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NRC Issues Final Safety Evaluation Report for NuScale Small Modular Reactor

The Nuclear Regulatory Commission has issued a [final safety evaluation report](#) for NuScale's small modular reactor design. This meets the agency's original 42-month technical review schedule and demonstrates the NRC's commitment to timely licensing of safe technologies for new, advanced reactors. The NRC is preparing a rulemaking to certify the design.

NuScale applied on Dec. 31, 2016, for certification of the company's SMR design for use in the United States; the NRC accepted the design for review in March 2017. The design uses natural "passive" processes such as convection and gravity in its operating systems and safety features to produce approximately 600 megawatts of electricity. The SMR's 12 modules, each producing 50 megawatts, are all submerged in a safety-related pool built below ground level. The NRC concludes the design's passive features will ensure the nuclear power plant would shut down safely and remain safe under emergency conditions, if necessary.

NuScale has indicated it will apply in 2022 for a standard design approval of a 60-megawatt-per-module version of the design. That version will require additional NRC review.

Neither a standard design approval nor a design certification grant permission to build or operate a reactor. Full certification, if granted by the Commission following the staff's recommendation, allows a utility to reference the design when applying for a combined license to build and operate a nuclear power plant.

The NRC has certified six other designs: the Advanced Boiling-Water Reactor, System 80+, AP600, AP1000, the Economic Simplified Boiling-Water Reactor and the APR1400. The agency is also continuing work on an application to renew the ABWR certification. More information about the [NuScale design review](#) can be found on the NRC's website.