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

**Mémoire de  
E.S. Fox Limited**

In the Matter of the

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**Ontario Power Generation Inc.**

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Applicability of the Darlington New Nuclear Project environmental assessment and plant parameter envelope to selected reactor technology

Applicabilité de l'évaluation environnementale et de l'enveloppe des paramètres de la centrale à la technologie de réacteur sélectionnée pour le projet de nouvelle centrale nucléaire de Darlington

**Commission Public Hearing**

**Audience publique de la Commission**

**January 2024**

**Janvier 2024**



**November 10, 2023**

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

ATT: Senior Tribunal Officer, Commission Registry

**Subject: Darlington New Nuclear Project**

Dear Tribunal Officer,

E.S. Fox Limited (ESFL) endorses Ontario Power Generation's (OPG) position that the previous Environmental Impact Statement (EIS) remains valid. Our endorsement is based on our knowledge of the Project, the Darlington site and review of the EIS and Plant Parameter Envelope (PPE) documentation with the Environmental Assessment being unchanged with the deployment of the GE Hitachi BWRX-300 reactor technology.

In OPG's original Environmental Assessment (EA) and "Application for a Licence to Prepare Site," OPG undertook extensive studies, assessments and consultations with Indigenous communities and stakeholders to complete the site evaluation studies and develop OPG's Environmental Impact Statement (EIS), for the DNNP EA. The site evaluation studies concluded that the DNNP site is suitable for a new nuclear plant. The EA was completed and concluded that the project is not likely to cause any significant adverse effects, provided the mitigation measures proposed and the commitments made by OPG are implemented. The JRP, consisting of representatives from the CNSC and Canadian Environmental Assessment Agency, accepted the DNNP EA.

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.

***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 the validity of the EIS and subsequent construction licence application for the Darlington New Nuclear Project.

### ***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 successfully completed in June 2020 with a strong safety record. Refurbishment of the second reactor (Unit 3) is currently underway.

The safety of the public and staff is OPG's top priority. OPG's Nuclear Power Generating Sites have been maintained and safely operated for 50 years. OPG has been recognized for a long history of 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. OPG's community partnerships include the Bowmanville Hospital Foundation, Marigold Hospice Care, Feed the Need Durham, Scientists in School, Toronto & Region Conservation Authority, and the Oshawa & Durham Region Métis Council's Heritage Celebration.

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-centred 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 Corporate Citizenship Program provides community investment support to over 90 Indigenous initiatives including: reading and science camps, traditional culture and language initiatives and youth amateur sports.

OPG has always demonstrated a strong commitment to the communities they serve. As ESFL has a long history with OPG, we see their efforts of:

- leveraging and coordinating Ontario's vast talents and competencies to make Canada a world leader in nuclear decommissioning;
- advancing innovative solutions for nuclear materials, with a continuing emphasis on minimizing the environmental footprint by reducing volumes, and diverting and recycling clean materials;
- stimulating economic growth in Ontario using cross collaboration between organizations that will lead to the launch of projects and research and development opportunities; and
- collaborating and forming partnerships with the nuclear industry, community, local businesses, academia and Indigenous communities, as well as interprovincial and international organizations to discover research, development and export opportunities for innovative nuclear energy solutions.

### ***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.

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 our biodiversity programs, which aim to protect and nurture species and their habitats wherever the company operates.
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### ***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.

As planning continues for the DNNP, 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.

A 2023 Conference Board of Canada Study reviewing the economic impact of building four SMRs at the Darlington nuclear site found that:

- Building and operating four SMRS at Darlington will contribute approximately \$15.3 billion to Canada's GDP - \$13.7 billion of that to Ontario's GDP.
- The project will create and sustain 2,000 jobs each year in Canada over the next 65 years.
- Municipal, provincial and federal governments will see \$4.9 billion in tax revenues



over 65 years.

- Ontario will reap 89 per cent of the economic benefit associated with the project.

### **Summary**

OPG has performed an extensive review of the EIS and PPE based on selected GE Hitachi BWRX-300 technology. It was determined the BWRX-300 design was within the established PPE except for 8 of 198 parameters. Through further analysis, it was determined the 8 values do not alter the conclusions of the EIS and the EIS remains valid for the selected reactor technology.

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**

A handwritten signature in black ink, appearing to be "Terry Warren", written in a cursive style.

Terry Warren, Director – Nuclear Services