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# Tariffs won't build a robust US solar industry

BY JOHN PAUL HELVESTON, OPINION CONTRIBUTOR - 05/02/22 2:30 PM ET

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The recent Intergovernmental Panel on Climate Change [Working Group III report](#) sets some rather ambitious goals for avoiding the worst consequences of climate change, such as reducing greenhouse gas emissions by 45 percent by the end of the decade. Achieving these goals will require a herculean effort in scaling up renewable energy deployment,

Over the past several decades, Chinese firms (with unwavering support and subsidies from the Chinese government) have focused their R&D efforts on the innovations needed to mass manufacture most of the key technologies the world needs to decarbonize. Those efforts have led to cost declines that have surpassed all expert expectations. In just one decade, prices for lithium-ion batteries have fallen from \$1,200 per kilowatt hour to just \$130 per kilowatt hour, and prices for crystalline silicon photovoltaic panels have fallen from \$2,000 per kilowatt to \$300 per kilowatt.

Chinese firms are now by far the leading producers of most low carbon energy technologies, producing two-thirds of the world's solar modules, one-third of all wind turbines, over half of all electric vehicles, and 70 percent of lithium-ion batteries. As Jonas Nahm and I wrote in a 2019 article in Science, "No other economy has been willing and able to pour even a remotely equivalent level of resources into manufacturing expansion and R&D in recent history. It is therefore highly unlikely that another nation will be able to replicate China's skills in the time frame needed to avoid the worst consequences of climate change."

Rather than continuing the Trump-era tariffs on Chinese solar panels, the U.S. and others should be partnering with Chinese firms to obtain low-cost technologies and components to increase domestic deployment of renewables as fast as possible to meet the narrow window left to decarbonize.

The belief that the tariffs would boost U.S. jobs in solar has proven to be a myth.

In contrast to rapid job growth prior to the tariffs, U.S. jobs in solar have since become stagnant. Meanwhile, the National Renewable Energy Laboratory (NREL) estimates that there are ten times more annual jobs in solar installations than those in the entire U.S. solar manufacturing supply chain. Tariffs increase costs, leading to overall lower deployment and lower employment in solar.

Removing tariffs does not mean abandoning domestic manufacturing. The U.S. should continue investing in manufacturing capabilities to support demonstration projects that incentivize firms to invest in bringing the next generation of these technologies closer to market. And the U.S. should also continue investing in innovating at the technological frontier to discover new and better technologies, like solid state batteries and next generation solar technology. Policy makers should also increase and expand incentives for domestic solar deployment and work with local regulators to streamline associated infrastructure bottlenecks, like transmission lines.

As nations set ambitious goals to decarbonize their energy systems, it is unrealistic to try to independently achieve those goals. Building on the advanced mass manufacturing capabilities that Chinese firms have already developed is the most promising path toward rapid global decarbonization. Encouraging the free flow of capital, talent, and innovations between the U.S. and China is the only feasible path towards decarbonization in the necessarily timeline.

*[John Paul Helveston](#) is an assistant professor in engineering management and systems engineering at the George Washington University.*

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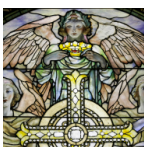
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