



**Written submission from  
E.S. Fox Limited**

**Mémoire de  
E.S. Fox Limited**

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 (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**



**October 31, 2024**

Canadian Nuclear Safety Commission  
280 Slater Street, P.O. Box 1046, Station B Ottawa  
ON K1P 5S9

Attn: Senior Tribunal Officer, Commission Registry

**Subject: Darlington New Nuclear Project - Licence to Construct**

Dear Tribunal Officer,

E.S. Fox Limited (ESFL) supports Ontario Power Generation's (OPG) application for a Licence to Construct (LTC) a Small Modular Reactor (SMR) at the OPG Darlington site. Our endorsement is based on OPG's unwavering commitment to safety, the environment and the reliable operation of its reactors. The GE Hitachi BWRX-300 reactor meets or exceeds regulatory requirements from a safety perspective. In addition to the safety aspect, the BWRX-300 reactor incorporates the lessons learned from the previous nine generations of BWR's that are deployed and operational around the world, ensuring that it's an industry leader from both the safety and technology perspectives.

We are confident in our support for OPG's application based on the technology selection and OPG's proven record of operating nuclear reactors safely and efficiently for over 50 years, never compromising any of their core values specific to safety and quality. This is reinforced as they move forward with the installation of the 10<sup>th</sup> generation BWRX-300 boiling water reactor (BWR). The simplified design incorporates passive safety features and optimizes safety, operability and maintainability.

The DNNP allows for additional power generation capacity at the Darlington Nuclear Generation Station (DNNGS). This is critical as the global nuclear industry advances its nuclear power generation technologies, as Ontario's population grows and as Canada moves towards becoming a Net-Zero country by 2050. The BWRX-300 (10<sup>th</sup> Generation) supports decarbonization using technology that is safe, easy to operate, and efficient to construct and maintain.

## **E.S. Fox History with OPG Nuclear Operations**

ESFL has provided Engineering, Procurement and Construction (EPC) project services, along with manufacturing and fabrication support to OPG for decades. The rich history between OPG and ESFL has provided many opportunities to learn over the millions of safe work hours provided. Today, as OPG prepares for the build of Canada's first Small Modular Reactor (SMR) as part of the DNNP, we are proud to stand by OPG and provide our support.

It is through witnessing OPG's consistency in delivering safe and reliable nuclear power to Ontario since 1971, that we are confident in endorsing their application for a Licence to Construct for the Darlington New Nuclear Plant.

## **Safety**

OPG and E.S. Fox share a commitment to a "Safety First" work environment. Our corporate management goal and the goal of our employees is to ensure that everyone returns home safely at the end of each workday. Following OPG's lead, ESFL continues to refine our processes and practices to ensure a strong nuclear safety culture on all sites.

OPG is currently executing the refurbishment of DNGS's four reactors, one of the largest infrastructure projects in Canada. The refurbishment of DNGS Unit 2 was completed in June 2020, DGNS Unit 3 was completed in July 2023, Unit 1 is just completing, all three units were completed successfully with strong safety records.

Safety was a critical consideration in OPG's technology selection of the BWXR-300 which meets or exceeds regulatory requirements. The technology uses low enriched uranium fuel, which will be supplied and processed by partners in Canada, France and the United States. This reactor technology safely operates in many other operating nuclear facilities around the world, just as the fuel type similarly has an abundance of operating experience.

The safety of the public and staff is OPG's top priority. OPG's Nuclear Power Generating Sites have been maintained and safely operated since 1971. OPG has been recognized for a long history of the safe operations of its nuclear facilities as well as being leaders in protecting the public, its employees and the environment. The commitment to improve the plant through continual investment has resulted in year-over-year improvement in all key areas. The plant's performance, as well as OPG's commitment to safety, has allowed for open and respectful relationships within the communities they operate in.

## Community Support

- OPG supports the local community with programs such as; Bring Back the Salmon program with the Ontario Federation of Anglers and Hunters (OFAH), tree planting and Watershed Festival with CLOCA, Clarington Library Reading Club, and Soper Creek Wildlife Rescue and Durham Community Health Centre for Tuesdays on the Trail programming, and the Oshawa & Durham Region Métis Council's Heritage Celebration are just some of the many programs that OPG is involved with.

OPG is a member of the Canadian Council for Aboriginal Business (CCAB), championing the need for more Indigenous representation in businesses through employment and partnership opportunities. OPG's Indigenous Opportunities Network (ION) is a community-centered program that recruits Indigenous people for skilled trades, project management and administrative jobs within the energy sector. ESFL is a proud member of ION and continues to partner with OPG on its inclusion efforts.

Furthermore, OPG's Power for Change Program is designed to give back to Ontario and the communities where they operate by helping to build a cleaner, more sustainable future for generations to come with a specific focus on:

- Protecting the Planet
- Advancing Reconciliation
- Supporting Strong Communities
- Empowering the Next Generation

## Environmental Benefits

OPG has taken the lead to support both Canada and Ontario's Net-Zero emissions by 2050 commitment. Since Ontario became the first North American government to eliminate coal-fired electricity generation, OPG has been a key contributor towards Canada's Environmental Net-Zero emission goals. Nuclear power is a key contributor to Ontario's low-emitting electricity grid, and is considered by many experts, including the International Energy Agency, to be critical to achieving net-zero economy by 2050. OPG as a company is committed to operating as a Net-Zero company by 2040.

One BWXR-300 has an approximate electrical output of 300 megawatts, enough to power 300,000 homes and is an important contribution towards the growth of Ontario's low-carbon energy supply.

Since 2012, OPG has been maintaining the PRSL and progressing long-lead regulatory commitments. OPG was recognized for its commitment to protecting the wildlife that surrounds its sites.

- OPG Darlington received the 2019 Sustainability Award from the Greater Oshawa Chamber of Commerce.
- In 2020, OPG Darlington received a gold Wildlife Habitat Council Conservation Certification recognizing the specific efforts of DNGS's biodiversity program.
- OPG's Nuclear Operations hold a Gold Level Conservation Certification from the Wildlife Habitat Council (WHC). This achievement recognizes the specific efforts of their biodiversity programs, which aim to protect and nurture species and their habitats wherever the company operates.

## **Economic benefits**

The Darlington Nuclear Generating Station (DNGS) refurbishment project, commenced in 2016 and expected to be completed in 2026, will add 30 years to its nuclear operations. This project is estimated to generate a total of \$89.9 billion in economic benefits for Ontario, create and maintain 14,200 well-paying jobs – boosting personal income by an average of \$1.6 billion on an annual basis. This will also benefit Ontario residents with reliable, low-cost power. ESFL has the privilege to supply EPC project services to the DNGS refurbishment project as an Extended Services Master Services Agreement contracted supplier and partner.

The Darlington New Nuclear Project (DNNP) has already commenced with site preparation resulting in the creation of 100's of well-paying construction jobs benefitting both the local and Indigenous communities. The construction, operation and maintenance of the SMR plant (4 units) will have a significant impact on both the Ontario and Canadian economy. It is expected to create 2,000 sustainable jobs adding \$15.3 billion over 65 years to the Canadian GDP. The economic benefits include direct and indirect employment (including STEM and other high-tech disciplines and skilled trades), economic growth through partnerships with Canadian Nuclear Services suppliers and manufacturers, along with the purchase of services and products through the Canadian nuclear supply chain.

## **Summary**

OPG has demonstrated their ability to execute large scale construction projects safely, on time and within budget with the refurbishment of Darlington Units 1,2, and 3. Unit 4 is forecasted to follow suit when completed in 2026. With this success, OPG has demonstrated its readiness to undertake the construction of the DNNP. OPG has an unprecedented record of safely operating reactors across their nuclear fleet ensuring the same will apply with the operation of the BWXR-300 reactor.

Given the contributions OPG Darlington has made to Canada's economy, environment and local communities since 2012, the building of the DNNP will expand current operations, directly benefiting Canada. ESFL has been privileged to be a partner in OPG Darlington's growth over the years and we are looking forward to the promising future of the DNNP. We hold a great confidence in OPG's ability to maintain the upmost health and safety standards for its employees, partners and the communities they serve.

Sincerely,  
**E.S. Fox Limited**



Terry Warren, Director – Nuclear Services