



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada

International Collaboration: Perspectives from the Canadian Nuclear Safety Commission

**U.S. Nuclear Regulatory Commission Meeting on Advanced Reactor Landscape:
Current Status and Moving Forward**

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MANDATE

To protect the health, safety and security of all people in Canada and its environment through independent, transparent and efficient regulatory oversight of Canada's nuclear sector



This includes:

Implementing Canada's international commitments on the peaceful use of nuclear energy in collaboration with domestic and international partners

Disseminating objective scientific, technical and regulatory information

Strengthening confidence through open communication and engagement to build and foster trusted relationships with Indigenous Nations and other communities in Canada and globally

THE CNSC: AN EFFECTIVE & EFFICIENT REGULATOR



EFFECTIVE

Robust, performance-based
regulatory framework

Enables innovation through a technology
neutral regulatory framework and
vendor design reviews

Promotes transparent, flexible, and risk-
informed processes

EFFICIENT

Conducts effective and efficient reviews of
licence applications

Prioritizes readiness activities for
technologies with high probability of
deployment in Canada

Prioritizes high-risk activities, and reduces
effort on low-risk activities

**INTERNATIONAL COLLABORATION SUPPORTS THE
CNSC'S EFFECTIVE AND EFFICIENT APPROACH TO REGULATION**

INTERNATIONAL COLLABORATION

The Canadian Nuclear Safety Commission (CNSC) engages in two types of international collaboration:



REGULATOR COLLABORATION

EXAMPLE: CNSC and PAA (Panstwowa Agencja Atomistyki) Memorandum of Cooperation on Advanced and Small Modular Reactor Technologies

INTERNATIONAL PARTNERSHIPS

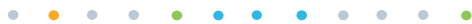
EXAMPLE: Nuclear Energy Agency (NEA) committees and their subsidiary bodies, International Atomic Energy Agency (IAEA) Forums, Committees, Advisory Groups

By working with other regulators and international organizations, we strengthen regulatory effectiveness, improve preparedness for new technologies, and continue to uphold high standards of nuclear safety, security, and environmental protection





TRILATERAL MEMORANDUM OF COOPERATION (MOC)



- The CNSC, US NRC, and UK ONR trilateral MOC facilitates collaboration between the three regulators on small modular and advanced reactors
- It serves as a model for international life-cycle collaboration that other countries can adopt
- The agreement encompasses various types of cooperation, including:
 - joint reviews
 - comparison of domestic approaches
 - pre-licensing activities
 - research, training and the development of regulatory positions for unique technical issues

The Trilateral Memorandum of Cooperation strengthens regulatory oversight in each country throughout the life-cycle of a facility

INTERNATIONAL COLLABORATION IN ACTION: THE BWRX-300



In 2022, the CNSC and NRC formed a working group to assess GE Vernova Hitachi Nuclear Energy's BWRX-300 design against Canadian and U.S. regulatory requirements.

JOINT REPORTS

- Containment Evaluation Method
- Steel Plate Composite Containment Vessel and Reactor Building Design
- Safety Strategy
- Advanced Construction Techniques
- Fuel Verification and Validation

Collaboration on the development of the joint reports facilitated a timely and efficient review of Ontario Power Generation's Licence to Construct application

BENEFITS OF COLLABORATION ON BWRX-300 REVIEW

The CNSC, US NRC and UK ONR collaboration enabled the CNSC to increase the efficiency and effectiveness of the licence application review process. Other benefits included:

- Strengthening transparency across the pre-licensing and licensing lifecycle
- Enhanced training opportunities
- Improved knowledge dissemination between regulators which supports a path towards standard designs and harmonization
- Identification and development of administrative tools to facilitate future collaborative efforts

The CNSC and US NRC collaboration is ongoing, with additional joint review topics being considered as they emerge.

Collectively, these benefits contributed to rigorous, efficient regulatory reviews and the effective delivery of our mandate





LESSONS LEARNED FROM INTERNATIONAL COLLABORATION

The CNSC has identified lessons learned that support effective collaboration, including:

- Establishing a focused group of regulators with common interests and objectives
- Facilitating participation by industry and vendors in working groups, creating opportunities to address regulatory and technical issues collaboratively
- Developing administrative tools that support efficiency, such as protocols, templates, and processes



CONCLUSION

The benefits of international regulatory collaboration are broad reaching and significant

SAFETY AND SECURITY

International collaboration enhances safety and security of people and the environment

EFFICIENCY

International collaboration reduces duplication by facilitating the leveraging of assessments performed by other regulators

ENHANCES CAPABILITIES

International collaboration facilitates the sharing of lessons learned and joint-training programs

REGULATORY PREDICTABILITY

Mitigates the risks of licensing novel designs while also respecting jurisdictional differences

Thank you

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