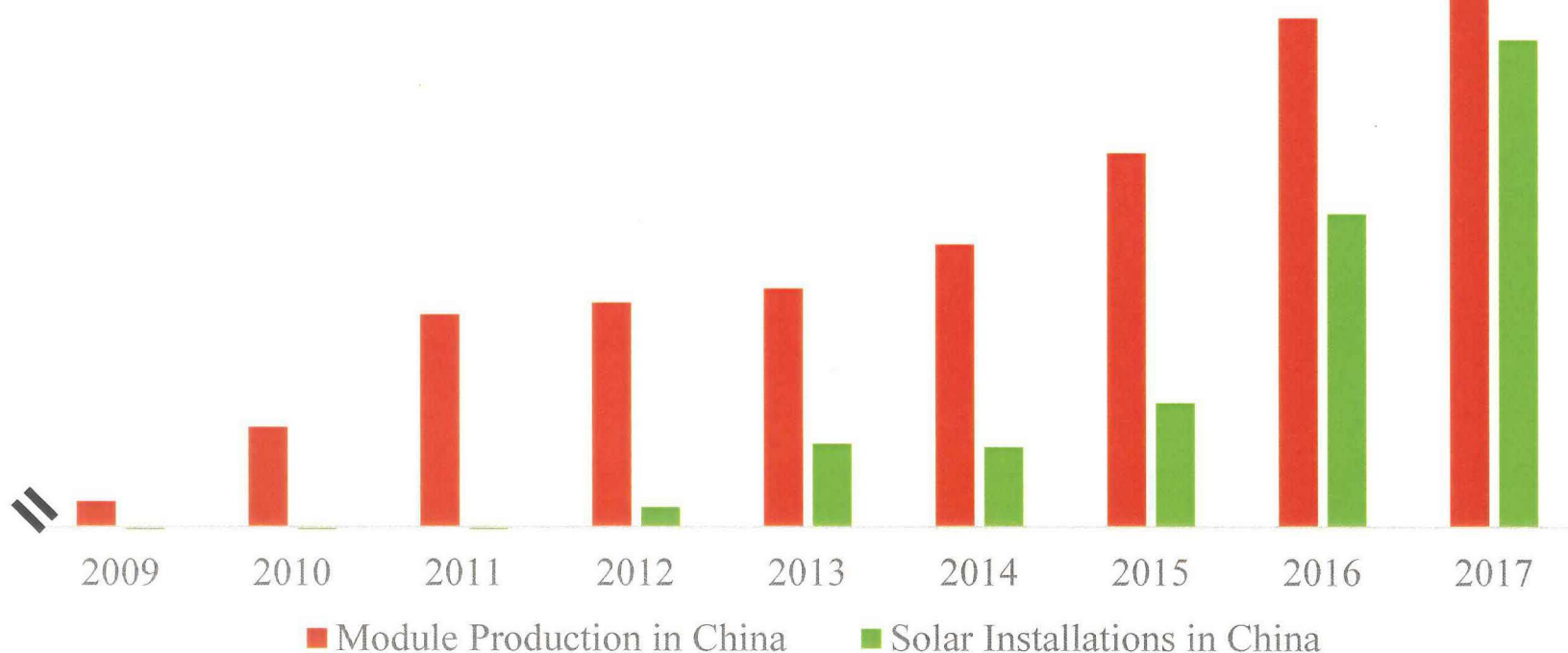
Injury

Capacity

## China's CSPV Industry Is Export-Oriented

Gigawatts

*Over the POR, Chinese module production was **twice** the volume of installations in China.*



**Injury**

**Capacity**

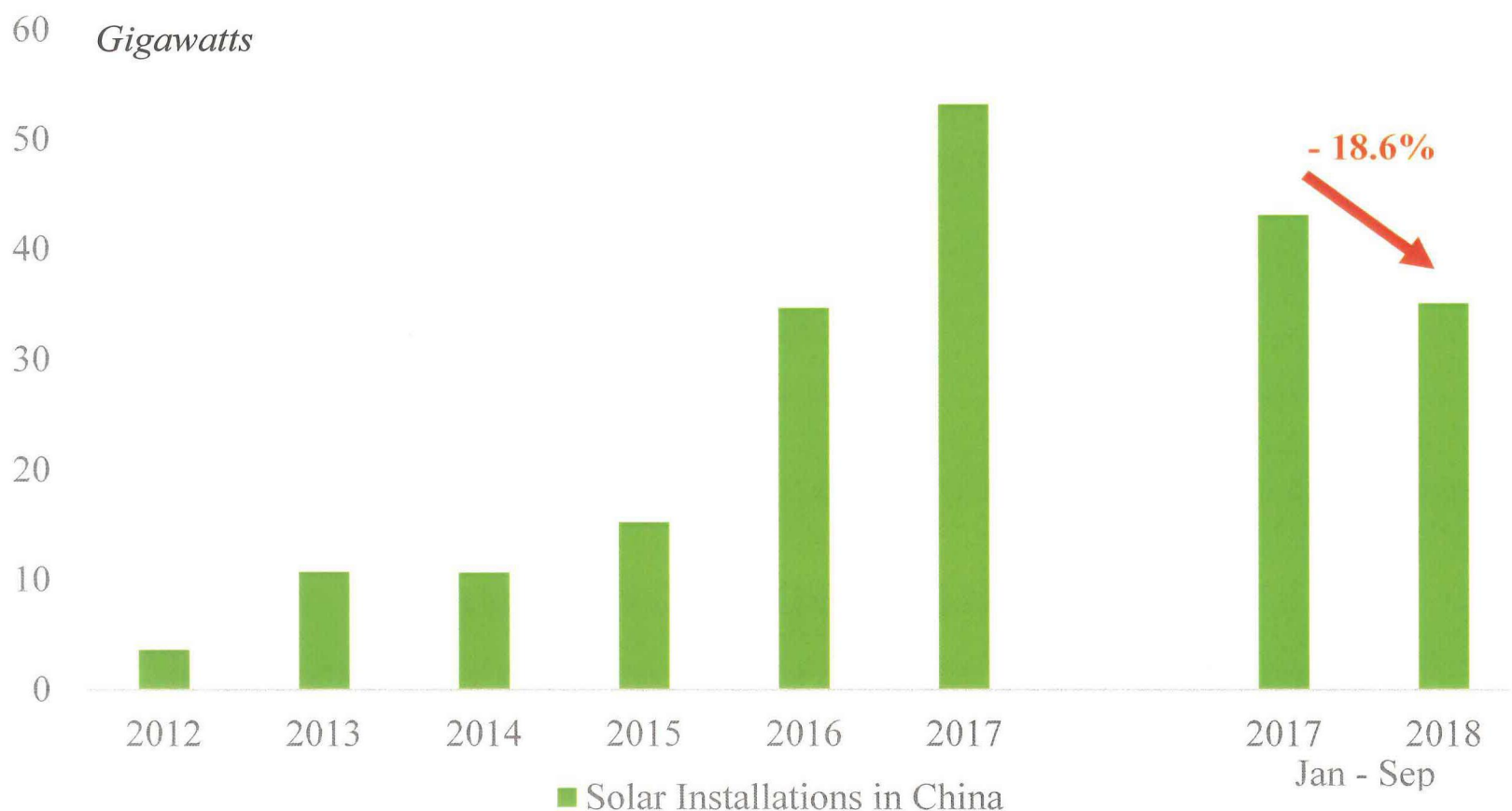
## **The Government of China Has Reduced Demand-Side Supports**

- Reduction in demand-side supports will only exacerbate the global supply glut.
- In 2018, the government of China:
  - Reduced solar feed-in tariffs
  - Capped new distributed solar projects and employed capped quotas that were exhausted within the first five months of the year.

**Injury**

**Capacity**

## Installations in China Declined in 2018



**Injury**

**Capacity**

## Third-Country Import Restraints Exacerbate Supply-Demand Imbalances

The global imbalance between supply and demand is even more extreme for China's CSPV exports.

### Third Country Import Restraints Affecting Imports from China

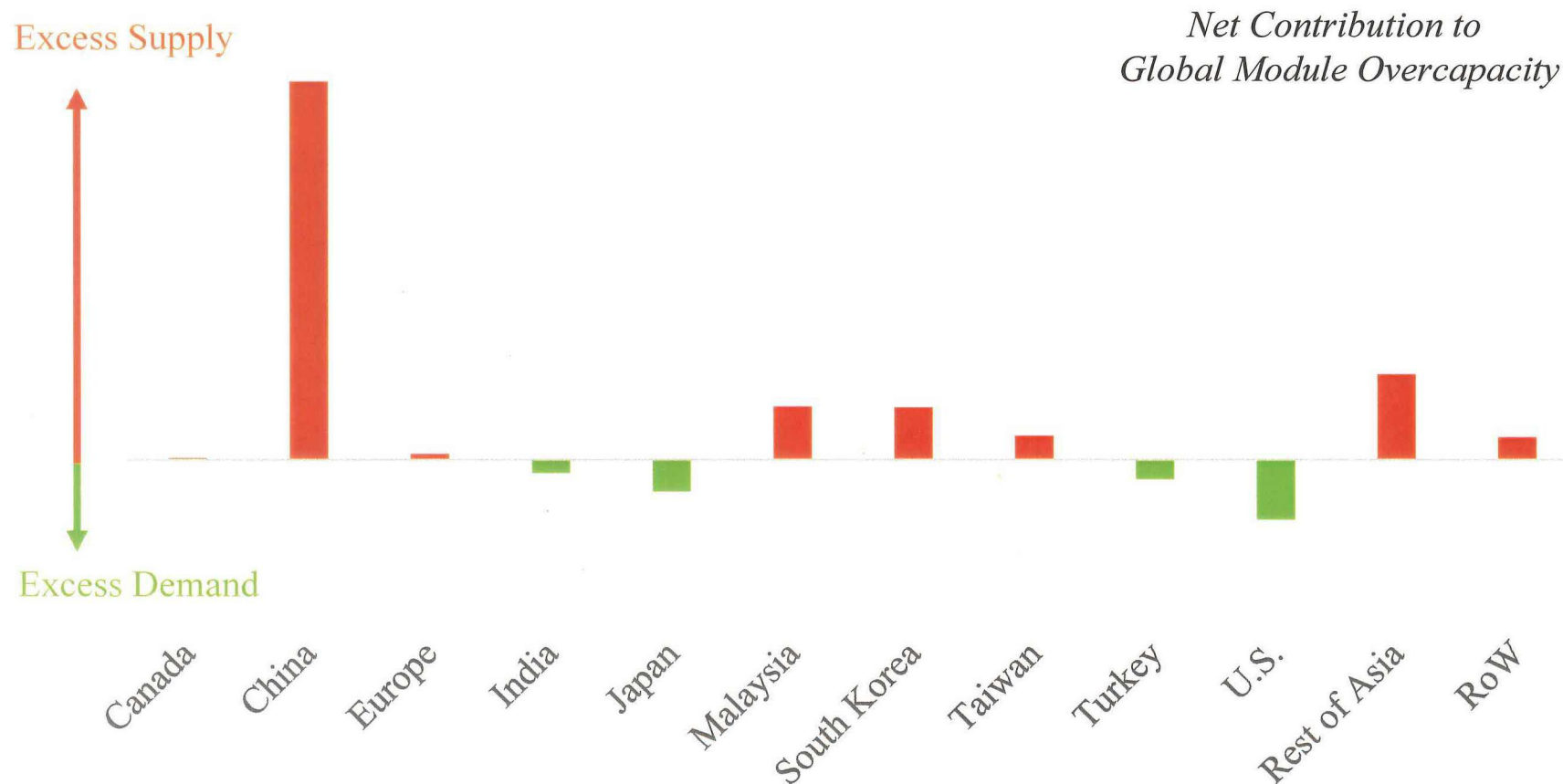
Importing Country	Product	Measure	Date	Exporting Country
Canada	CSPV modules	Antidumping duties (124.4%) Subsidy rate (6.2%)	July 2015	<b>China</b>
Turkey	CSPV modules	Antidumping duties (27%)	February 2017	<b>China</b>
India	CSPV modules	Safeguard duties (25% in first year, 20% in the first six months of the second year, and 15 percent in the last six months of the second year)	July 2018	<b>China,</b> Malaysia



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**Capacity**

## Supply/Demand Imbalance by Country

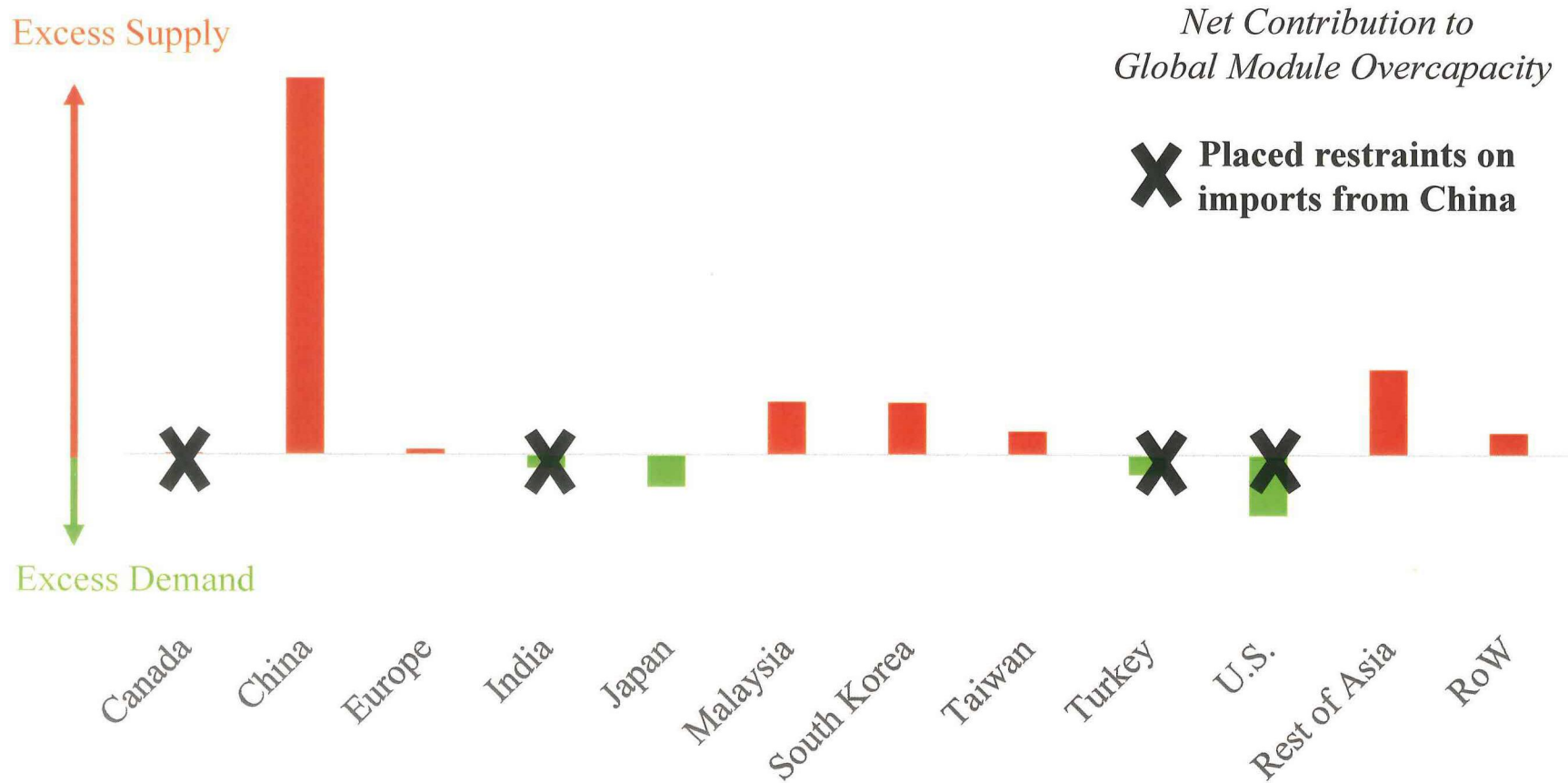


Source: Chart displays the difference between module capacity and installations. **Installations:** IEA. 2018 Snapshot of Global Photovoltaic Markets, Report IEA PVPS T1-33:2018, at 4, 15. Country-specific data provided for PVPS countries. India's 2017 installations: Prehearing Report at IV-43, Table IV-3. **Module Capacity:** GTM Research PV Pulse March 2018, Supply/Demand Metrics (Proprietary).  
Axis suppressed to avoid disclosure of proprietary data.

Injury

Capacity

## Import Restraints Block China's Access to the Few Market That Are Net Importers

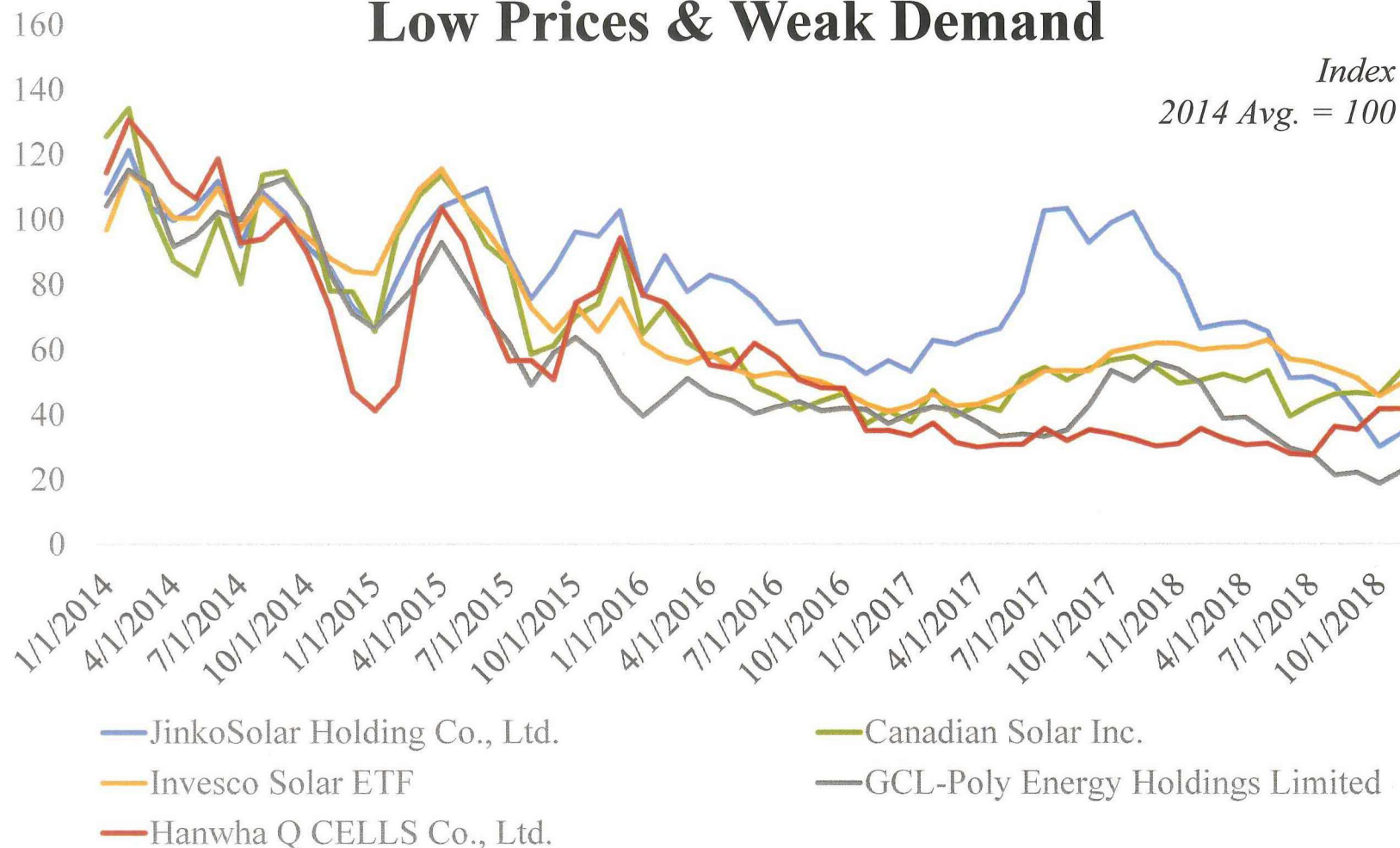


Source: Chart displays the difference between module capacity and installations. **Installations:** IEA. 2018 Snapshot of Global Photovoltaic Markets, Report IEA PVPS T1-33:2018, at 4, 15. Country-specific data provided for PVPS countries. India's 2017 installations: Prehearing Report at IV-43, Table IV-3. **Module Capacity:** GTM Research PV Pulse March 2018, Supply/Demand Metrics (Proprietary).  
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**Injury**

**Capacity**

## Future Excess Capacity: Stock Prices Reflect Low Prices & Weak Demand



Source: *Yahoo Finance*. Monthly average prices, Jan 2014 – Nov 2018. Yingli not shown because its stock was de-listed from the New York Stock Exchange in June 2018 due to inadequate capitalization. (Joshua S. Hill. *Yingli Green Energy De-Listed From New York Stock Exchange*. Clean Technica. Jul. 4, 2018.)

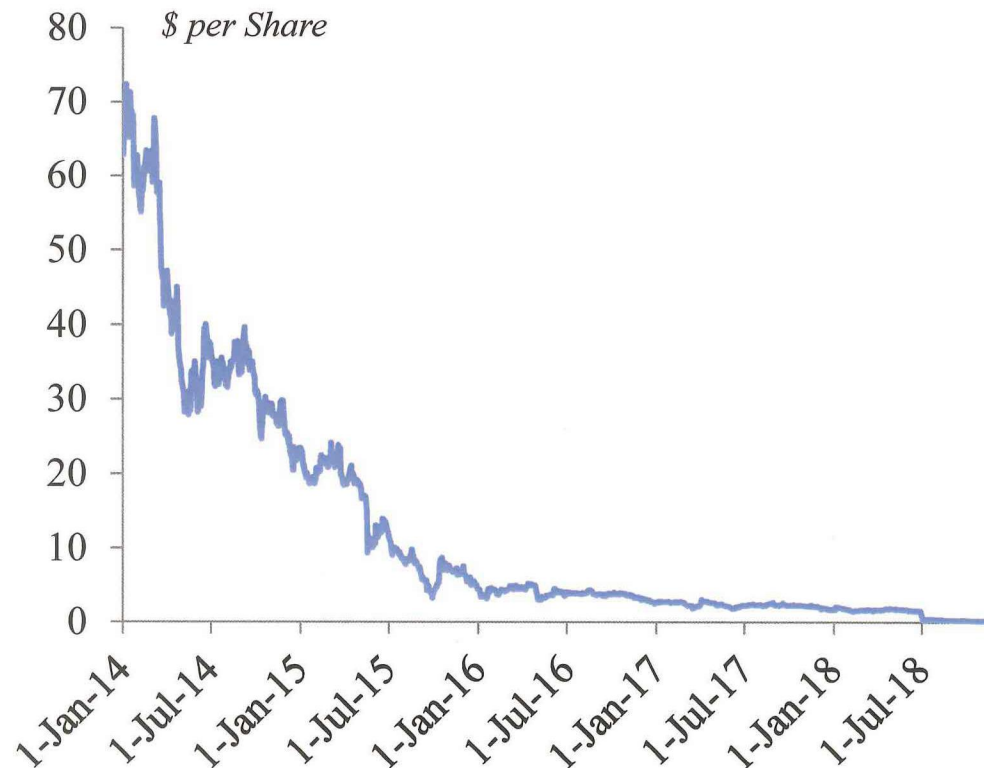
**Injury**

**Capacity**

## Future Excess Capacity: Trouble at Publically-Owned Chinese Firms

Yingli Green Energy's ADR indicates financial distress

- Yingli Green Energy's capitalization declined to such an extent that it was de-listed from the New York Stock Exchange.
- Trina was privatized, selling for less than book value.
- JA Solar was privatized, valued at only \$362 million.

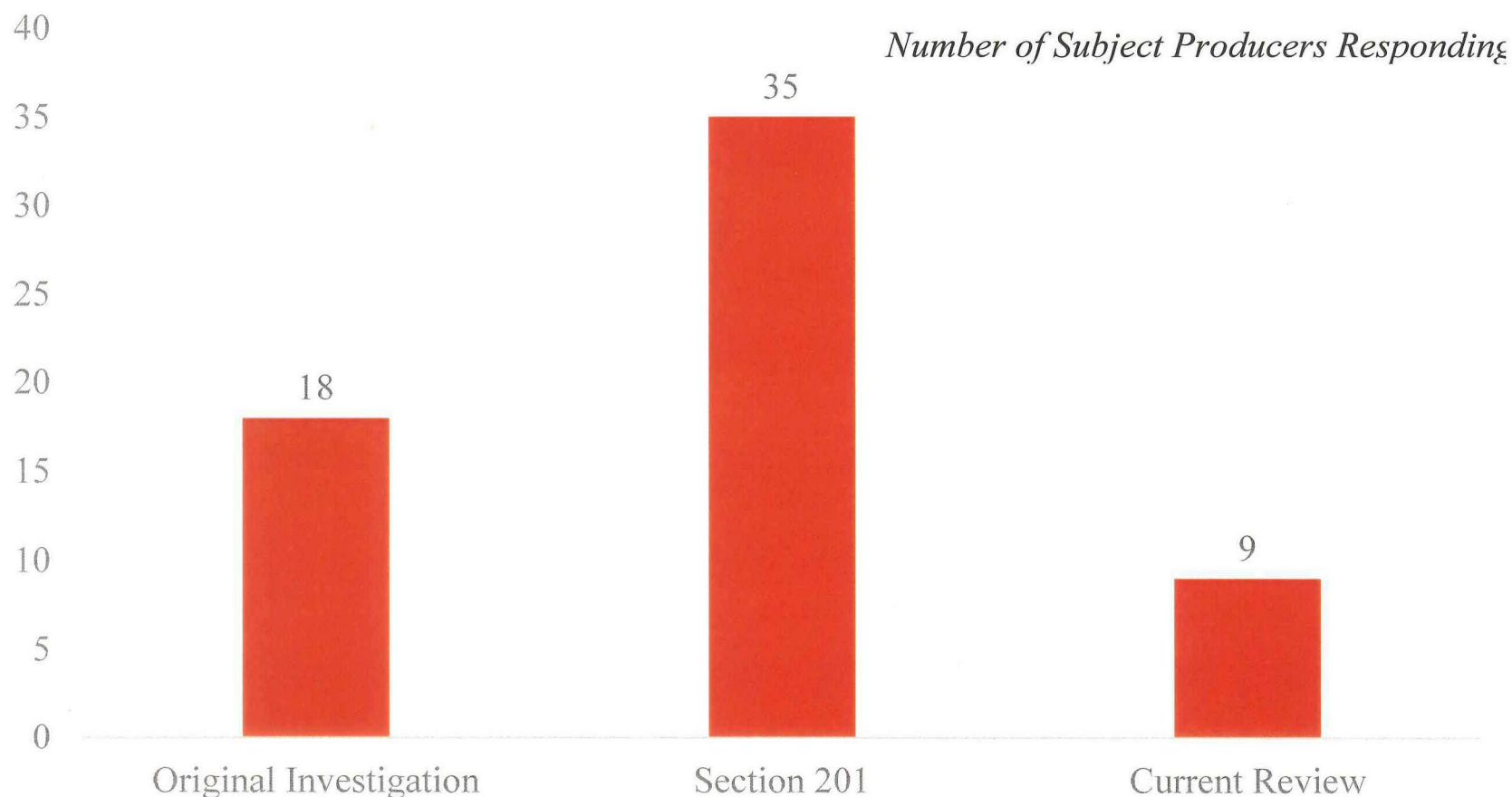


Source: *PVTech*. Mark Osborne. "Yingli Green Energy de-listed from NYSE." Jun 29, 2018. *PV Magazine International*. Mark Hutchins. JA Solar exits NASDAQ exchange." Jul 17, 2018. Yingli's stock price: <https://seekingalpha.com/symbol/YGE/historical-price-quotes>. *The Motley Fool*. "Trina Solar Is Going Private." Jan. 6, 2015. ADR: American Depositary Receipt.

**Injury**

**Capacity**

## Lack of Responses from Subject Producers





**Injury**

**Incentive**

## **The United States Is A Highly Attractive Market for Subject Producers**

- Large market
- Strong forecasted growth
- High prices relative to world
- With revocation, these factors will incentivize an increase subject imports

**Injury**

**Incentive**

## **The United States Is a Large and Growing Market**

- The United States is the world's second-largest solar market.
  - 11 percent of global installations in 2017.
- U.S. demand growth is expected to be strong.
  - 23.9 GW of planned installations in the development pipeline, the largest amount in U.S. history.
  - Most firms responding to Commission Questionnaires expect increased demand to continue into the future.

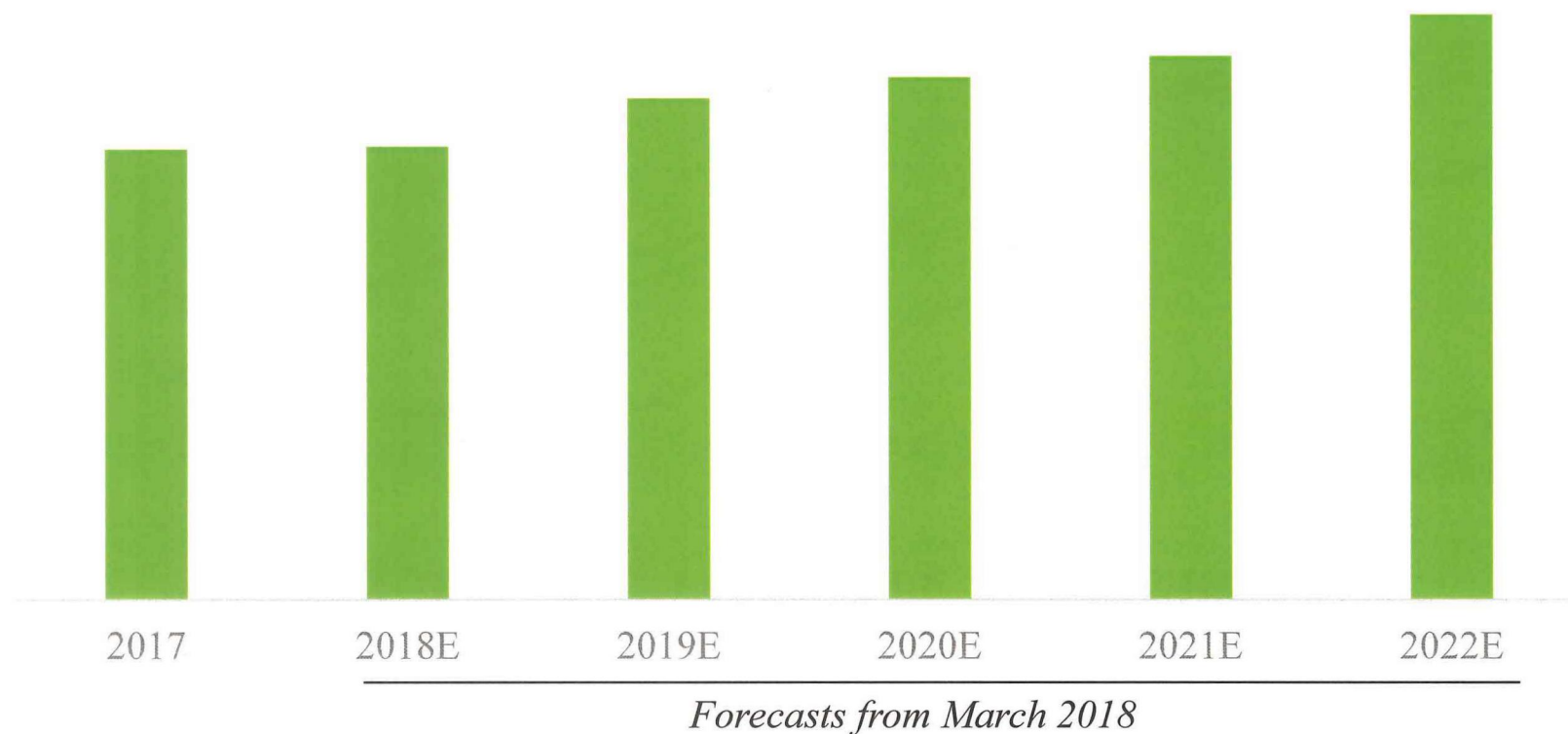
**Injury**

**Incentive**

## U.S. Installations Are Expanding

*Gigawatts*

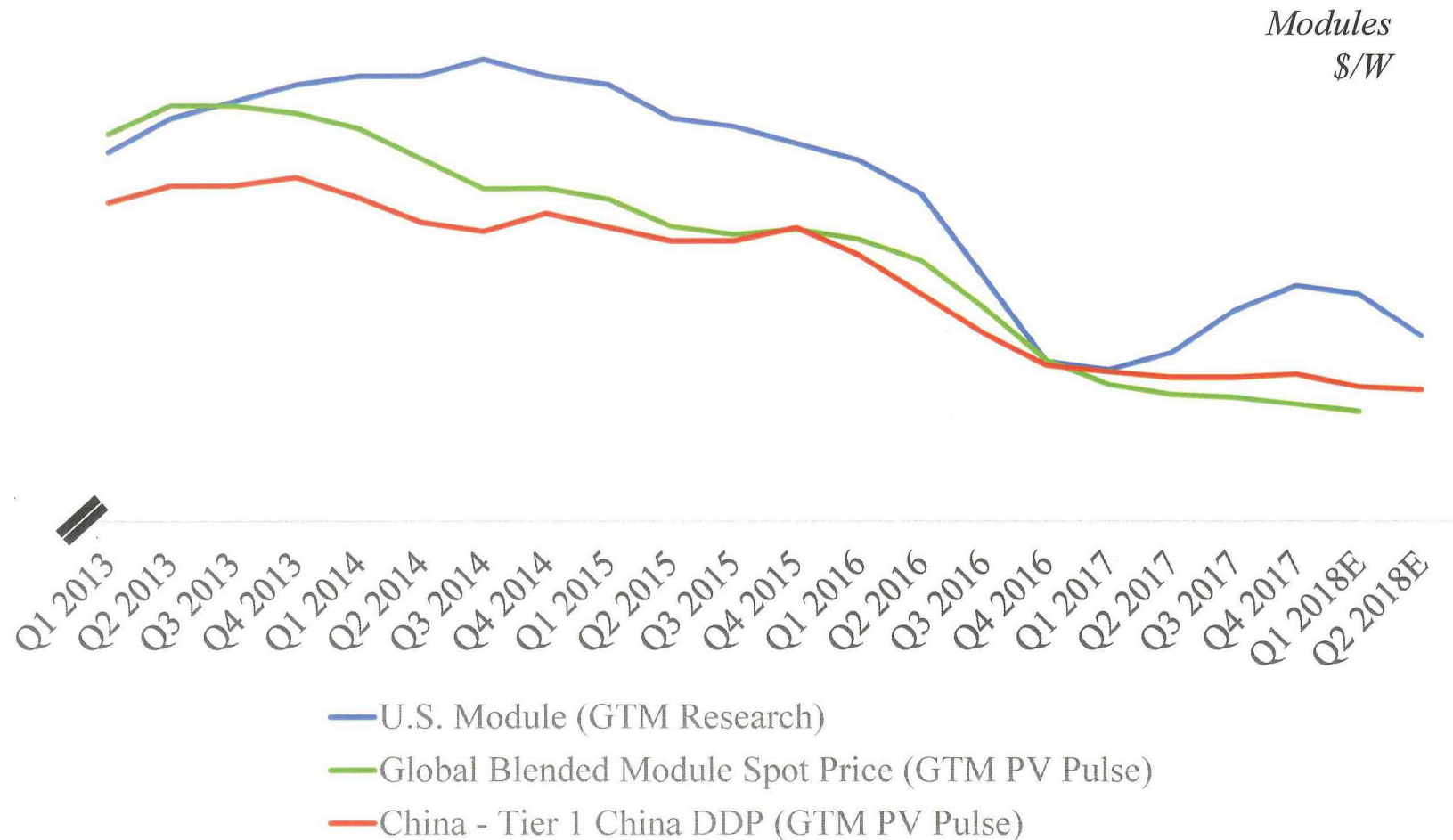
■ US Installations



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## High U.S. Prices Are Attractive



Source: U.S.: GTM Research Solar Market Insight Reports (Q1.2013 through Q3.2018); Global Blended Spot Price and China Tier 1 Module: GTM Research PV Pulse, March 2018, 2.A and 2.C. Axis suppressed and not set to zero to avoid disclosure of proprietary information.

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**Incentive**

## **Substantial Underselling Even with AD/CVD Rates in Place**

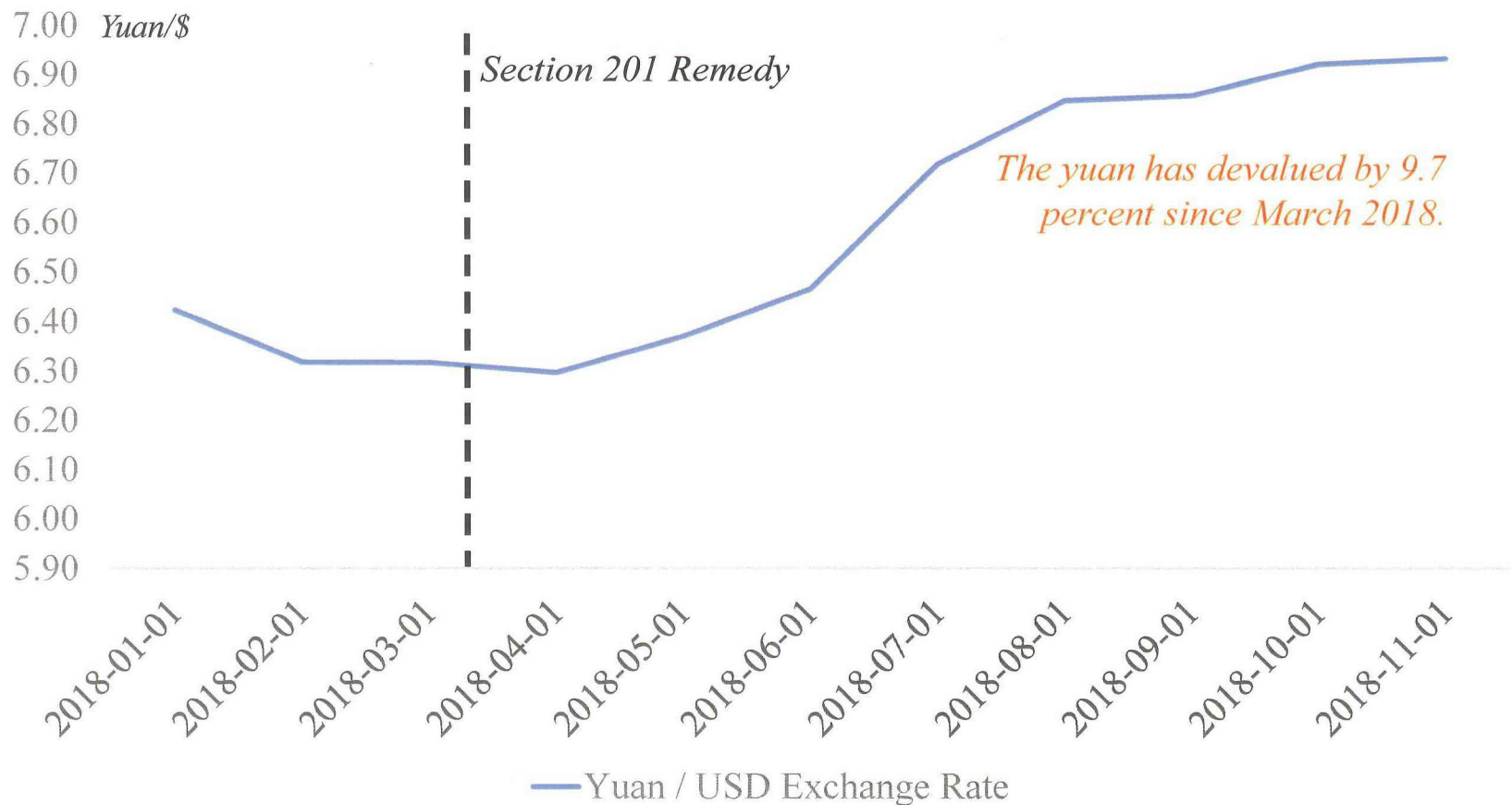
- High U.S. prices are reflected by persistent underselling.
- Substantial AD/CVD rates did not prevent underselling.
- Underselling in 62 of 85 instances (73 percent).
- The vast majority of subject shipments volume was undersold.



Injury

Incentive

## Devaluation of the Chinese Yuan Further Incentivizes Exports to the United States

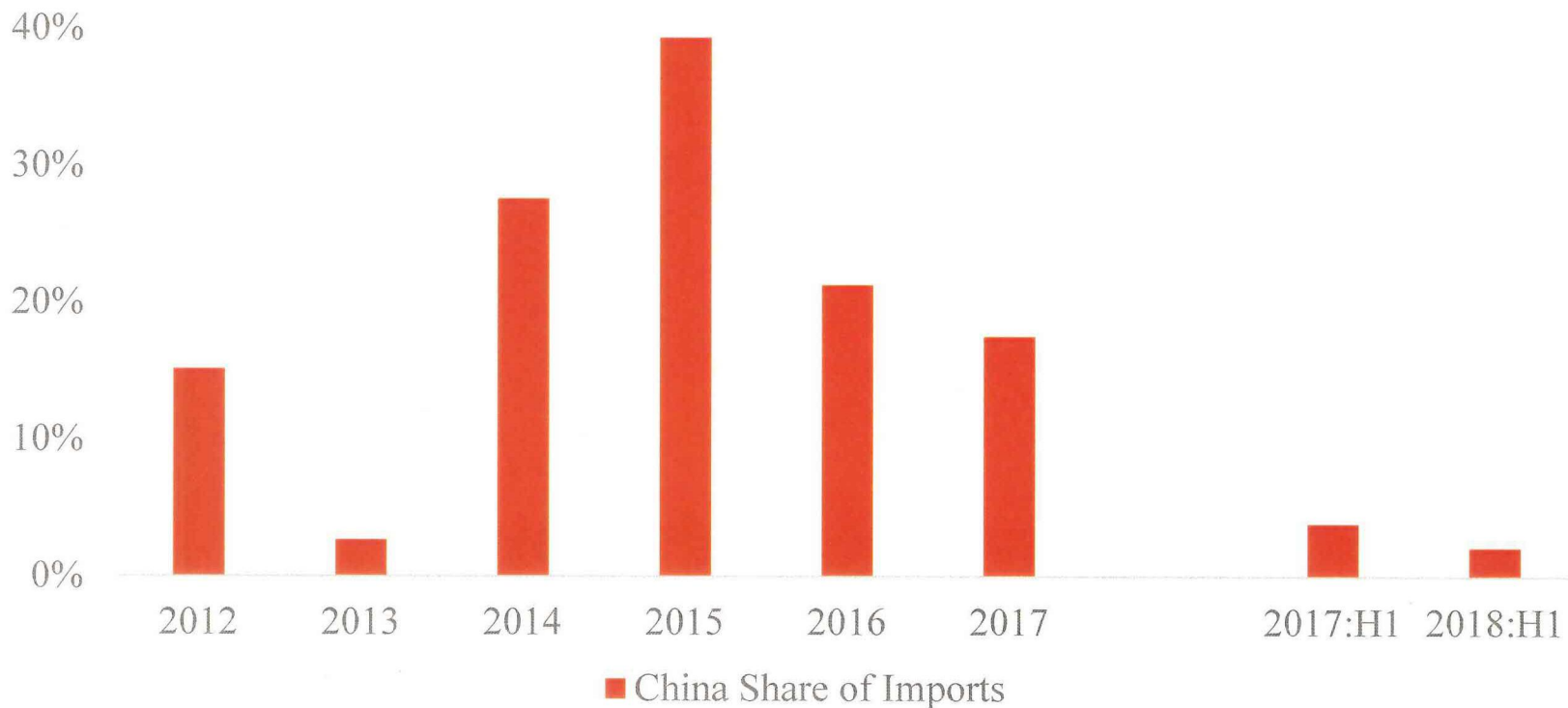


**Injury**

**Incentive**

## Subject Imports Were Significant During the POR & Surged Prior to Section 201 Remedies

50% *Share of Imports*

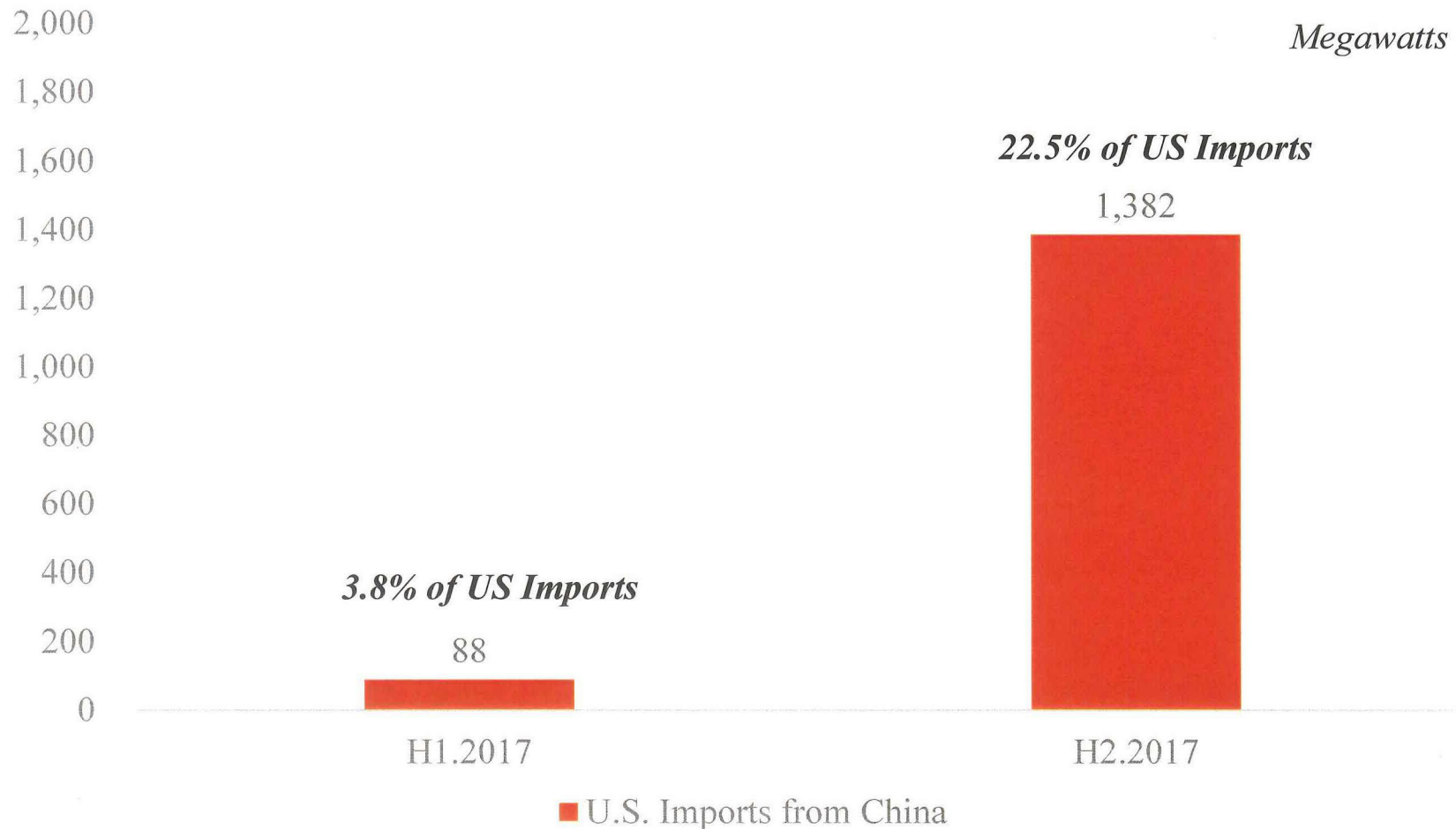


Source: Prehearing Report at IV-4 (Table IV-1).

**Injury**

**Incentive**

## Excess Capacity Has Led to Import Surges



# Conclusion

*Revocation of the orders would lead to a recurrence of injury to the domestic industry.*

Domestic and subject products are highly substitutable and competition is based on price.

Subject producers have both the capacity and the incentive to export injurious volumes of low-priced dumped and subsidized imports to the United States.

- The export-oriented industry in China has significant excess and divertible capacity. The Government of China has a history of intervening on behalf of its solar industry.
- The United States is a large and attractive market for subject producers due to strong (and growing) demand and high prices.

The domestic industry is vulnerable to injury from subject imports. Other U.S. trade actions, including the global safeguards and the Section 301 action, do not remove the domestic industry's vulnerability to a recurrence of injury from the subject imports.

