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## DIVE BRIEF

# Amazon announces small modular reactor deals with Dominion, X-energy, Energy Northwest

The digital retail and web services company led a \$500 million investment in X-energy and will support the development of more than 600 MW of SMR capacity in Washington and Virginia.

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By Brian Martucci

*The Amazon logo seen at Amazon campus in Palo Alto, California on February 18, 2020. The company announced three separate deals Oct. 16 in support of small modular reactors. hapabapa via Getty Images*

### Dive Brief:

- Amazon has signed three agreements to support the development and deployment of small modular reactors in the United States, it said today.
- The company entered into a deal with Energy Northwest, a consortium of 29 public utility districts and municipalities across Washington, to deploy four reactors developed by X-energy that will together generate approximately 320 MW of electricity beginning in the early 2030s, Amazon said.
- Amazon also revealed an equity investment in X-energy as part of an approximately \$500 million fundraising round announced today by the nuclear technology company and a separate

memorandum of understanding with Dominion Energy “to explore innovative new development structures that would help advance potential [SMR] nuclear development in Virginia,” according to a Dominion Energy news release.

**Dive Insight:**

Amazon’s announcements come the day after Google announced a deal with advanced nuclear reactor developer Kairos Power to deploy 500 MW of new generating capacity by 2035 and less than a month after Constellation Energy announced a 20-year power purchase agreement with Microsoft that would allow the 835-MW Unit 1 reactor at Three Mile Island Nuclear Generating Station in Pennsylvania to restart.

Microsoft and Google are parties to the Advanced Clean Electricity initiative, which aims to spur development of clean, firm power generation technologies like advanced nuclear.

Though Amazon is not an Advanced Clean Electricity initiative participant, it aims for net-zero carbon emissions across its operations by 2040. Amazon previously announced a deal with Talen Energy to purchase electricity in 120-MW increments from the independent power producer’s 2,228-MW stake in the Susquehanna nuclear power plant.

Under the deal, Amazon would use the electricity to power a data center colocated with the power plant. But AEP and Exelon say the agreement would shift up to \$140 million in transmission costs to ratepayers.

Amazon’s announcements today are focused on SMRs and support their deployment on the U.S. power grid.

The company’s investment in X-energy will support the completion of X-energy’s reactor design and licensing and the first phase of its

fuel fabrication facility in Tennessee, according to an X-energy news release.

Amazon and X-energy are also collaborating to bring more than 5 GW of new nuclear power projects online in the U.S. by 2039 and to develop a standardized “deployment and financing model to develop projects in partnership with infrastructure and utility partners,” X-energy said. Those projects “will help meet growing energy demands in key locations through direct project investments and long-term power purchase agreements to help power Amazon operations,” it said.

The first phase of the Energy Northwest agreement would see the deployment of four 80-MW Xe-100 SMRs at the Columbia Generating Station in Richland, Washington. Future phases could add eight more reactors, bringing the site’s total SMR generating capacity to approximately 960 MW, Energy Northwest said today.

X-energy is separately developing a four-module, 320-MWe power plant at a Dow petrochemical plant in Texas. That project is supported by the U.S. Department of Energy’s Advanced Reactor Demonstration Program and would be “the first grid-scale advanced nuclear reactor deployed to serve an industrial site in North America” to provide both electricity and high-temperature steam, X-energy said.

The Xe-100 reactor will use TRISO fuel pellets produced at X-energy’s Tennessee facility. TRISO is a novel and more stable fuel form that uses high-assay, low-enriched uranium, a more highly-enriched alternative to conventional low-enriched uranium.

Through its MOU with Dominion Energy, Amazon aims to deploy an SMR near the utility’s North Anna nuclear generating station to add at least 300 MW of new capacity to the Virginia grid, Amazon

said. The companies did not specify a reactor design for that project.