

June 18, 2012

## SUMMARY OF NRC ESBWR REVIEW STATUS

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This document summarizes the status of the U.S. Nuclear Regulatory Commission (NRC) review of the Economic Simplified Boiling Water Reactor (ESBWR). This ESBWR review information, and other design approval and certification activities under 10 CFR Part 52, including the regulatory safety review process and requirements, the current status of the NRC reviews, and actions to complete the process are in the public record and may be accessed by any party through the NRC public website, the NRC ADAMS document access system, and other websites. This information may be provided to any interested party. Attachment 1 provides information on access to the information on the public record.

The NRC staff completed its safety review of the ESBWR design on March 9, 2011 and issued a final safety evaluation report (FSER) available in the NRC's Agencywide Documents Access and Management System (ADAMS) at accession number ML103470210. The NRC staff also issued a standard design approval (SDA) via letter to GE Hitachi Nuclear Energy on March 9, 2011 (ADAMS accession number ML110540310). This SDA signifies that the NRC staff reviewed the design and found the design met all applicable regulations. An SDA represents the NRC staff's approval of the design and is valid for 15 years from the date of issuance. The SDA allows the ESBWR design to be referenced in an application for a construction permit, an operating license, a combined license or manufacturing license.

In parallel with the SDA, the NRC staff began preparing a rulemaking to certify the design approved in the SDA. A design certification (DC) represents the Commission's approval of the design and is valid for 15 years from the date of issuance. The DC allows a combined license applicant to incorporate by reference the DC in its application. The advantage of a DC over an SDA is that the issues resolved during the DC review are precluded from reconsideration at the combined license stage, i.e., the safety issues resolved during the DC process have "finality." Based on the completion of its safety review, the NRC published a proposed rule on March 24, 2011 (77 FR 16549) that would certify the ESBWR design in Appendix E to 10 CFR Part 52.

In late 2011, while the NRC staff was preparing the final rule, issues were identified with the ESBWR steam dryer, a non-safety component. These issues called into question certain conclusions in the staff's safety review under the SDA. Resolution of these issues requires additional analyses by the applicant and review by the NRC staff in order for the NRC staff to conclude the design is acceptable for certification. The DC rulemaking process is delayed pending resolution of these issues. If the additional analyses resolve the issues, it is reasonable to assume certification, via publication of a final rule, would be completed in calendar year 2013. The existing March 2011 SDA will be updated when the final rule is completed so the duration of the SDA and rulemaking will coincide.

## Attachment 1 - ESBWR Design Certification Information Access

Information on the status of the ESBWR design certification rule is available several ways.

1. Through the U.S. Federal Government's e-rulemaking portal, <http://www.regulations.gov>. Search on the docket identification number for the ESBWR design certification rule, which is NRC-2010-0135. As they are issued, the NRC will post the design certification application; the proposed rule SECY paper, staff requirements memorandum, *Federal Register* notice and environmental assessment documents; the public comments received; the final rule SECY paper, staff requirements memorandum, *Federal Register* notice and environmental assessment documents; and the design control document.
2. Through the NRC's Web site for the ESBWR design certification, which is <http://www.nrc.gov/reactors/new-reactors/design-cert/esbwr.html>.
3. Use the Advanced Web Search feature of our ADAMS document management system at <http://adamswebsearch.nrc.gov/scripts/securelogin.pl> and choose "Advanced Search," then enter 05200010 in the "Docket Number" field.  
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4. The NRC staff also maintains an electronic service list for e-mail announcements on the ESBWR design certification rule. Although this is not a substitute for a search of design certification documents at <http://www.regulations.gov> or on the NRC Web site, it does provide notice of the more significant rulemaking events. To be placed on the electronic service list for ESBWR design certification rulemaking, please contact the PM for the ESBWR design certification rule: David Misenhimer, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-6590; e-mail: [david.misenhimer@nrc.gov](mailto:david.misenhimer@nrc.gov).  
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