

CNSC/NRC Cooperation in Pre-application Review Activities Pertinent to GE Hitachi's Boiling Water Reactor X-300 (BWRX-300) – Safety Strategy

Objective/Scope

To share regulatory experiences and insights for the BWRX-300 SMR design. Specifically, the scope of work is to perform a collaborative review of a whitepaper on BWRX300 Safety Strategy. An exchange of information between the CNSC and USNRC will cover regulatory approaches and the application of the IAEA defense-in-depth methodology.

The sharing of experiences and insights would not affect the schedule for either USNRC or CNSC licensing reviews.

Context/Background

This project involves the USNRC and CNSC discussion about the processes and approaches that will be used in reviewing a whitepaper on BWRX300 Safety Strategy using the IAEA defense-in-depth methodology as discussed and decided by both agencies. GEH will submit information to CNSC and USNRC at similar timeframes and have agreed to facilitate information flow to support cooperative activities.

Relevance to Memorandum of Cooperation

This project supports MOC 2.a. [1] “Development of shared advanced reactor and SMR technical review approaches that facilitate resolution of common technical questions to facilitate regulatory reviews that address each Participant’s national regulations.”

This project is also supportive of MOC 2.b. “Collaboration on pre- application activities to ensure mutual preparedness to efficiently review advanced reactor and SMR designs.”

Expected Outputs

To the extent practicable, the working group will explore and identify common areas of regulatory alignment or differences and determine suitable products for communicating results of collaborative activities to the vendor and the public. A joint document and/or a joint assessment of the Safety Strategy adopted for BWRX-300 will be prepared which is expected to document:

- alignment on key technical areas that will summarize the findings of the CNSC and USNRC collaborative work and states items of mutual understanding/agreement that could be used in each regulator’s review process
- areas of regulatory alignment
- key differences in methodologies
- acceptability of the GEH approach

- lessons learned from this cooperative initiative and areas for improvement to inform future cooperative work

Work Process

The USNRC and CNSC will form a working group to accomplish this project. Both CNSC and USNRC staff will collaborate on the safety strategy whitepaper on the BWRX-300 Safety Strategy. The review will be performed by technical reviewers from both agencies. GEH will share key information provided to one regulator with the other regulator. Additionally, GEH will need to address or highlight unique aspects of regulatory requirements between the two countries.

Milestones

Working group formation – August 2022

Pre-submittal Meeting: June 29, 2022

Revision 0 Submittal: TBD

Joint report – The target date will be established by NRC and CNSC two weeks after the documented is submitted.

Points of Contact

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