



# NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

Office of Public Affairs Telephone: 301/415-8200

Washington, D.C. 20555-0001

E-mail: [opa\\_resource@nrc.gov](mailto:opa_resource@nrc.gov) Site: [www.nrc.gov](http://www.nrc.gov)

Blog: <http://public-blog.nrc-gateway.gov>

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## NRC SEEKS COMMENT ON PROPOSED RULE TO CERTIFY GE-HITACHI ESBWR REACTOR DESIGN

The U.S. Nuclear Regulatory Commission is seeking comments on a proposed rule that would certify GE-Hitachi Nuclear Energy's Economic Simplified Boiling-Water Reactor (ESBWR) design for use in the United States.

The design certification process provides for early public participation and resolution of safety issues for proposed reactor designs. NRC certification, in the form of a final rule, means the design meets the agency's applicable safety requirements. If an applicant for a nuclear power plant license references a certified design, the applicant need not submit safety information for the design. Instead, the license application and the NRC's safety review would address the remaining safety issues for the proposed nuclear power plant.

The design to be certified is fully described in a "design control document," which would be approved (incorporated by reference) in the design certification rule. The NRC has also prepared an environmental assessment of the design to support the rulemaking. The environmental assessment discusses possible design alternatives that could be included in the design certification to mitigate potential severe accidents. The NRC invites public comments on the design control document and environmental assessment as part of this rulemaking. These documents are available through the Federal e-Rulemaking web site at <http://www.regulations.gov> by searching under Docket ID **NRC-2010-0135**.

GE-Hitachi Nuclear Energy submitted an application for certification of the ESBWR standard plant design on Aug. 24, 2005. The ESBWR is a 1,594 megawatt electric, natural circulation reactor. The ESBWR includes passive safety features that would cool down the reactor after an accident without the need for human intervention. These passive features include:

- enhanced natural circulation via a taller reactor vessel, a shorter core and improved water flow through the vessel;
- an isolation condenser system to control water levels and remove decay heat while the reactor is pressurized, and;
- a gravity-driven cooling system to maintain water levels when the reactor pressure has dropped.

The NRC conducted an extensive technical evaluation of the design and issued a final safety evaluation report (FSER) in March 2011. The FSER provides the basis for the design certification now being considered for addition to NRC's regulations at 10 CFR Part 52. The FSER is available through <http://www.regulations.gov> by searching under Docket ID **NRC-2010-0135**.

The NRC is currently reviewing a Combined License application, referencing the ESBWR design certification application, from the Detroit Edison Company for Fermi Unit 3. The NRC has certified four other standard reactor designs: the Advanced Boiling Water Reactor (ABWR), System 80+, AP600, and AP1000, and the agency has published proposed rules to amend the ABWR and the AP1000.

The public can view the NRC's Federal Register notice at <http://edocket.access.gpo.gov/2011/pdf/2011-6839.pdf>. Comments may be submitted for 75 days following publication. Comments may be submitted via <http://www.regulations.gov> under Docket ID **NRC-2010-0135**; by e-mail to [Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov); by mail to Secretary, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, ATTN: Rulemakings and Adjudications Staff; or by fax to Secretary, U.S. Nuclear Regulatory Commission, at 301-492-3466.

More information about the ESBWR design review can be found on the NRC's website at <http://www.nrc.gov/reactors/new-reactors/design-cert/esbwr.html>.

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