



Shore Up Clean Energy Supply Chains

This policy memo is part of Data for Progress and National Wildlife Federation's Made Clean in America series, which features analysis and polling on federal investments to build American clean industrial capacity, tackle the climate crisis, and create high-quality manufacturing jobs.



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Background

Over the course of the COVID pandemic, we have learned a lot about supply chains. Disruptions in the production of everything from medical supplies to meat to cars and, yes, toilet paper, has shown us the importance of robust and redundant sources of the products we rely on. The need to source these things domestically is particularly clear when it comes to the most critical goods and their components.

In 2000, China produced virtually no solar energy products, and the U.S. owned about one-quarter of the market. By 2012, the roles had more than reversed: China had captured 60% of the global market share while U.S. manufacturers floundered. Today 80% of the solar supply chain runs through China, as does the majority of the world's lithium, an essential component of batteries for electric vehicles, and 78 percent of battery cells themselves. These developments did not happen by accident; they were the result of a coordinated set of policies focused on R&D, government procurement, and demand- and supply-side incentives. In other words, the Chinese government did green industrial policy, setting technology cost targets and nursing a handful of companies to maturity throughout the supply chain.

Today the manufacturing capacity for a number of clean energy technologies, such as batteries and solar photovoltaic panels, is concentrated in particular areas, notably China. The rapid increase in demand for clean energy technologies in the NZE requires new production capacity to

come online that could be located in any region. Those countries and companies that move first may enjoy strategic advantages in capturing burgeoning demand.

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China's dominance of the clean energy supply chain should make us nervous about the prospects of a prosperous clean energy transition in the United States. Not because of some inherent America-first sentiment; on the contrary, Chinese manufacturing investments have delivered the cost reductions in solar panels and batteries that have enabled us to bend the curve downward on greenhouse gases and toxic air pollution. Still, we have only scratched the surface of the global market for clean energy. For instance, a [recent Economic Policy Institute](#) study showed that, as the global market begins to shift to electric vehicles, investments in domestic EV supply chains between now and 2030 can increase U.S. auto sector jobs by 150,000. A failure to do so will cost 75,000 jobs.

We should view the urgent imperative to decarbonize the U.S. economy as an opportunity to rebuild our domestic manufacturing base and make good on the promise of millions of high-quality green jobs. This is a view [the Biden White House shares](#). To do so, we will have to invest, once more, in strengthening the competitiveness of domestic clean energy supply chains.

Key policy options

Congress has several near-term opportunities to make progress on energy supply chains, in the infrastructure bill and beyond. These include:

SUPPLY CHAIN TAX CREDITS. Federal tax credits can target specific clean energy supply chain components deemed critical, ranging from minerals to solar wafers to battery cells. Three notable tax credit proposals in the current Congress get at this: The Solar Energy Manufacturing Tax Credit from Sen. Ossoff, the Offshore Wind American Manufacturing Act from Sens. Markey, Warren, Booker, and Menendez, and [forthcoming legislation](#) from Sens. Bennet and Stabenow. Lawmakers should [leverage budget reconciliation](#) to ensure these incentives make it into the final infrastructure package.

DOMESTIC CONTENT INCENTIVES OR REQUIREMENTS. Congress can also strengthen domestic manufacturing supply chains by inducing demand for solar, wind, and batteries produced in the U.S. On programs like clean energy tax credits, lawmakers can add stipulations for domestic production, known as “domestic content” requirements or incentives. In packages passed by committees in both the [Senate](#) and [House](#), new tax credits for solar, wind, and other clean energy would receive a bonus if at least 55 percent of component parts (on a cost basis) is not being produced in the U.S. If energy developers cannot meet that threshold within a few years, they can still claim an incentive - but their ability to receive direct payments phases out, reducing the value of the credit. Domestic content rules can be designed to phase in and out on certain timelines, or to function as penalties or incentives. Regardless, they provide a favorable market for U.S.-produced clean energy that can spur the development of the domestic supply chain.

MANUFACTURING GRANTS PROGRAMS. The bipartisan infrastructure deal included one major clean energy supply chain grant program: A \$6 billion battery manufacturing and recycling effort run out

of the Department of Energy. The proposal, originally sponsored by Sen. Cortez-Masto, emphasizes the value of retooling existing facilities and incentivizing prevailing wages. Importantly, it would be a rare contemporary example of DOE expanding beyond applied R&D and committing significant capital to the supply chain for a specific technology, in this case one that is essential in any pathway for decarbonizing light-duty transportation. Lawmakers should leverage DOE, which has ample technical expertise in its national labs and applied energy programs (including the Advanced Manufacturing Office), to invest in domestic supply chains for batteries and other critical climate technologies, and to do so in a manner that promotes high-quality jobs.

ADVANCED ENERGY MANUFACTURING TAX CREDITS. A number of Senators have expressed support for reviving advanced energy manufacturing incentives. The 48C investment tax credit, leveraged as a grant program in the Obama-era Recovery Act, covers 30 percent of capital costs for manufacturing facilities that produce clean energy, renewable fuels, carbon capture equipment, and more -- the final products that rely on strong supply chains. [Read more on 48C here.](#)

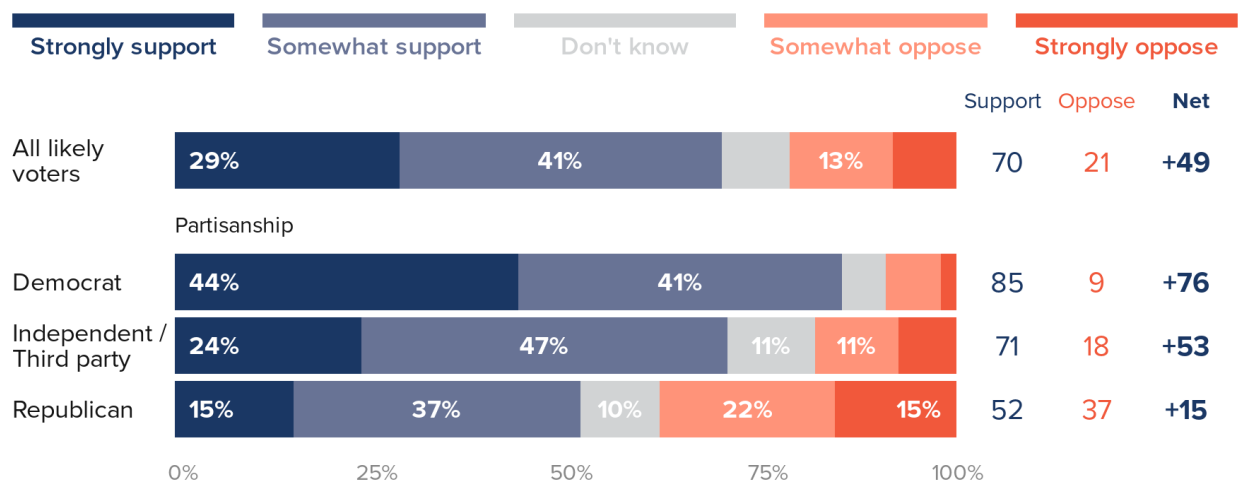
Polling

There is widespread bipartisan support for clean energy supply chain incentives. By a 49-point margin, voters support new tax credits for manufacturers of clean energy components, including a majority of Democrats (85 percent), Independents (71 percent), and Republicans (52 percent).

A Majority of Voters Support Federal Tax Credits for Clean Energy Supply Chains

To strengthen domestic supply chains, the federal government is considering new tax credits for manufacturers of components of clean energy technologies, like solar panel components or batteries for electric vehicles.

Would you support or oppose these tax credits for clean energy supply chains?

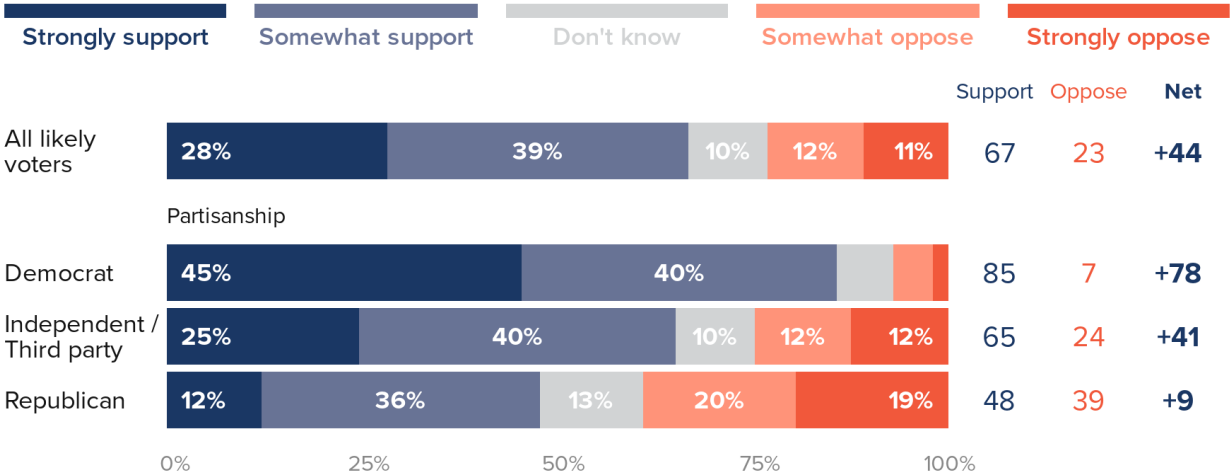


Senator Ossoff’s Solar Energy Manufacturing for America Act (SEMA), a critical policy to expand domestic solar panel production, also enjoys support from over two-thirds of voters (67 percent support, 23 percent oppose). Democrats support the bill by a +78-point margin, Independents by a +41-point margin, and Republicans by a +9-point margin.

A Majority of Voters Support the Solar Energy Manufacturing for America Act

Lawmakers have proposed a new bill called the Solar Energy Manufacturing for America Act (SEMA), which would provide tax credits to the American solar manufacturing industry at every stage of the supply chain. The proposal aims to create tens of thousands of new clean energy jobs in the U.S., grow demand for solar energy technologies, and increase America's competitiveness abroad.

Do you support or oppose the Solar Energy Manufacturing for America Act (SEMA)?



September 17–20, 2021 survey of 1,311 likely voters

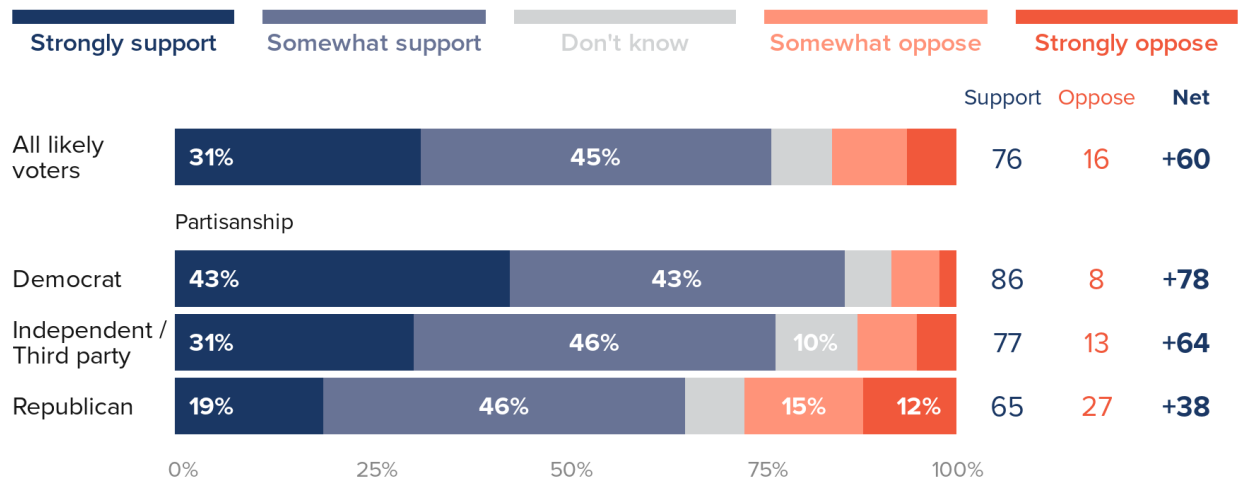
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Moreover, federal incentives that are linked to domestic content requirements enjoy overwhelming support from voters across party lines. Over three-quarters of likely voters (75 percent), including a majority of Democrats (86 percent), Independents (77 percent), and Republicans (65 percent), support adjusting incentives for clean energy developers depending on whether or not they use American-made materials.

Voters Support Tying Clean Energy Tax Credits to Domestic Content Requirements

The federal government provides tax credits for the production of clean energy, like solar and wind power. A new proposal would provide clean energy developers who use materials that are made in America with larger incentives and reduce benefits for those who fail to do so after a certain grace period.

Would you support or oppose adjusting incentives for clean energy developers based on whether or not they use materials that are made in America?



September 15–17, 2021 survey of 1,346 likely voters

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Support for strengthening domestic content requirements for clean energy tax credits remains high, even when voters are presented with pushback around increased consumer costs and trade relationships. Nearly two-thirds of all voters (64 percent), including a majority of Democrats (77 percent), Independents (60 percent), and Republicans (51 percent) all support shoring up domestic content requirements despite seeing an oppositional stance against the proposal.

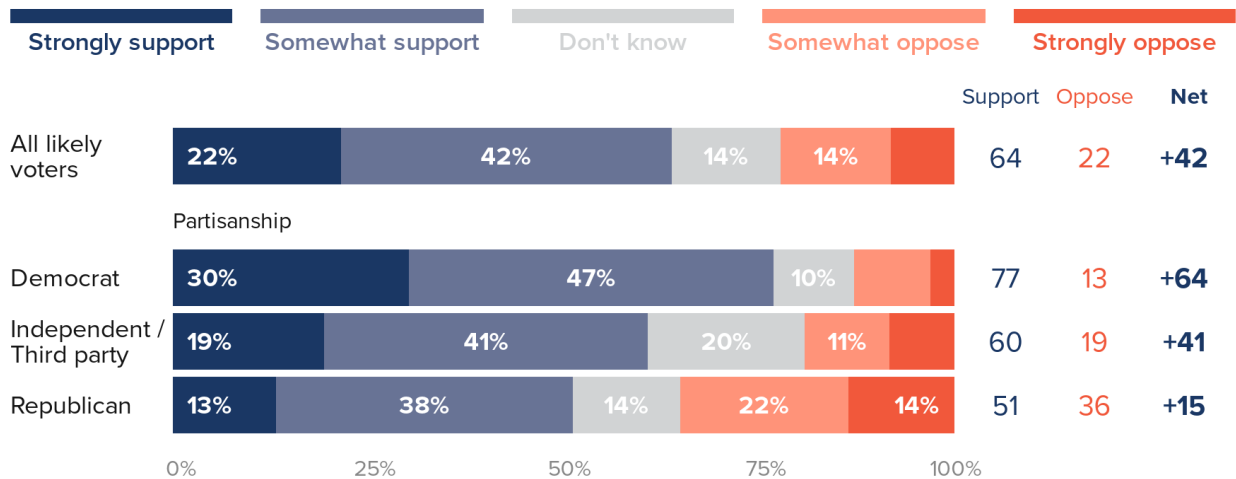
Support for Domestic Content Requirements Withstands Pushback

Some lawmakers have proposed strengthening rules around "domestic content requirements" for clean energy tax credits. These requirements specify that clean energy manufacturers are eligible to receive government incentives only if at least 55% of their production materials are made in America.

Supporters of this proposal say that these domestic content requirements will close loopholes that allow companies to receive federal funding but create jobs overseas. They say that taxpayer money should be used to strengthen supply chains and create jobs at home.

Opponents of this proposal say that domestic content requirements will place a cost on manufacturers that will get passed down to consumers. They also say that these requirements will hurt America's trade relationships with foreign countries.

Knowing what you know now, do you support or oppose strengthening domestic content requirements for clean energy tax credits?



September 15–17, 2021 survey of 1,346 likely voters

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From September 15 to 17, 2021, Data for Progress conducted a survey of 1,346 likely voters nationally using web panel respondents. The sample was weighted to be representative of likely voters by age, gender, education, race, and voting history. The survey was conducted in English. The margin of error is ±3 percentage points.

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