

Preparing for deployment

The U.S. Nuclear Regulatory Commission is the gold standard for nuclear regulation worldwide and is committed to ensuring the safety of any nuclear reactor undergoing licensing in the United States. Other countries will be looking to the United States as a model while the NRC, backed by years of preparation, new experimental data, and a congressional mandate, determines what information is necessary to license advanced reactors. Demonstrating the overall safety case for a reactor through modeling, testing, and operating experience is the license applicant’s responsibility, and it is in the applicant’s best interest to submit a thorough application that stands up to the NRC’s review and helps make the financing case for the reactor.

The NRC is taking a technology-neutral, risk-informed, and performance-based approach to building a licensing framework that will provide effective and efficient regulation of advanced reactor designs. As part of a rigorous application review, the NRC staff will review probabilistic risk assessments, pose questions, gather public feedback, and post documents for public review. Public meetings give members of the public a chance not only to get information, but also to question the NRC’s approach. Some have suggested, for example, that the lack of a clear determination on whether prototype testing will be required before a reactor is licensed constitutes a serious safety issue.

What is to be made of such ominous but credible-sounding concerns? It is important to acknowledge that the NRC cannot make determinations on prototyping for a specific design until a license application is submitted for review. Existing regulations clearly state that special testing and protective provisions may be required for the initial unit of a new reactor type for a limited period, which gives the NRC the

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