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## Trump tariffs will save some solar jobs and destroy others

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The first time the United States tried to protect solar industry manufacturing jobs from foreign competition, things did not go exactly as planned.

Chinese solar panel makers evaded U.S. tariffs by relocating to Taiwan, and <u>the Chinese</u> <u>government</u>retaliated with its own duties on U.S. exports of the raw material used in making the panels — leading American manufacturers to lay off more than 1,000 workers and scrap a new \$1.2 billion factory.

Now, the United States is trying again. President Trump on Monday imposed a <u>new round of tariffs</u> on imported solar panels in response to fresh pleas from two bankrupt manufacturers, Suniva and SolarWorld. The companies — U.S.-based but foreign-owned — complain that Chinese rivals, backed by generous state subsidies, have flooded the U.S. market with solar panels at prices they can't match.

For the president, the solar decision, and a similar move against imported washing machines, represent a big step toward fulfilling <u>his campaign promises</u> to get tough on trading partners like China. Additional decisions loom on trade secrets, steel and <u>aluminum</u>, raising the prospect of a more confrontational trade stance that might cheer Trump's supporters in the industrial heartland while unnerving investors and multinational corporations.

The polysilicon industry serves as a cautionary tale of what can happen when trade officials take actions designed to protect workers in one corner of the economy only to see them boomerang elsewhere.

"There's always a risk of tit-for-tat retaliation, particularly with China. . . . It's a warning shot: Don't do this too often," says economist Douglas Irwin, author of "Clashing Over Commerce: A History of U.S. Trade Policy."

Three global firms — Wacker, REC Silicon and Hemlock Semiconductor — account for the vast majority of U.S. polysilicon production. The material is used to produce semiconductors for computers as well as the solar components that turn sunlight into electricity.

The Tennessee factory that Hemlock leveled in 2015 before it had produced anything was not the only collateral damage from the initial U.S. trade action. REC Silicon took refuge in a joint venture with a state-owned Chinese company, gaining a foothold in China but surrendering access to its proprietary technology in the bargain.

Polysilicon executives fear that the president's action will leave in place the Chinese trade barriers, which imperil their existing U.S. operations.

Industry representatives in recent weeks met with officials such as <u>Robert E. Lighthizer</u>, the president's chief trade negotiator, and Commerce Secretary Wilbur Ross to plead for an alternative that would resolve all solar-related disputes between the United States and China.

Polysilicon producers say that the United States should negotiate a comprehensive settlement with <u>China</u> to resolve both the old and new solar issues. Such a deal could divide the estimated \$1.5 billion in customs duties that importers paid in the original trade case among the panel makers, polysilicon producers and rebates importers.

Trump's tariffs could pave the way for such a negotiated bargain. Lighthizer's formal tariff announcement promised to open "discussions among interested parties" toward that goal.

Still, the idea remains a long shot. The European Union resolved a similar spat with China through talks, butObama administration efforts to settle its solar differences with Beijing at the negotiating table stalled.

Most analysts say that Trump has long been fixated on imposing tariffs as a demonstration of the muscular new course in trade policy that he is charting.

"Politicians like to say they're going to bat for a particular group of people and like to look tough," said Daniel Ikenson, trade policy analyst at the nonpartisan Cato Institute. "What's harder to see is there are costs . . . and they are real."

It may be too late to prevent further erosion in the U.S. polysilicon industry, given the dramatic expansion in Chinese production since the tariff war erupted. In 2010, the United States topped China 62,000 tons to 55,000 tons, according to Ethan Zindler, head of Americas for Bloomberg New Energy Finance. But by 2016, after a flurry of new plant construction, China produced 208,250 tons, nearly triple total U.S. production.

"There was a moment when the U.S. was the global leader. But China just basically blew by them," Zindler said. "If tariffs disappeared immediately, they would still have trouble finding customers in China."

The Chinese tariffs effectively barred U.S. suppliers from a market that accounts for 80 percent of global sales. U.S. exports of polysilicon to China plunged to less than \$200 million in 2016, the most recent year available, from more than \$1 billion before the tariffs were imposed, even as overall Chinese demand more than doubled.

Hemlock laid off roughly 500 workers in Michigan and Tennessee, including 100 who will leave the payroll this quarter. REC Silicon dropped 450 workers in Washington state, cut production capacity in half and mothballed a new \$150 million facility.

"We're probably the victim that's been hit the hardest in this trade war," said Francine Sullivan, vice president for business development at REC Silicon.

If the Chinese tariffs remain in place, further layoffs are likely, industry officials have warned.

Wacker Polysilicon North America produces polysilicon at a \$2.5 billion polysilicon plant in Charleston, Tenn., that was designed as an answer to China's surging needs, a company executive told a U.S. Trade Representative Office hearing last month. The "health" of the facility and prospects for future expansion depend upon lifting the Chinese tariffs, said Mary Beth Hudson, the Charleston site manager.

Polysilicon factories are mammoth, multibillion-dollar facilities that in scale and appearance resemble oil refineries. Inside, workers use a chemical process to convert silane gas or quartz into polysilicon. Industry jobs pay well, with total compensation often exceeding \$100,000, executives say.

The dispute that reached Trump's desk saw panel makers Suniva and SolarWorld, two bankrupt foreign-owned manufacturers, face off against a growing U.S. workforce of solar installers, engineers, project managers and sales executives.

The International Trade Commission concluded that rising imports are hurting the domestic industry and recommended to the president potential remedies including quotas and tariffs of up to 35 percent. Tariff opponents say that more than one-third of industry's 260,000 jobs are at risk of disappearing following the president's action to discourage imports.

Suniva petitioned the government for protection in April, taking advantage of a clause in U.S. trade law that allows the president to impose sweeping global tariffs without any evidence that foreign trading partners acted unfairly. SolarWorld joined the fight for such "safeguard" measures one month later.

"More than 30 U.S. companies have been forced out of business. A strong remedy will revive and strengthen U.S. manufacturing," Timothy Brightbill, an attorney who represents SolarWorld, said before the decision.

When the United States has imposed such safeguard measures in the past, its trading partners have inevitably complained to the World Trade Organization. And the multilateral trading body's dispute settlement board has repeatedly found the specific U.S. actions in violation of Washington's international commitments.

No U.S. industry has sought safeguard protection since 2001, when the steel industry appealed for help to the Bush White House. President George W. Bush imposed tariffs of up to 30 percent, drawing applause from domestic manufacturers but leading to steep job losses at companies that used steel.

Estimates of the jobs lost ranged from 26,000 to 200,000, dwarfing the steel jobs temporarily saved. Bush lifted the tariffs in 2003 after the WTO authorized the European Union to retaliate for the improper duties with more than \$2 billion in levies on U.S. imports.