



Oral presentation

Exposé oral

**Written submission from
the Society of United Professionals**

**Mémoire du
Society of United Professionals**

In the Matter of the

À l'égard d'

Ontario Power Generation Inc.

Ontario Power Generation Inc.

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

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

**Commission Public Hearing
Part-2**

**Audience publique de la Commission
Partie-2**

January 8, 2024

8 janvier 2024



November 4, 2024

Re: Darlington New Nuclear Project (DNNP) Licence to Construct 2024-H-03

The Society of United Professionals represents over 10,000 engineers, scientists, supervisors, and other professionals in Canada's energy and legal sectors. For 80 years, our organization has represented professionals in Ontario's electricity sector, including workers in Ontario's nuclear generating stations in Pickering, Darlington, and Bruce County.

Our members work in every aspect of the electricity industry. They are involved in generation, transmission and distribution of electricity, management of the electricity system, regulation and enforcement of standards, and management of the electricity market. They are employed as first-line managers and supervisors, professional engineers, scientists, information systems professionals, economists, auditors and accountants, as well as many other professional, administrative, and associated occupations.

The Society's members are knowledge workers who take great pride in exercising their civic, social, and professional responsibilities. As a union, we stand behind our members' professionalism, integrity, and commitment to excellence in all areas, particularly workplace safety, public health, and environmental sustainability.

Advocating for safe and healthy operation of our nuclear workplaces is one of the Society's highest priorities as a union. Our members work inside of, and in close proximity to, nuclear facilities, and they are among the first in harm's way if the highest standards of safe operation, and occupational health and safety are not adhered to. They and their families are residents of Clarington and Durham and Port Elgin and they are very conscious of the importance of ensuring a safe and healthy environment in the areas where they live.

The Society strongly supports the construction of new nuclear generation at the Darlington site.

Catastrophic climate change is the greatest threat facing humanity, and we have already begun to feel its effects. If we are to mitigate the impact of climate change on future generations, we need to end our reliance on fossil fuels. This requires electrifying the major sectors of our economy, and powering electrification with emissions-free electricity generation.



The IESO has forecast that to achieve net-zero emissions by 2050, we need to triple the province's existing nuclear capacity. In addition to new, large scale nuclear reactors, developing new technology like the BWRX-300 at Darlington are important first steps in meeting our clean electricity needs.

The Darlington site is an ideal location for new nuclear generation. The region contains a supportive local community that has seen firsthand the economic benefits nuclear generation provides, and the expertise of thousands of skilled workers with experience working in Ontario's nuclear generating stations. The site also provides an opportunity to leverage existing transmission infrastructure and corridors.

Additionally, having reviewed OPG's licence application, and the CNSC's staff report, the Society reaffirms its support for OPG's application for a licence to construct a BWRX-300 SMR at the Darlington site, with a particular focus on the following areas of interest:

Environmental Protection

In August 2011, the joint review panel conducting the environmental assessment on the Darlington site for the proposed Darlington New Nuclear Project (DNNP) issued its environmental assessment report, which concluded that *“the Project is not likely to cause significant adverse environmental effects, provided the mitigation measures proposed and commitments made by OPG during the review, and the Panel's recommendations are implemented.”*¹

In January 2024, the CNSC conducted a hearing to determine whether the 2011 environmental assessment was still valid for the BWRX-300 technology at the DNNP site. The Society engaged a third-party expert consultant – Dr. Kirk Atkinson, PhD, Associate Professor in the Faculty of Energy Systems and Nuclear Science and Director of the Centre for Small Modular Reactors at Ontario Tech University – to provide an opinion on the applicability of the existing environmental assessment to the BWRX-300 reactor.

The Society, based on a review of Dr. Atkinson's assessment, submitted that the 2011 environmental assessment was applicable to the BWRX-300 reactor technology chosen for the Darlington New Nuclear Project, and as such no new environmental assessment need be conducted.

¹ Darlington New Nuclear Power Plant Project Joint Review Panel. August, 2011. <https://iaac-aeic.gc.ca/archives/evaluations/29525/documents/55381/55381E.pdf>



In its April 2024 decision, the CNSC concluded that *“the BWRX-300 reactor technology was not fundamentally different than the technologies considered in the EA, and that a new EA was not required. The EA remains valid.”*²

Nuclear Safety

As the union representing professionals in Ontario’s nuclear generating stations, the Society considers the issue of nuclear safety to be of paramount importance.

While the BWRX-300 SMR will be a first-of-its-kind technology, OPG notes that it is the 10th generation of GE-Hitachi’s boiling water reactor design. The CNSC staff report notes that while “aspects of this design are evolutionary from previous generations, there are novel features of this design.”³

The CNSC’s staff report notes the comprehensive assessment conducted on the safety case for the BWRX-300 reactor described in the Preliminary Safety Analysis Report, as well as supporting documents of the PSAR, and the regulator has concluded that *“OPG has provided sufficient information to support a recommendation that the Commission issue a licence to construct.”*⁴ While there are bound to be challenges which arise from the construction of first-of-its-kind technology, the Society notes that the proposed licence contains a series of “facility-specific conditions which require OPG to provide additional detailed information, prior to the removal of regulatory hold points.”

With the inclusion of these regulatory hold points, the Society trusts the regulatory process to ensure all safety standards are adhered to at every step of the licensing process.

Indigenous Consultation

The DNNP site is situated within the lands and waters of the Michi Saagiig Anishinaabeg, the Gunshot Treaty and the Williams Treaties First Nations, including Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, the Mississaugas of Scugog Island First Nation, Chippewas of Beausoleil First Nation, Chippewas of Georgina Island First Nation and the Chippewas of Rama First Nation.

The Society believes that continued work towards reconciliation is incumbent on all of us, and meaningful engagement with the local Indigenous communities whose land and waters the DNNP’s site belong to must be a necessary condition in projects like the DNNP.

² CNSC Staff Report, CMD 24-H3. June 28, 2024. <https://api.cnsccsn.gc.ca/dms/digital-medias/CMD24-H3.pdf/object>

³ ibid

⁴ ibid



The Society notes that the CNSC has added a site-specific condition to the proposed licence, which would “require OPG to conduct ongoing Indigenous engagement specific to the DNNP throughout the construction phase...[and] sets out the expectation that OPG continues to engage and collaborate with the interested Williams Treaties First Nations on the ongoing studies and assessments OPG has committed to.”⁵

Through the inclusion of Indigenous engagement requirements as a condition of the licence to construct, the regulator is provided with a mechanism of regulatory oversight to ensure Indigenous Nations are engaged in a meaningful way throughout the construction process, and to protect the rights and interests of Indigenous Nations.

Conclusion

The Society is grateful for the opportunity to intervene on OPG’s proposed licence to construct a BWXR-300 SMR at the DNNP site. The Society strongly supports the licence application, and looks forward to working with all parties involved in the years to come.

Sincerely,

Michelle Johnston
President
The Society of United Professionals

⁵ CNSC Staff Report, CMD 24-H3. June 28, 2024. <https://api.cnscccsn.gc.ca/dms/digital-medias/CMD24-H3.pdf/object>