
CHARTER – Collaboration on GE Hitachi’s BWRX-300 Design

*A Collaborative Information Sharing Effort by the U.S. Nuclear
Regulatory Commission and the Canadian Nuclear Safety Commission*

September 2022



Approved by

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Daniel H. Dorman
Executive Director for Operations
United States Nuclear Regulatory Commission



Approved by

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Ramzi Jammal
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CHARTER: CNSC and USNRC Collaboration on the review of the BWRX-300

The MOC and this Charter do not in any way alter the national regulatory requirements of either country or alter licensing decision-making. This Charter does not constitute an international agreement and does not create rights and obligations governed by international law.

Background

In April 2022, the Tennessee Valley Authority (TVA) and Ontario Power Generation (OPG) announced plans to jointly work to help develop and deploy small modular reactors (SMRs) in both Canada and the United States. They have signed a Memorandum of Understanding (MOU) that allows the companies to coordinate efforts on the design, licensing, construction, and operation of SMRs. Both TVA and OPG have announced plans to apply for licences to construct and operate the GE Hitachi Nuclear Energy Americas, LLC (GEH) BWRX-300 SMR design in Canada and the United States.

Differing regulations, regulatory guidance, and review practices for licensing in Canada and the United States may impact the licensing and construction timelines for the two proposed GEH BWRX-300 SMR projects in North America. The TVA and OPG MOU enables industry to share experience regarding multi-national applications to maximize the standardization of the BWRX-300 SMR design between both countries, while enhancing safety, efficiency, and timeliness of deployment.

Overall Objectives

CNSC and USNRC intend to enhance their cooperative work under their Memorandum of Cooperation (MOC) on Advanced Reactor and Small Modular Reactor Technologies by working on regulatory and safety issues in the licensing review of the BWRX-300 SMR design. Objectives for CNSC and USNRC include collaborating to reduce duplication of licensing review efforts, jointly utilizing third party verification, identifying areas for collaborative verification, sharing expertise and leveraging analysis done by each organization. These activities will be accomplished in a manner that supports each regulator's adherence to national laws and regulations and is consistent with the MOC. The ultimate goal will be joint safety reviews and/or a risk-informed acceptance of the other regulator's technical conclusions.

Activities

This charter establishes the collaborative relationship and the overall work to be done by CNSC and USNRC on the BWRX-300 SMR design project. The charter is subject to update and revision as the project progresses.

CNSC and USNRC are currently engaged in pre-application activities with OPG and TVA, respectively, to prepare for pending license applications in Canada and the United States. Additionally, GEH is engaged in pre-application activities with both CNSC and USNRC with respect to GEH-led design activities. The activities under this charter are intended to further enhance these pre-application activities and carry forward into future reviews of applications.

OPG, TVA and GEH will identify licensing topics for consideration by the CNSC and USNRC for cooperative reviews. Further, OPG, TVA, and GEH will identify challenges with applying existing guidance or frameworks, provide technical information to facilitate timely and efficient safety reviews, and ensure efficient communication with both regulators.

CNSC and USNRC will develop work plans to identify specific deliverables under this charter, conduct coordinated and efficient technical reviews within established schedules, and strive to align on common regulatory technical positions that enhance standardization of the GEH BWRX-300 SMR design, to the extent practicable.

This work will be monitored by the Advanced Reactor Technologies and Small Modular Reactors Sub Committee (ART-SMR Sub Committee) and as set out under the Terms of Reference for the MOC between the CNSC and the USNRC. Working groups of the CNSC and USNRC staff will be established as needed.

Routine meetings between CNSC, USNRC, OPG, TVA and GEH will be scheduled for updates and discussion. These meetings will be arranged and led by the ART-SMR Sub Committee or the working groups.