NRC Issues Final Safety Evaluation Report; Standard Design Approval for Korean APR1400 Reactor

The U.S. Nuclear Regulatory Commission has issued a final safety evaluation report and standard design approval for Korea Electric Power Corporation and Korea Hydro & Nuclear Power’s Advanced Power Reactor 1400 (APR1400).

The approval, which indicates the NRC finds the design technically acceptable but does not fully certify the design, is valid for 15 years. Separately, the NRC is preparing a rulemaking to fully certify the design for U.S. use.

Both companies submitted an application Dec. 23, 2014, to certify the APR1400 for use in the United States. The design, as approved, would produce approximately 1,400 megawatts of electricity. The APR1400 features enhanced systems to safely shut down the reactor or mitigate the effects of an accident.

Neither a standard design approval nor design certification grant permission to build or operate a reactor. Full certification, if granted by the Commission following the staff’s recommendation, is valid for 15 years and 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 five other designs: the Advanced Boiling Water Reactor, System 80+, AP600, AP1000, and the Economic Simplified Boiling Water Reactor. The staff is reviewing applications to certify two other designs: the U.S. Advanced Pressurized Water Reactor and the NuScale small modular reactor. The staff is also reviewing an application to renew the ABWR certification. More information about the APR1400 design review can be found on the NRC’s website.