

CLIMATE IN CRISIS

How the Inflation Reduction Act sparked a manufacturing and clean energy boom

271 manufacturing projects for clean energy tech and electric vehicles have been announced since the IRA passed.



— Monica Muñoz, top, and Denise Denning place black encapsulation material on solar panels at Elin Energys solar panel manufacturing facility in Brookshire, Texas, on April 25.

Brett Coomer / Houston Chronicle via Getty Images file

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By Spencer Kimball, CNBC and Gabriel Cortés, CNBC

The Inflation Reduction Act has sparked a manufacturing boom across the U.S., mobilizing tens of billions of dollars of investment, particularly in rural communities in need of economic development.

The future of those investments could hinge on the outcome of the U.S. presidential election. The prospect of a Republican victory has shaken the confidence of some investors who worry the IRA could be weakened or in a worst-case scenario repealed.

Companies have announced \$133 billion of investments in clean energy technology and electric vehicle manufacturing since President Joe Biden signed the IRA into law in [August 2022](#), according to data from the [Massachusetts Institute of Technology and the Rhodium Group](#).

Actual manufacturing investment has totaled \$89 billion, an increase of 305% compared to the two years prior to the IRA, according to MIT and Rhodium. Overall, the IRA has leveraged half a trillion dollars of investment across the manufacturing, energy and retail sectors, according to the data.

“It is having a transformative effect within the manufacturing sector,” said Trevor Houser, a partner with the Rhodium Group. “The amount of new manufacturing activity that we’re seeing right now is unprecedented in recent history, and is in large part due to new clean energy manufacturing facilities.”

Some 271 manufacturing projects for clean energy tech and electric vehicles have been announced since the IRA passed, which will create more than 100,000 jobs if they are all completed, according to the [advocacy group E2](#), a partner of the National Resources Defense Council. The investments sparked by the IRA have been a boon for rural communities in particular, Houser said.

“Unlike investment in AI and tech and finance, which is clustered in big cities, clean energy investment really is concentrated in rural communities, and is one of the brightest sources of new investment in those areas,” Houser said.

The IRA has also accelerated the deployment of renewable energy, with \$108 billion in invested in utility-scale solar and battery storage projects. Investments in solar and battery storage have surged 56% and 130%, respectively, over the past two years, according to the Rhodium data.

“The more mature technologies, so like wind and solar generation, electric vehicles, those have achieved escape velocity,” Houser said. “They will continue to grow no matter what. It’s a question of speed.”

Trump threats to IRA

But the “manufacturing renaissance” is still in its early stages and remains fragile, Houser said. Without the IRA, the resurgence of new factories would not have taken off, said Chris Seiple, vice chairman of Wood Mackenzie’s power and renewables group.

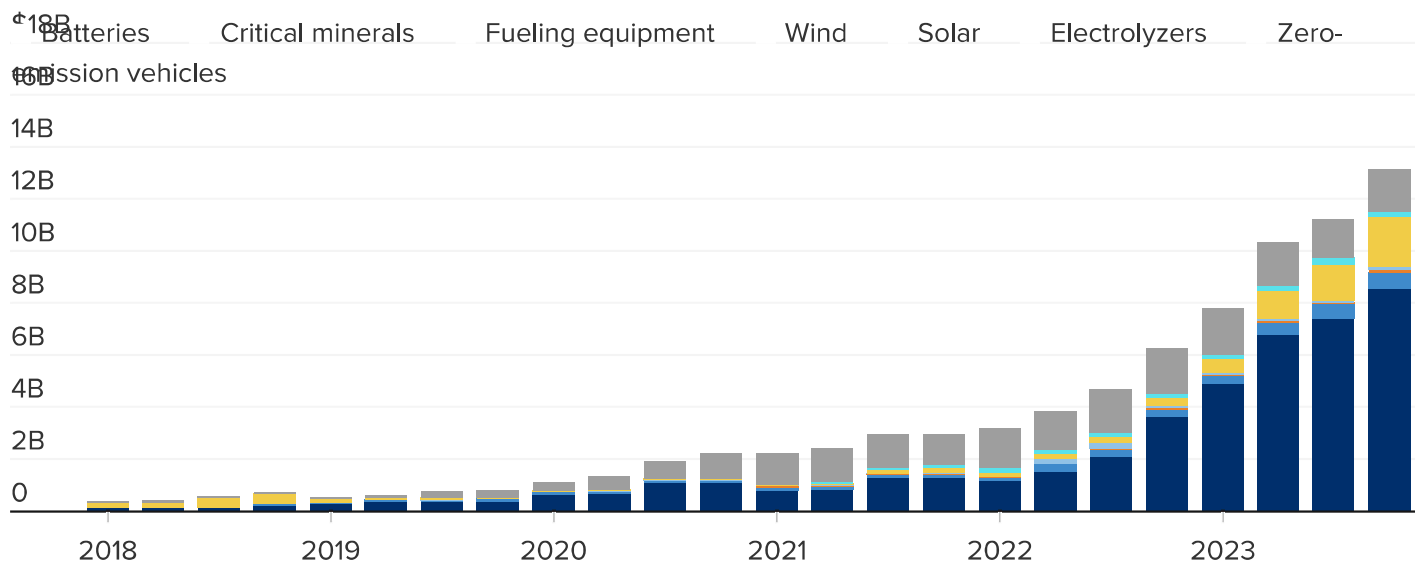
Former President Donald Trump has threatened to dismantle the law as he advocates for more oil, gas and coal production.

“Upon taking office, I will impose an immediate moratorium on all new spending grants and giveaways under the Joe Biden mammoth socialist bills like the so-called Inflation Reduction Act,” Trump [told supporters at a May rally in Wisconsin](#).

“We’re going to terminate his green new scam,” he said. “And we’re going to end this war on American energy – we’re going to drill, baby, drill.”

Actual investment in manufacturing for clean energy technology in the U.S.

By technology type Q1 2018–Q2 2024



Source: MIT Center for Energy and Environmental Policy Research and the Rhodium Group's [Clean Investment Monitor](#)



Clean energy [stocks tumbled](#) after President Joe Biden’s disastrous debate performance in late June, as investors worried that Trump and the Republicans are poised to sweep both the White

House and Congress were growing more likely.

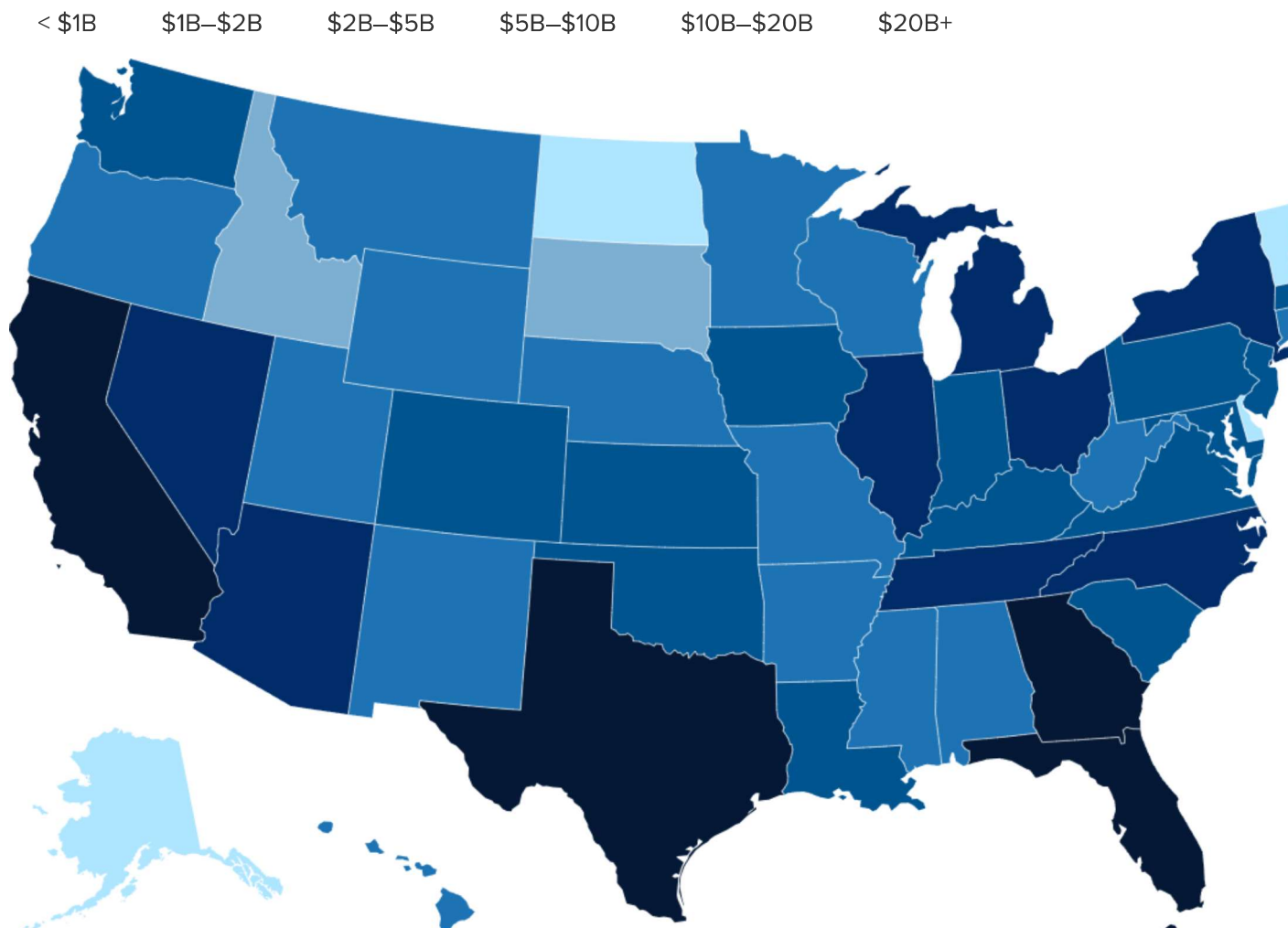
[First Solar](#), the largest panel manufacturer in the U.S., saw growing constraints on access to capital in the second quarter for early stage solar companies as well as larger players that are trying to build out domestic manufacturing, CEO Mark Widmar told analysts on the company's July 30 earnings call.

Investors are waiting to make decisions until they have a clearer view of what the policy environment will look like for the solar industry, Widmar said. Utilities and oil companies that were making investments in renewables are now considering a pivot to prioritize fossil fuel projects, he said.

The fear among some investors is that Republicans would will use the reconciliation process, through which bills can be passed with a simple majority, to roll back the IRA in order to finance making Trump's 2017 tax cuts permanent.

Total actual clean investment in the two years since the Inflation Reduction Act

By state



Source: [MIT Center for Energy and Environmental Policy Research](#), [Rhodium Group](#)



Trump told Reuters Monday he would consider ending the \$7,500 tax credits for electric vehicles. Consumers and business have spent \$157 billion on zero-emission vehicles since 2022, double the amount before the IRA became law, according to Rhodium.

“Tax credits and tax incentives are not generally a very good thing,” the former president told Reuters in an interview when asked specifically about the EV credits after a campaign even in York, Pennsylvania.

Trump has not specifically called out the tax incentives that have supported the expansion of renewables. The former president’s [campaign platform](#) says Republicans will support energy

production from all sources. The document backs oil, coal and natural gas as well as nuclear, but does not specifically mention solar or wind power.

Republican districts benefit most

Executives at renewable companies and analysts are betting the investment, production and manufacturing tax credits, which are driving much of the spending on clean energy and technology, would survive even a Republican administration.

A majority of IRA investment in new projects, 85%, has gone to GOP congressional districts, according to E2 data. And Trump's campaign platform emphasizes expanding domestic manufacturing and bringing supply chains back to the U.S.

The dynamics of the presidential race have also changed since Biden ended his re-election bid, with Vice President Kamala Harris rising to a slight lead over Trump national polling averages as she formally accepts her party's nomination at the Democratic National Convention in Chicago this week.

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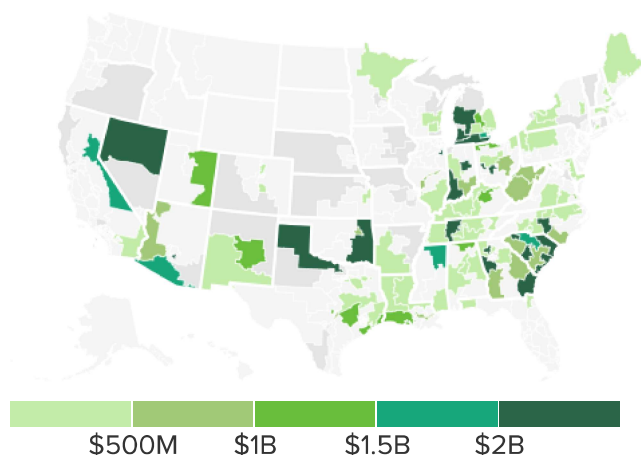
"We've seen an increase in the number of Republican lawmakers that are embracing the clean energy credits within the IRA as they see the positive impact to their states and communities, which is hard to turn away from," John Ketchum, CEO of [NextEra Energy](#), which operates the largest portfolio of renewable energy, told analysts on the company's July 24 earnings call.

"And the tax laws are very difficult to overturn," Ketchum said. "And we're very likely to have thin margins in the House and the Senate, particularly in light of some of the recent developments," he said, hinting at Harris' rise as the new Democratic candidate.

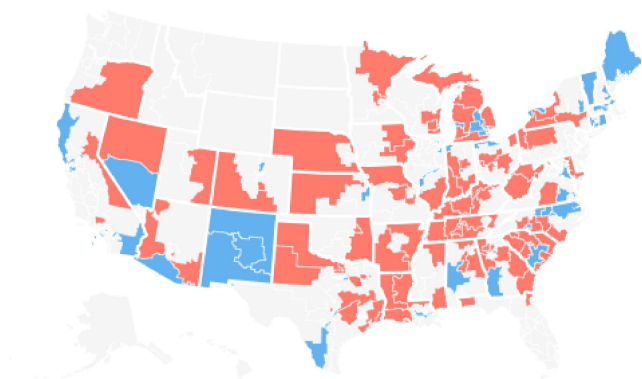
Actual investment in manufacturing for clean energy technology

By U.S. Congressional District

BY ACTUAL INVESTMENTS (\$)



BY POLITICAL PARTY



Note: Complete investment data unavailable for states in medium gray

Graphic: Gabriel Cortes / CNBC

Source: E2

Data as of August 2024



Indeed, 18 Republican members of Congress warned House Speaker Mike Johnson earlier this month that repealing IRA energy tax credits would be bad for business.

“Prematurely repealing energy tax credits, particularly those which were used to justify investments that already broke ground, would undermine private investments and stop development that is already ongoing,” the Republican [lawmakers wrote](#).

“A full repeal would create a worst-case scenario where we would have spent billions of taxpayer dollars and received next to nothing in return,” they wrote.

John Berger, CEO of rooftop solar installer [Sunnova](#), told analysts on the company’s Aug. 1 earnings call the Trump trade that drove clean energy stocks lower might not have much more room to run.

“Clearly, this is a dead heat now,” Berger said of the presidential race. “I think that the old Trump trade and so forth, I would be very cautious on that.”

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