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U.S. Energy Secretary Highlights Nuclear Option for Climate Action



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nergy Secretary <u>Jennifer Granholm</u> told *Newsweek* that her department is helping big tech and electric utility companies bring more nuclear power to the nation's grid to meet the rapidly increasing energy demand for data centers.

"That is absolutely one of the pieces of the clean power solution that data centers should look at," Granholm said in an interview Thursday during Climate Week NYC.

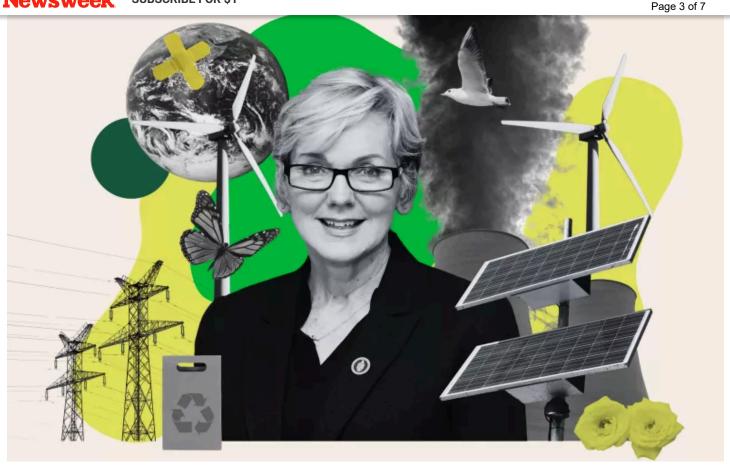
The boom in AI has triggered a massive expansion of bigger and more powerful data centers that <u>consume</u> <u>enormous amounts of electricity</u>. That growth challenges both big tech and power suppliers who want to meet new demand while reducing greenhouse gas emissions from their data operations and power generation facilities.

Despite ambitious climate objectives at many big tech companies, emissions from <u>Google</u> and <u>Microsoft</u> are rising due to Al's growth.



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U.S. Energy Secretary Jennifer Granholm said nuclear power is "absolutely one of the pieces of the clean power solution that data centers should look at." The boom in AI data centers is driving up demand... More PHOTO-ILLUSTRATION BY NEWSWEEK/GETTY

Granholm cited a recent projection from the North American Electric Reliability Corporation showing a 15 percent increase in demand on the nation's electric grid just from data centers. However, Granholm said the power demand from the tech sector also provides a chance to spur the development of more low-carbon energy sources, including nuclear.

"We don't really view the rise of AI and data centers as a challenge or an anomaly, but really more of an opportunity," she said. "It really is a chance to revitalize communities with data centers."

Granholm said the Inflation Reduction Act includes incentives for the reuse of sites that were once used for fossil fuel generation, such as coal-fired power plants or coal mines that closed. Data center developers find those old heavy industry facilities attractive because they have the needed electric transmission infrastructure in place.

Similarly, she said, some nuclear power facilities that had closed for economic reasons are getting a fresh look.

"The existing nuclear sites—60 gigawatts worth of power, potentially—we think it's a real opportunity for communities and it's an opportunity for improved grid management," Granholm said.



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Granholm said the DOE is developing new nuclear technology while reviving older facilities as well. Nuclear plants in Michigan and Pennsylvania that closed years ago could be coming back online in the coming years, due in part to the way data center demand is changing the economics of electricity. Granholm said the DOE is working to get those idled reactors running again.

"We have a golden nuclear regulatory regime in this country, and we know we can do it safely," Granholm said.

Climate Week Panel on AI and Energy

The twin issues of AI and nuclear power were recurring themes this week at gatherings and announcements during Climate Week NYC, including an event *Newsweek* hosted Wednesday evening.

The <u>panel discussion event</u>, <u>sponsored by Kia</u>, <u>"Al: Climate Hero or Climate Villain?"</u>, featured experts from big tech, the power industry, philanthropy and academia exploring both Al's promise to help solve energy problems and the challenge of powering data centers.

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Microsoft's Bobby Hollis (left) discussed Three Mile Island during the climate discussion on September 25 at Newsweek headquarters. MARLEEN MOISE

Microsoft VP for Energy Bobby Hollis told the audience about his company's announcement last week to purchase more than 800 megawatts of nuclear power from the energy company Constellation. The agreement could allow Constellation to restart a closed reactor at what is probably the country's best-known nuclear facility, Three Mile Island in Pennsylvania.

"We're hoping there will be a nuclear resurgence," Hollis told the audience at Newsweek's New York headquarters.

"AI has accelerated and increased the need for carbon-free energy, so that requires us to look outside the box," Hollis said.

In 1979, Three Mile Island was the scene of the most serious accident in U.S. nuclear power history when the facility's Unit 2 reactor partially melted down. The facility's other reactor was unaffected and stayed in operation until it closed in 2019.

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The Three Mile Island Nuclear Plant in Middletown, Pennsylvania. An agreement with Microsoft could restart a closed reactor at the facility to help power data centers. **JEFF FUSCO/GETTY IMAGES**

Duke Energy Managing Director of ESG & Sustainability Heather Quinley said her company, which serves 8.4 million electricity customers in the southeast and Midwest, is looking to new nuclear power as part of its path to cleaner electricity.

She said power demand is growing rapidly in the region Duke serves.

"We're seeing significant load growth from data centers and advanced manufacturing," Quinley told the audience, adding that data centers will account for 25 percent of new projects Duke will power.

Duke entered an "Accelerating Clean Energy" memorandum of understanding this year with Microsoft, Google, <u>Amazon</u> and Nucor, a steelmaking company, to develop nuclear and renewable clean energy, on-site generation for those large-scale energy consumers.

Shifting Attitudes on Nuclear Power

Granholm said the Microsoft agreement to restart a reactor at Three Mile Island is an example of shifting attitudes on nuclear power. The accident in 1979 elevated public anxiety about health and safety risks and opposition to nuclear power became a central tenet of environmental activism.



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A coming generation of new, smaller nuclear reactors will offer more flexibility for how and where those units are put to use, she said, and the DOE national laboratories are leading research on a completely different type of nuclear power, nuclear fusion.

Unlike fission—the splitting of uranium or plutonium atoms to release power—fusion occurs when two atoms slam together to form a heavier one. Fusion reactions hold the promise of enormous clean energy production but require high pressure and temperature to join the nuclei together.

DOE scientists achieved breakthroughs with fusion in the laboratory in 2021 and 2022 and Granholm said fusion energy could become reality sooner than many had expected. She said that President <u>Joe Biden</u> has set a "decadal vision" for the first commercial fusion plant.

"There's a couple of companies that are really leaning in with a lot of investment support from the private sector," she added. "So, it might even be sooner than that."

Granholm said that with the advances in nuclear power and the rapid growth of renewable energy sources she is optimistic about the country's ability to produce power while also meeting climate targets.

"This year we will add 60 gigawatts of clean power onto the grid," Granholm said. "So, we will be able to meet that demand."



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