



**Written submission from  
Calian**

**Mémoire de Calian**

In the Matter of the

À l'égard d'

**Ontario Power Generation Inc.**

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

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 2025**

**Janvier 2025**



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October 31, 2024

Canadian Nuclear Safety Commission  
Commission Secretariat  
280 Slater Street, P.O. Box 1046  
Ottawa, Ontario, K1P 5S9

**Re: Ontario Power Generation's Licence to Construct (LTC) Application for the Darlington New Nuclear Project**

Dear Commission Secretariat,

I am writing on behalf of Calian in support of Ontario Power Generation's (OPG) application to construct the first of four BWRX-300 units for its Darlington New Nuclear Project (DNNP).

For over 25 years, the Calian Nuclear team has helped to ensure the safety and security of Canada's nuclear infrastructure through participation in hundreds of projects serving the nuclear industry. Our team offers a range of services related to environmental protection, impact assessments, licensing, safety analysis, engineering, emergency preparedness, waste management, and decommissioning.

Calian was contracted by OPG to complete a comprehensive Environmental Impact Statement (EIS) Review for the DNNP Project. This review confirmed that the deployment of up to four BWRX-300 reactors at the DNNP remains bounded by the original Environmental Assessment for DNNP. The completion of this work included the development of a public-facing report, as well as a detailed technical report for regulatory review. As such, we have gained extensive knowledge of the BWRX-300 technology and are familiar with OPG's capabilities to carry out this project successfully.

Through our involvement in international projects, our team has gained knowledge of the technology that will be used in the BWRX-300. Our specialists have visited the sites of BWR reactors in operation, including several specialists with experience operating BWR reactors. They are familiar with the operating experience of the fleet of BWR reactors and can provide support to OPG during the BWRX's construction, operation and decommissioning.

Calian has confidence in the success of the DNNP and is available to support DNNP throughout its lifespan. DNNP represents a major step forward in the nuclear sector in Canada and will support new industry growth. It will also demonstrate to other utilities, investors, and the world that Canada is a nuclear leader and is investing in decarbonization.

We would like to offer that DNNP will significantly improve the future of nuclear deployment for projects across Canada. Calian supports OPG's DNNP application for a License to Construct because it will demonstrate that the nuclear industry is ready to deploy small modular reactors (SMRs), and that SMRs can play a major role in the Canadian energy landscape as they are safe, efficient and effective.

There are many construction and operational benefits derived from SMRs that will benefit Canadian citizens. SMRs are smaller and require less material than larger reactors, making their expected construction timeline shorter. OPG intends to build four reactors on the Darlington site for a total capacity of 1,200 MWe. Each BWRX-300 is independent, with limited shared facilities between the reactors. The first BWRX-300 will start operation and production of electricity while the other reactors are being built. A successful sequential deployment of the BWRX-300 reactors offers the opportunity to improve the economics of nuclear reactor construction projects and get energy into the grid faster. This would allow OPG to support several SMR projects in Ontario and the rest of Canada, enabling the decarbonization of the economy and electrification of the transport industry.

In summary, the DNNP is positioning the Canadian nuclear industry to lead the way for the commercial development and deployment of SMRs. The advancement of SMR projects such as the DNNP have contributed to significant overall economic growth for the sector, as well as at Calian, creating more jobs for Canadians. Nuclear is an important piece of achieving a net-zero future, and SMR projects like the DNNP are a big step in the right direction. Calian urges the CNSC to have confidence in OPG and the BWRX-300. Calian fully supports this important project.

Sincerely,

A handwritten signature in black ink that reads "Hani Al Anid". The signature is written in a cursive, flowing style.

Dr. Hani Al Anid  
Vice President, Nuclear  
Calian Ltd.