

"Designated Original"



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U.S. Nuclear Regulatory Commission
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Subject: Projections for Licensing Actions Associated with New Reactor Applications

GE Hitachi Nuclear Energy ("GEH"), is providing the information herein in response to NRC Regulatory Issue Summary 2009-03, "Process for Scheduling Acceptance Reviews of New Reactor Licensing Applications After April 2009 and Process for Determining Budget Needs for Fiscal Year 2011" (Feb. 12, 2009), and NRC Letter "Projecting Licensing Workloads for Advanced Reactors in Fiscal Year 2011 and Beyond" (Feb. 23, 2009). We appreciate the opportunity to provide the NRC with our plans for submitting additional licensing actions associated with new reactor designs.

In that regard, currently, GEH has before the NRC a design certification application for the Generation III+ ESBWR passive reactor design. GEH notified the NRC in a letter submitted to the NRC December 5, 2008 (MFN 08-947), of GEH's intent to submit a renewal application for the Generation III ABWR design certification in mid-2010. In addition, GEH has been exploring opportunities for the Generation IV PRISM reactor and has preliminary plans to submit an application in mid-2011 for NRC review of the design. These three reactor designs and the associated licensing actions are discussed further below.

ESBWR Design Certification Application: GEH submitted the ESBWR design certification application on August 24, 2005, and the NRC accepted it for review on December 1, 2005. The regulatory review has been underway since that time. The NRC issued a review schedule in a letter dated February 18, 2009, which addresses the remaining actions. Included in the

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schedule was a listing of the GEH Licensing Topical Reports ("LTR") for which the NRC will issue individual Safety Evaluations. GEH is not at this time aware of any additional LTR that will be submitted as part of the NRC review of the ESBWR design certification application. GEH is aware that certain LTRs currently under review may be revised before the design certification review is complete, but the NRC is aware of the status of any such revisions through the tracking of Requests for Additional Information ("RAI") and the responses. Also, as reflected in the NRC schedule letter of February 18, 2009, GEH plans to submit a revision to the ESBWR Design Control Document in 2009 that will incorporate the RAI responses and close open items so that the NRC may proceed to finalize its Safety Evaluation and eventually move to conduct rulemaking for the application, if approved.

In addition, in the revised ESBWR Design Control Document, GEH plans to include information that will address the results of an aircraft impact assessment that is expected to be required by a final rulemaking by mid-2009.

Advanced Boiling Water Reactor ("ABWR") Renewal and Support of Potential Near-Term Combined License Applications: As noted above, GEH submitted a letter on December 5, 2008, informing the NRC of its intent to apply for a renewal of the ABWR design certification rule, 10 CFR Part 52, Appendix A. GEH still intends to seek renewal.

As GEH explained in the December 5, 2008, letter, the ABWR design certification rule, 10 CFR Part 52, Appendix A, issued May 12, 1997, was effective for a period of 15 years from June 11, 1997. Because the rule - unless renewed - would expire June 11, 2012, GEH intends to seek renewal. GE Nuclear Energy (GEH's predecessor) was the original applicant for the U.S. ABWR design certification and GEH maintains the detailed design, supporting engineering data and analyses, proprietary information, and procurement, construction and installation specifications associated with the design certified to U.S. regulations, codes, and standards (see Section I of the ABWR design certification rule). It is GEH's intent to file an application for renewal of the ABWR design certification in accordance with the provisions in 10 CFR 52.57(a) between the period of June 11, 2009, and June 11, 2011. In order that the NRC may schedule its resources for review of a renewal application, GEH currently proposes to file its detailed renewal application in mid-2010, with the NRC review commencing between June 2010 and October 1, 2010, as NRC resources are available.

As part of the renewal of the ABWR design certification, GEH plans to submit a revised ABWR Design Control Document that will include certain changes related to departures that might be included in any near-term Combined License Application ("COLA") referencing the ABWR design certification with GEH supplying the design. As discussed in the GEH letter of intent and because this will be a new regulatory process, GEH will coordinate with the NRC in pre-application meetings to ensure that the scope of the renewal application is consistent with NRC regulations, guidance, and expectations.

In addition, LTRs that support renewal of the ABWR or that would support a potential near-term COLA are listed in Enclosure 1. NRC review of these LTRs was suspended in February 2008 as discussed in NRC letter to GEH dated January 31, 2008. GEH plans to restart the

review of these LTRs by mid-2009 following specific notification to the NRC for each LTR. In addition, GEH plans to submit a LTR for a power uprate of the ABWR by the end of 2009.

Finally, as related to the ABWR, GEH plans to conduct an aircraft impact assessment for the ABWR design and plans to include the results in the renewal application. However, GEH may discuss with the NRC providing the results of this assessment in a limited amendment request for the ABWR design certification in late 2009 (FY 2010), but GEH will discuss with the NRC any plans regarding an expedited amendment request well in advance of submitting such an amendment request.

Power Reactor Inherently Safe Module or Power Reactor Innovative Small Module ("PRISM")

Reactor: The NRC is familiar with the PRISM sodium-cooled fast reactor design, which was a conceptual design developed in the 1980s and 1990s in conjunction with the U.S. Department of Energy ("DOE") as part of the Advanced Liquid Metal Reactor Program. The NRC prepared a pre-application safety evaluation report to document its review of DOE's submittal of the conceptual design for the PRISM (see NUREG-1368, "Preapplication Safety Evaluation Report for the Power Reactor Innovative Small Module (PRISM) Liquid-Metal Reactor" (Feb. 1994)). GEH continued to refine the PRISM design after suspension of the DOE program and, more recently, as part of the DOE Global Nuclear Energy Partnership. GEH is aware of industry and DOE interest in the PRISM reactor as part of efforts in closing the nuclear fuel cycle, along with deployment of Advanced Fuel Facilities.

GEH is considering submittal of a PRISM reactor design review application as early as mid-2011. GEH would consider the first PRISM reactor to be the prototype reactor, which would prove the concept and serve to license the advanced fuels designs being considered for transuranic destruction. However, it is expected that this first reactor would also be the first module of a plant that would then employ additional PRISM modules which could be manufactured and available for deployment once the NRC issues a license to the operating company desiring to purchase one or more of the modules. Thus, GEH is considering requesting a manufacturing license pursuant to the provisions in 10 CFR Part 52, Subpart F. GEH would discuss with the NRC more final plans and schedules at a later date, but considers mid-2011 as the best estimate, earliest submittal date. GEH recognizes that it will need to discuss with the NRC potential customers for the PRISM reactor be a priority. In advance of submitting an application, GEH would coordinate with the NRC in pre-application meetings to discuss the licensing process, application format and content, schedule, and other topics to ensure that the application meets NRC regulations, guidance, and expectations.

We hope that this information assists the NRC in planning its resources over the next few years. Please contact me if you have any questions.

Sincerely,



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Enclosure

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Enclosure 1

List of ABWR Licensing Topical Reports

Title	Identification Number¹
GEH ABWR with Alternate RCIC Turbine-Pump Design	NEDE-33299P
GEH ABWR Procedures Development Plan	NEDE-33297P
GEH ABWR Startup Administrative Manual	NEDE-33305P
GEH ABWR APRM Oscillation Monitoring Logic (OPRM)	NEDE-33328P
GEH ABWR Vibration Assessment Program in compliance with The US NRC Regulatory Guide 1.20	NEDE-33316P
GEH ABWR Reactor Pressure Vessel Material Surveillance Program	NEDE-33315P
GEH ABWR Common Equipment and Structures (eg, Fire Pumps)	NEDE-33325P
GEH ABWR Startup Test Specifications	NEDE-33310P
GEH ABWR Life Cycle Management	NEDE-33321P
GEH ABWR Hydrogen Recombiner Requirements Elimination	NEDE-33330P
GEH ABWR Plant Medium Voltage Electrical System Design	NEDE-33335P
GEH ABWR Containment Analysis	NEDE-33372P
GEH ABWR Stability Evaluation	NEDE-33336P

¹ It is expected that each of these LTRs will be issued in both a proprietary version and a non-proprietary version when revised after reinitiating NRC review.