



NATIONAL JOURNAL

Can Trump's plans to re-energize the nuclear power industry work?

Executive orders calling for developing next-gen reactors and cutting red tape may not be enough to overcome market forces, experts say.



None

Cooling towers at the nuclear reactor facility at the Alvin W. Vogtle Electric Generating Plant in Waynesboro, Ga. (AP Photo/Mike Stewart, file)

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President Trump's bold plans for re-energizing the nuclear power industry include aggressively ramping up uranium production, deploying "advanced nuclear technology," and having 10 large reactors under construction by 2030.

But even nuclear-energy advocates question how easy Trump's vision, put forth in a series of executive orders, would be to achieve, especially for an industry that's not only facing safety concerns, market pressures, and high costs but also lacks a uniform plan to make it happen.

"These [executive orders] are exciting; there's a lot of cool things in there. There's a lot of things that also kind of miss the mark," said Victor Ibarra, senior manager at the Clean Air Task Force. "I think ultimately we need a cohesive strategy."

On May 23, the president announced

[four executive orders](https://www.federalregister.gov/presidential-documents/executive-orders/donald-trump/2025)

(<https://www.federalregister.gov/presidential-documents/executive-orders/donald-trump/2025>).

that set ambitious deadlines and goals for growing the country's fleet of nuclear reactors, restructuring the Nuclear Regulatory Commission, and revitalizing uranium production in the states.

“We’re gonna get it very fast and we’re gonna get it very safe,” [Trump said at the signing of the orders](https://truthsocial.com/@realDonaldTrump/posts/114558830580449105)

(<https://truthsocial.com/@realDonaldTrump/posts/114558830580449105>). “We’re starting very strong. It’s time for nuclear, and we’re going to do it very big.”

Democrats often take issue on energy policy with Trump and his “drill, baby, drill” approach. But nuclear power draws bipartisan support. Democrats pushing to combat climate change like nuclear for its lack of carbon emissions. Republicans tout it for its reliability as part of an “all-of-the-above” energy strategy.

While industry experts applauded Trump for reinstating an urgency to broaden the United States' nuclear-generating capacity, they raise concerns that the orders fail to effectively address factors that have weakened the industry in the past, such as overspending and production inefficiencies.

Ibarra said there needs to be a coordinated approach between different stakeholders in order to efficiently apply what Trump is proposing.

As of 2024, nuclear power makes up about 18 percent of the country's overall energy generation, a slight decrease from years past.



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([s/727600](#)).

While the United States is a [world leader](#) (<https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear->

power), in nuclear energy production, its capacity for continued expansion pales in comparison to other countries.

China currently has the [fastest-growing](https://world-nuclear.org/information-library/country-profiles/countries-a-f/china-nuclear-power#:~:text=Prior%20to%202008%2C%20the%20government,400%2D500%20GWe%20by%202050)

(<https://world-nuclear.org/information-library/country-profiles/countries-a-f/china-nuclear-power#:~:text=Prior%20to%202008%2C%20the%20government,400%2D500%20GWe%20by%202050>

), nuclear arsenal. In the last 10 years, the country added over 34 gigawatts of nuclear power capacity, amounting to 58 operating reactors—an additional 21 are underway. Despite the United States having the largest nuclear fleet, with 94 reactors, it took nearly 40 years to create the same nuclear capacity that China did in 10.

Nuclear setbacks

Following the [Three Mile Island accident](https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.html) (<https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.html>), in 1979, commercial nuclear-energy expansion has remained mostly stagnant. The radioactive meltdown, the nation's first and only serious accident at a commercial nuclear plant, inspired sweeping changes in the industry and

led to an NRC crackdown on regulatory oversight, cementing the current state of the organization in place.

The majority of nuclear-generating capacity comes from reactors built and commercialized between 1967 and 1990. Numerous projects have been scrapped under the pressures of community skepticism fueled by Three Mile Island and [unmanageable costs](#)

(<https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power#Summer>).

[Only three reactors](#)

(<https://www.eia.gov/todayinenergy/detail.php?id=57280>), have opened in the last decade—two at Vogtle in Georgia and one at the Watts Bar Unit 2 plant in Tennessee—compared to several that have been mothballed. The [two Vogtle reactors](#)

([https://apnews.com/article/georgia-nuclear-power-plant-vogtle-rates-costs-](https://apnews.com/article/georgia-nuclear-power-plant-vogtle-rates-costs-75c7a413cda3935dd551be9115e88a64)

[75c7a413cda3935dd551be9115e88a64](https://apnews.com/article/georgia-nuclear-power-plant-vogtle-rates-costs-75c7a413cda3935dd551be9115e88a64)), were completed nearly seven years later than planned and overshot their budget by \$17 billion.

Experts say the challenges to expanding nuclear energy in the U.S. can be partially blamed on a lengthy licensing process, as [required by the NRC](https://nuclear.duke-energy.com/2012/01/17/nrc-new-nuclear-licensing-process#:~:text=The%20licensing%20process%20%E2%80%93%20something%20that,for%20new%20nuclear%20power%20facilities.)

(<https://nuclear.duke-energy.com/2012/01/17/nrc-new-nuclear-licensing-process#:~:text=The%20licensing%20process%20%E2%80%93%20something%20that,for%20new%20nuclear%20power%20facilities.>), that can take as long as a decade. This includes design certification, early site permits, construction permits, and operating licenses.

In one of the executive orders, [Trump called](https://www.whitehouse.gov/presidential-actions/2025/05/ordering-the-reform-of-the-nuclear-regulatory-commission/) (<https://www.whitehouse.gov/presidential-actions/2025/05/ordering-the-reform-of-the-nuclear-regulatory-commission/>), the process a “fundamental error” that has restricted the promotion of “safe, abundant nuclear energy.” His order requires that the NRC expedite the licensing process, setting a prospective deadline of 18 months.



DAILY

Europe is doing what Trump wants. But Washington might not reap the benefits.

Europe's plan to increase defense spending could exclude U.S. weapons producers.

CRISTINA MAZA

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Ibarra said the nuclear industry has thrived on “one-off reactors,” unique designs tailored to the geography a reactor is located in. Ibarra said shorter licensing timelines are possible, but a deadline of less than two years might be too much for what the NRC does.

High production costs

Outside of the extensive list of regulations and licensing requirements, nuclear growth is often stymied by expensive production costs.

In August 2017, Duke Energy shelved the [William States Lee III](https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power#Summer) (<https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power#Summer>), plant near Charlotte, South Carolina, over “risks and uncertainties” that limited the initiation of construction.

The [South Texas Project](https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power#Summer) (<https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power#Summer>).

suffered a similar fate in May 2018 when Toshiba, a part-owner of the project, announced its decision to withdraw. The move came partially because of “construction-related cost overruns” typical in nuclear projects.

These are two of over 18 proposed projects suspended or shelved because of licensing, investment, or construction complications.

Energy Department loan programs and tax credits guaranteed by climate measures such [as the Inflation Reduction Act](https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power-policy) (<https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power-policy>).

are an important element to spur nuclear expansion, said John Kotek, senior vice president of policy development and public affairs at the Nuclear Energy Institute.

Passed in 2022, the IRA includes over \$370 billion in tax credits and subsidies that are directed towards lowering energy costs and triggering clean-

energy investments. The law guarantees nearly \$40 billion in loans aimed at covering the [costs of technology production, including nuclear.](#)

(<https://world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power-policy>).

Current tax codes are “necessary compliments” for the industry to effectively scale, Kotek said.

Trump has expressed a desire to roll back much of the IRA, but he has not said much about the nuclear energy credits themselves. Industry advocates are hopeful he'll keep them even if tries to do away with many other parts of the bill signed by President Biden.

Next-generation nuclear

Trump's [executive orders](#)

(<https://www.whitehouse.gov/presidential-actions/2025/05/deploying-advanced-nuclear-reactor-technologies-for-national-security/>), also call for deploying advanced nuclear technologies, including small modular, micro, stationary, and mobile reactors

considered safer and more efficient than the bulk reactors built decades ago.

Small modular reactors have been the leading, hot-button topic in the nuclear world. Much of their appeal comes from the notion that smaller reactors can be mass produced in factories, cutting construction costs.

No commercial micro reactor is operating in the U.S. aside from variations present on aircraft carriers and submarines. Experts say the lack of such a model makes costs more uncertain.

A total cost estimate of small modular and micro reactor mass production is still theoretical, said Lucian Niemeyer, co-founder of the United Coalition for Advanced Nuclear Power. The world has yet to see factory production of nuclear reactors, but Niemeyer anticipates it will cost less than the legacy reactors.

“The jury’s still out,” Niemeyer said. “We actually have to get one up and operating.”