

US firm unveils game-changing small nuclear reactor that can power 300,000 homes

“This is a game-changer technology,” says Westinghouse CEO. “If the AP1000 had been in operation at Fukushima, it would have been a total non-event.”



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Westinghouse unveils AP300, a small modular reactor for mid-sized nuclear technology.

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"The launch of the AP300 SMR rounds out the Westinghouse portfolio of reactor technology, allowing us to deliver on the full needs of our customers globally, with a clear line of sight on schedule of delivery, and economics."

Westinghouse's decision marks a significant turning point in the nuclear industry's effort to reinvent itself in response to climate change.

Nuclear fission reactor electricity produces no greenhouse gas emissions, and smaller nuclear reactors are less expensive to develop.

The AP300 is expected to cost around \$1 billion per unit, compared to the AP1000's anticipated cost of \$6.8 billion.

It will produce about 300 megawatts of electricity, compared to the AP1000's 1,200 megawatts, and power about 300,000 households.

AP300, a 'game-changer' technology

Industrial companies consider smaller nuclear reactors as carbon-free heat sources because they are more adaptable and versatile.

The Nuclear Regulatory Commission must approve the AP300 before it can be made accessible to customers in the US by 2027, but Durham feels optimistic.

"We have absolute confidence, because the NRC has already licensed every bit of this technology," Durham told CNBC.

Transmission lines are essentially exhausted in the United States. And small reactors can be connected to the electrical grid more efficiently.

New power sources frequently require an update in transmission capacity; thus, connecting them can take years.

It would be simpler to replace one coal plant with an AP300 nuclear reactor since it will generate nearly the same amount of power as a typical coal plant, said a *CNBC* report.

"Unlike the previous generation of nuclear power plants, which were only used by large integrated utilities, the sizes of the advanced reactors which range from microreactors of a half-megawatt to 300 megawatts or more," Jeffrey S. Merrifield, a nuclear energy lawyer and former commissioner of the US Nuclear Regulatory Commission, told *CNBC*.

This "means that there is a significantly larger number of utilities that can utilize these technologies."

The AP300 has the same security measures as the AP1000, said Durham. Both types of passive cooling systems are extremely important, and if the AP1000 had been in use at Fukushima, the incident would have been no issue.

"This is a game-changer technology," he told *CNBC*. "If the AP1000 had been in operation at Fukushima, it would have been a total non-event."

The AP300 is an important step in extending access to nuclear electricity for the US market, even if there is still a strong demand for large reactors outside of the United States.

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