New Westinghouse Reactor Design Is Safe

RAY HENRY, Associated Press

ATLANTA (AP) — An attempt to build the first brand-new nuclear power plant in a generation has taken a step forward now that staff at the U.S. Nuclear Regulatory Commission says plans to build new reactors in Georgia meet safety requirements.

The federal regulators issued two related safety reports Friday that cleared the design of Westinghouse Electric Co.'s AP1000 nuclear reactor and plans by the Atlanta-based Southern Co. to build two of those reactors at Plant Vogtle near Augusta. The NRC's commissioners must still decide whether to give final approval to the reactor design and its construction in Georgia.

"This is a significant step forward in the licensing process for the Vogtle project," Southern Company CEO Thomas Fanning said in a written statement.

The positive finding for the AP1000 reactor comes after NRC Chairman Gregory Jaczko said in May that Westinghouse Electric had failed to correctly model potential stresses on parts of the reactor, such as the combined forces that an earthquake and changing temperatures would have on the concrete-and-steel shield protecting the reactor from debris flung by a tornado or a crashing aircraft.

At the time, NRC officials said that Westinghouse also incorrectly calculated possible stresses on portions of the plant, including a tank holding emergency cooling water and on equipment that protects against radioactive releases during an accident. Westinghouse submitted an update in June that it said addressed all

the questions raised by regulators. The company said it did not need to change its design.

David Matthews, the NRC's director of the division of new reactor licensing, told Westinghouse officials in a letter obtained by The Associated Press that the final safety report will show that all outstanding issues with the AP1000 have been resolved. The report will be publicly released in several days.

"We're in the home stretch to receive final approval of the amended AP1000 design," Westinghouse Electric CEO Aris Candris said in a written statement. The company is based in Cranberry Township, Pa.

Besides Georgia, the AP1000 reactor could see use in South Carolina and Florida. Four AP1000 reactors are under construction in China.

Proponents of the AP1000 say it would be safer during a prolonged power outage than the country's existing 104 commercial reactors because the AP1000 relies on gravity and evaporation to run its emergency cooling systems, not electricity. A March 11 earthquake and tsunami that knocked out emergency power at the Fukushima Dai-ichi nuclear plant in Japan led to reactor meltdowns, explosions and radiation releases.

During an accident at an AP1000 reactor, emergency cooling water would be released from a large tank atop a 10-story-high shield building and fall onto a steel shell that surrounds a vessel containing highly radioactive nuclear fuel and other vital equipment.

In 2009, NRC officials told Westinghouse to strengthen the shield building so it could better survive a tornado, earthquake or high winds. While the upcoming report means the NRC believes all those issues are fixed, one senior NRC engineer has filed a dissent questioning the building's strength.

In a second report, the NRC staff also found that plans to build two AP1000 reactors at Plant Vogtle complied with safety rules. A public version of that report is expected to be released later this week.

NRC officials will hold a public hearing within four months on whether to allow the Southern Co. and its partners to start building the $14 billion project.

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