Low-Priced Chinese PV Modules

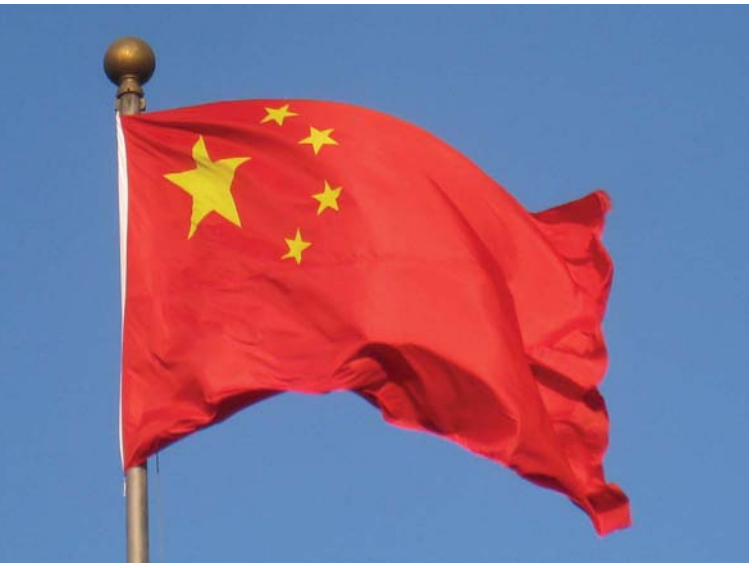
Good or Bad for the U.S. PV Industry?

Where you stand on the controversy of Chinese photovoltaic module imports to the United States likely depends on where you sit in the American solar industry. While there is a huge boom going on in the U.S. PV *installation* industry, there is a huge bust going on in the U.S. PV *manufacturing* industry.

According to the Solar Energy Industries Association (SEIA), a Washington, DC-based trade group, there are more than 100,000 jobs in the U.S. solar industry, a doubling since 2009. SEIA states that the industry grew 69% in 2010, a time when very few American industries were growing. Much of this growth is driven by record-low prices for PV modules, which usually comprise more than half of a PV system's cost. Currently, most of these modules are coming from China.

In August 2011, three American PV manufacturing companies went bankrupt. Two European-based companies shuttered their U.S. module manufacturing facilities. In all, about 20% of U.S. PV manufacturing capacity was lost. While not all bankruptcy problems can be blamed on imports, there is no doubt that it was a significant factor.

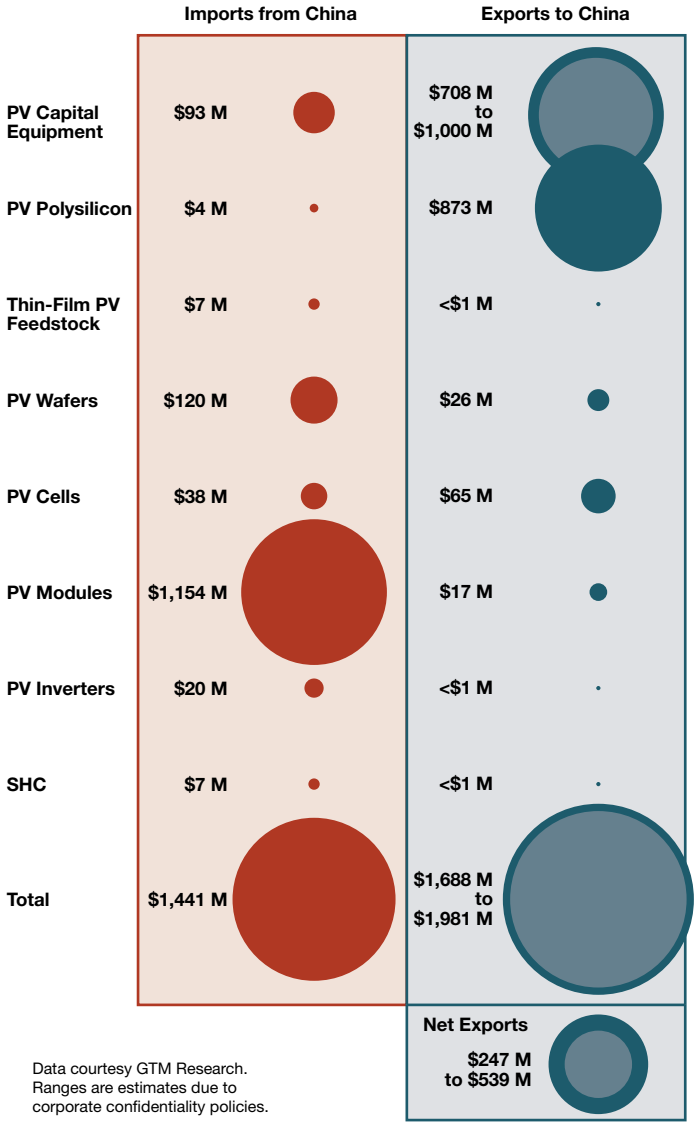
In October 2011, SolarWorld and six other unnamed parties filed a formal complaint against Chinese producers with the U.S. International Trade Commission. In December 2011, the quasi-federal agency unanimously found that Chinese PV imports harmed the U.S. PV manufacturing industry by "dumping"—selling modules below their cost of manufacturing and marketing.



Punitive tariffs of between 50% to 250% could be imposed in 2012. An additional issue, to be decided later, is whether China is subsidizing module export. If so, that could result in additional sanctions of 100% or more.

The filing organization, the Coalition for American Solar Manufacturing (CASM), claims that the Chinese companies and government are violating both international and domestic trade rules—that China, through "its state-controlled financial, utility,

2010 U.S. / China PV Trade



Data courtesy GTM Research. Ranges are estimates due to corporate confidentiality policies.

and other institutions, intermingled with its solar manufacturing industry, has deployed an arsenal of land grants, contract awards, trade barriers, financing breaks, and supply-chain subsidies to advance its pricing and export aggression." CASM also charges the Chinese with "impeding imports" and says that China's PV industry "sidesteps U.S.-level manufacturing standards for labor, quality, and the environment."

Another group, the Coalition for Affordable Solar Energy (CASE), comprised of other solar industry companies such as U.S. module importers and installers, opposes the tariffs on Chinese modules. CASE asserts that "global competition is making affordable solar energy a reality in America and around the world" and "protectionism drives up the price of solar electricity and negatively impacts more than 5,000 American solar companies, mostly small businesses, and more than 100,000 American jobs." It says that "[s]elfish anti-trade actions places [17 gigawatts of] contracts, along with state renewable portfolio standards, at serious risk." CASE maintains that "[in] a solar trade war, everyone loses."

The Chinese government denies the claims of CASM and is pushing back by launching an investigation of programs that they claim set trade barriers against Chinese products. In an ironic twist, it is also accusing the U.S. industry of dumping polysilicon, the basic building block of a PV module, into the Chinese market, thereby forcing its companies out of the business. In 2010, the Chinese bought $873 million of American polysilicon. In comparison, China sold the United States $1.154 billion of PV modules. (The value of U.S. PV modules sold *to* China was $17 million.) In 2010, China produced 33% of the world's polysilicon, followed by the United States (25%), South Korea (16%), and Germany (15%).

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At the same time that it is considering its own complaint with the Chinese Commerce Ministry, Chinese industry is hedging against U.S. tariffs on their product by making plans to move some of their final production to South Korea, Taiwan, and the United States.

According to SEIA, in 2010, the United States exported $5.6 billion and imported $3.7 billion of PV components and products, for a net PV trade surplus of $1.9 billion. That same year, U.S. PV exports to China were close to $2 billion, while imports were $1.4 billion.

The Chinese government invests (it owns most of its banks) in the front end of industries to put up large factories quickly, which drives down product costs and grabs market share. The U.S. government doesn't own banks and offers tax credits to PV module consumers who want to buy the cheapest modules on the market, which often means a "Made in China" label.

Since January 2010, $40.7 billion has been made available to the Chinese PV industry. Compare that to the $1.4 billion of U.S. loan *guarantees* (the federal government is only on the hook if the company fails—like Solyndra did—but most others have not).

The United States used to make televisions, textiles, and shoes until foreign companies ratcheted up their competition using various forms of state capitalism. (The totalitarian Chinese state capitalism is even more efficient than was democratic Japanese government-industrial cooperation.)

As the editors of *Solar Today* magazine (the journal of the American Solar Energy Society) trenchantly note:

The success of China's front-end investment, designed to achieve critical mass and break even quickly, is making some rethink our national emphasis on end-use incentives. We didn't build the railroads by rebating transport costs to farmers: We built them with front-end financing. Tennessee and Michigan appear to have figured this out, and have laid out incentives to get factories built, as a priority over forcing utilities and ratepayers to subsidize PV installations.

Many critics say the United States doesn't have an "industrial policy" for any industry—let alone the PV industry. The U.S. industrial policy for PV, such as it is, is non-permanent subsidies (tax credits and other incentives that expire and have to be renewed) to end users. The U.S. government tried to directly subsidize emerging new solar technologies, but that may have ended with Solyndra's bankruptcy (see "News" in *HP147*). In this global world of manufacturing, if one country's state-owned banks are providing adequate and inexpensive capital and massive infrastructure development and allowing low or no worker and environmental protection standards, how can the U.S. PV industry compete?

—Andy Kerr