



Oral presentation

Written submission from Bruce Power

In the Matter of the

Ontario Power Generation Inc.

Application for a licence to construct one BWRX-300 reactor at the Darlington New Nuclear Project Site (DNNP)

Commission Public Hearing Part-2

January 8, 2024

Exposé oral

Mémoire de Bruce Power

À l'égard d'

Ontario Power Generation Inc.

Demande visant à construire 1 réacteur BWRX-300 sur le site du projet de nouvelle centrale nucléaire de Darlington (PNCND)

Audience publique de la Commission Partie-2

8 janvier 2024

October 31, 2024

Senior Tribunal Officer, Commission Registry
Canadian Nuclear Safety Commission
280 Slater St
PO Box 1046 Stn. B
Ottawa ON K1P 5S9

RE: Ontario Power Generation – Darlington New Nuclear Project

Dear Members of the Commission,

Bruce Power is an electricity company based in Bruce County, Ontario. Our 4,200 employees are the foundation of our accomplishments and are proud of the role they play in safely delivering clean, reliable, nuclear power to families and businesses across the province and cancer-fighting medical isotopes around the world. Bruce Power has worked hard to build strong roots in Ontario and is committed to protecting the environment and supporting the communities in which we live.

Bruce Power requests the opportunity to orally present at the upcoming Part 2 Hearing for the Darlington New Nuclear Project (DNNP). Ontario Power Generation (OPG) shares similar values to Bruce Power, with a commitment to Safety First, passion for excellence and has built a solid foundation on protecting the environment, the public and communities in its surroundings.

With shared values and our collective commitments to provide the province with stable, clean electricity, Bruce Power is supportive of the Darlington New Nuclear Project (DNNP) and its plans to construct a small modular reactor (SMR), specifically the GE Hitachi's BWRX-300, which will play a role in nuclear's commitment to further decarbonize our electricity grid and provide additional clean electricity to support Ontario's long-term electrification plans.

Safety was a critical factor in OPG's careful selection of the BWRX-300, and OPG's application for a construction licence demonstrates that they will meet regulatory requirements. This reactor design leverages lessons learned from the previous nine generations of boiling water reactors deployed worldwide. Its simplified design incorporates enhanced safety features, optimizing safety, operability, and maintainability.

The BWRX-300 is the tenth generation of GE Hitachi's boiling water reactor (BWR) design, characterized by technology that is safe, easy to operate, and efficient to construct and maintain.

The BWRX-300 operates on low-enriched uranium fuel, which will be supplied and processed by partners in Canada, France, and the United States. This reactor technology has demonstrated its safety in numerous operational nuclear facilities globally, with the fuel type having an extensive operational history.

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October 31, 2024

With an electrical output of approximately 300 megawatts, one BWRX-300 can power around 300,000 homes, significantly contributing to Ontario's low-carbon energy supply.

As outlined in Darlington's application for the requested License to Construct (LTC), we trust OPG will carry out the following activities:

- Complete any remaining tasks under the existing site preparation license.
- Construct one powerblock, including structures and components associated with the reactor, control, turbine, waste buildings, and auxiliaries.
- Build support structures for up to four BWRX-300 units.
- Conduct inspection and testing of equipment and the commissioning of systems before fuel loading.

OPG's successful track record, including the Darlington Refurbishment Project, highlights OPG's readiness to construct a BWRX-300 unit at the Darlington Nuclear site.

OPG continues to demonstrate it is fully prepared to carry out the activities outlined in their application while ensuring environmental protection, the health and safety of their employees and the public, and the security of the site during construction.

Moreover, we believe the DNNP site is suitable for the construction of this new reactor. OPG has demonstrated an established and managed system to effectively conduct the proposed licensed activities, with safety in mind and has continuous monitoring and a follow-up program in place that is robust and adaptable to the BWRX-300 reactor technology.

OPG, along with the entire nuclear industry, will ensure that nuclear safety is upheld to protect the public, personnel and the environment.

We trust ongoing engagement and communications with Indigenous groups and the community will continue through the duration of the project.

Bruce Power thanks the Commission for your time attention to this important development for OPG and the nuclear industry in advancing Ontario's clean energy future.

Sincerely,

**Michael
Rinker**  Digitally signed by
Michael Rinker
Date: 2024.10.31
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Michael Rinker
Vice President,
Regulatory, Environment & Sustainability