**Can Trump team meet ambitious nuclear energy deadlines?**

Story by Callie Patteson, Washington Examiner • 3h • 8 min read

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President [Donald Trump](https://www.washingtonexaminer.com/tag/donald-trump/) has vowed to usher in a [nuclear energy](https://www.washingtonexaminer.com/tag/nuclear-energy/) renaissance, promising to swiftly deploy traditional reactors and advanced technologies to get ahead in the [artificial intelligence](https://www.washingtonexaminer.com/tag/artificial-intelligence/) race.

But overhauling the [nuclear](https://www.washingtonexaminer.com/tag/nuclear-power/) energy industry, which has seen only a glacial pace of projects in recent decades, will not be easy. Some analysts say the Trump administration may [overpromise](https://www.washingtonexaminer.com/policy/energy-and-environment/3470361/nuclear-power-us-production-trump-administration-chris-wright-three-mile-island/) what it can achieve in the next four years.

Energy demand has soared over the last year, and is only expected to rise as Big Tech continues to build power-hungry data centers to advance AI operations. To get ahead of China in the race for AI, and to ensure that the existing electric grid is not at risk of blackouts, the Trump administration is prioritizing securing as much baseload energy as possible.

Nuclear power has become an extremely attractive option for the administration, as it [has](https://www.energy.gov/ne/articles/what-generation-capacity) a capacity factor of around 92.3%, higher than any other energy source. This means nuclear power plants can produce reliable and secure power more than 92% of the time.

While it is highly reliable and carbon-free, there has been little development of nuclear power in the United States in the last 50 years. Since 1978, the Nuclear Regulatory Commission [has](https://www.whitehouse.gov/presidential-actions/2025/05/ordering-the-reform-of-the-nuclear-regulatory-commission/) only seen two approved reactors enter commercial operation.

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**The race to build a nuclear reactor on the moon**

Critics have blamed this snail-like pace on bureaucratic red tape from the NRC and successful campaigns led by environmentalists and anti-nuclear activists worried about safety and radioactive waste. With nuclear technology advancing and electricity demand rising each year, nuclear power advocates see an opportunity to break through those barriers.

Through executive order and agency action, the Trump administration has laid out a number of goals for building out nuclear power in the U.S., including expanding domestic nuclear energy capacity from 100 gigawatts to 400 gigawatts by 2050.

To help meet that goal, the administration hopes to achieve two milestones within the next five years. The first is to have 10 large reactors under construction by 2030, and the second is to have three small test reactors built by July 4, 2026.

Both targets are widely considered ambitious, as the deployment of the reactors can easily be delayed by supply chain issues with fuel and construction materials or through the permitting and regulatory process.

**A race to next July**

Energy Secretary Chris Wright first [anno](https://www.washingtonexaminer.com/policy/energy/3445844/us-three-small-nuclear-reactors-next-fourth-of-july/)unced in June that, by Independence Day 2026, the Department of Energy would have at least three small test reactors built and hit criticality status. Reaching criticality means that a reactor is perfectly stable and can produce power.

This doesn’t mean these test reactors will be fully operational and producing electricity by July 4. Most projects are only expected to achieve “zero-power criticality,” meaning the reactor barely turns on. This allows developers to move faster without acquiring other equipment necessary for a fully functioning reactor.

“This [is a] really special time for nuclear,” Aalo Atomics co-founder and CEO Matt Loszak told the Washington Examiner. “It's basically like a flat-out race amongst a bunch of different nuclear vendors to prove their technology first and achieve criticality and regulatory approval and make sure they can do this, economically and safely, and all that.”

Aalo Atomics was one of the 10 companies and 11 projects selected earlier this month to participate in the DOE’s reactor pilot program focused on building test reactors.

Each project is taking a slightly different approach, in terms of the fuel used, the size of the reactor, or the type of design for the reactor. While the companies are not starting from scratch, as most have been pursuing funding and pathways to deployment for the last couple of years, they face an uphill battle to build their projects within the tight timeline.

**Possible hurdles**

One key obstacle the developers face is that none of the 10 companies has approved designs for their small modular reactors.

“None of those companies have approved designs,” the American Nuclear Society's Paul Dickman told the Washington Examiner. “The first thing you’ve got to do before you build a reactor is have a design. Simple.”

Dickman said the project managers will likely face delays in obtaining the right materials, such as steel, to construct the small reactors and the correct fuel to run them.

He pointed out that several companies intend to use a more potent fuel known as High-Assay Low-Enriched Uranium to support their smaller designs. Only one company in the United States currently produces HALEU.

“It's not to say some of their designs aren't good,” Dickman said, adding, “If they haven't completed the design yet – which most of them have not – they don't have the construction designs and test materials, and they don't have fuel. So how are you gonna make neutrons in less than a year?”

Aalo Atomics is still confident it will meet the Independence Day deadline, partly because it decided not to use HALEU in its design. Instead, it plans to use “off-the-shelf uranium dioxide,” used in all pressured water reactors nationwide.

Loszak said the company has also secured most of its funding, recently closing its $100 million Series B round. They [broke](https://x.com/MattLoszak/status/1961197521054687426) ground for its facility at the Idaho National Laboratory at the end of August.

Even the administration, however, has acknowledged that July 4th might be too ambitious. Wright broadened that goal to next year entirely during an interview with the Washington Examiner.

“It is an accelerated time frame. That’s an ambition, that’s a goal,” Wright said. “I think we will get multiple reactors critical next year. That’s ambitious, but I think that’s achievable. Will it be three by July 4th? Well, the president’s a hard-driving guy. He wants to make stuff go as quickly as possible. But, I think we will see multiple reactors critical next year, which is an enormous step forward for 20 years of talk and no action.”

By participating in the DOE program, companies can move through the regulatory process much more swiftly than the lengthy process seen under the NRC.

These pathways are similar, but DOE cannot license commercial reactors. Instead, the Atomic Energy Act allows the agency to license reactors, often for research purposes, under DOE control or under substantial contractual obligations, Adam Stein, director of nuclear energy innovation at the Breakthrough Institute, a Berkeley, California-based economic research center, told the Washington Examiner.

DOE hopes to accelerate the timeline further through a streamlined licensing pathway related to the reactor pilot program.

This process is ongoing, the agency confirmed to the Washington Examiner, saying, "To support the American nuclear renaissance, the Energy Department taken several steps to fast track the test reactor pilot program, including by updating internal DOE guidelines."

No matter how streamlined the process is, there is doubt that the administration will be able to get projects to the July finish line if the companies start from scratch.

Luckily, companies like Aalo Atomics were already discussing construction permit applications, supply chain decisions, and reactor designs with DOE and the NRC.

"They will have a chance to meet that deadline," Stein said. "They've already put in a few years of work. But, a new company that is just starting out and expects to deliver a complete reactor by next year is unlikely to succeed."

**Building large reactors**

Only three nuclear reactors have been built and brought into commercial U.S. operations in the last 25 years. With that history, getting 10 new large reactors under construction in five years might seem impossible.

However, with permitting reform back before Congress and changes being made to the NRC through the executive branch, the administration is confident that 2030 is an easily achievable goal.

“We will sail past that goal,” Wright said, adding, “We just need to, again, return to the original mission of the NRC, which is safe operations of reactors in the United States. And believe me, I think that that will happen. Common sense is contagious right now in Washington, DC.”

In May, Trump signed an executive order to reform the NRC, targeting its licensing timeline and agency culture. The order specifically called on the NRC to decide on reactor licenses within 18 months.

On Wednesday, the three sitting members of the NRC testified before Congress, saying they are committed to meeting that 18-month review timeline. However, they [also](https://www.washingtonexaminer.com/policy/energy-and-environment/3791397/regulators-fear-dismissal-slow-trump-nuclear-power-plans/) emphasized they would not sacrifice safety to hit a deadline despite the apparent risks of dismissal.

Meanwhile, in Congress, lawmakers are poised to consider bipartisan legislation to speed up the overall federal permitting process by limiting legal challenges and simplifying the scope of environmental reviews, which critics say have caused years of red tape for infrastructure projects nationwide.

Many believe that if the pilot reactor program is successful, it will pave the way for traditional and advanced projects to receive regulatory approval even faster, thereby making it easier to hit the 2030 goal.

“That's a big part of the thesis, is that if you have an operating safe reactor, that should really help speed up the NRC process,” Loszak said.

**Driving public and private interest**

Rising energy demand plays a massive role in the interest behind bringing new nuclear generation online, as a supply and demand gap has grown in part because traditional fossil fuel plants have been shuttered faster than renewable energy alternatives can replace them.

AI and large-load facilities like data centers have driven an unprecedented spike in electricity demand that is only expected to balloon in the next five years. Some analysts estimate that AI data centers will consume upward of 84 gigawatts by 2030, compared to the four gigawatts consumed last year.

Grid operators have warned that if demand growth continues to outpace the installation of new generation, there will be greater risks of blackouts and higher costs for consumers.

Private investments in nuclear energy have also soared within the last year, as Big Tech giants like Google, Meta, and Amazon have raced to secure power for their AI operations.

“They believe in nuclear, and they're going to sign above-market price power purchase agreements. They're going to inject equity capital into these reactors,” Wright said. “So equity capital, capital from these hyperscalers, plus government loans from our Loan Program Office or other programs in our government, those things are going to bring the financing together to make reactors happen.”

Wright did not offer details on sites the administration is eyeing to construct the 10 reactors. The secretary said the reactors would be built in multiple “pro-nuclear” states across the country and that announcements regarding new commercial reactors should be made within “this calendar year.”

**[KEY HOUSE REPUBLICAN AIMS TO GET PERMITTING REFORM TO SENATE BY YEAR'S END](https://www.washingtonexaminer.com/policy/energy-and-environment/3786606/top-house-republican-aims-permitting-reform-senate-years-end/)**

With the 2026 and 2030 deadlines established, some nuclear energy experts are urging the industry to take the timelines with a grain of salt.

“Not all of these projects are going to succeed, and that's part of innovation, but we need to be clear about that up front,” Stein said.