



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

**Mémoire de
E.S. Fox Limited**

In the Matter of

À l'égard de

**Ontario Power Generation Inc.,
Pickering Nuclear Generating Station**

**Ontario Power Generation Inc.,
centrale nucléaire de Pickering**

Request for a ten-year renewal of its Nuclear
Power Reactor Operating Licence for the
Pickering Nuclear Generating Station

Demande de renouvellement, pour une période
de dix ans, de son permis d'exploitation d'un
réacteur nucléaire de puissance à la centrale
nucléaire de Pickering

Commission Public Hearing – Part 2

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

June 2018

Juin 2018

May 7, 2018

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

Att: Louise Levert, Secretariat

Subject: Renewal of Pickering Nuclear Generating Station's Operating License

Dear Commission Members,

E.S. Fox Limited supports Ontario Power Generation's application to the Canadian Nuclear Safety Commission to extend the operating license for the Pickering Nuclear Generating Station for a period of ten years. Allowing Pickering to continue its operations to 2024 is critical to Ontario in order to meet the energy needs of the province while the OPG Darlington and Bruce Power reactor units are off-line and progressing through their nuclear refurbishment programs. Between 2022 and 2024, five units will be offline for refurbishment.

Benefits of Continued Operations to 2024

Pickering plays an important role in providing safe, reliable, low cost and clean energy to approximately 1.5 million people, or 14% of Ontario's electricity requirements. As determined by an economic impact analysis, continuing the operations of the Pickering Nuclear Generating Station to 2024 will contribute over \$12.3 billion to Ontario's GDP and will preserve 7,590 FTE jobs annually. It will also reduce Ontario's greenhouse gas emissions by approximately 17 million tonnes and carbon costs by an estimated \$850 million.

OPG is heavily invested in continuing safe operations at the Pickering Nuclear Generating Station. The \$290 million investment includes plant safety modifications, modernization, and increased maintenance and inspections of the station's key safety and reliability components.

E.S. Fox History at the Pickering Nuclear Generating Station

ES Fox Ltd. has provided over three decades of service to the Pickering Nuclear Generating Station. During this period E.S. Fox has executed 100s of projects, ranging from minor modifications to EPC project, including work on complex nuclear safety systems.

E.S. Fox employs highly skilled engineers and trades craftsmen with extensive nuclear experience both at the site and throughout Southern Ontario. We manufacture major equipment, provide project management support, engineering and construction services across the nuclear sector in Ontario, and are proud to be part of the Pickering Nuclear Generating Station's team. In order to be an approved supplier of services to OPG we are required to maintain a quality program that meets the strict

requirements of N286-12, ISO-9001 and CSA Z299/N299 along with many other quality programs utilized within the industry. Our compliance to these programs is supported by routine audits and evaluations sponsored by OPG. We have a long-standing working relationship with Pickering and our staff feel safe, valued and appreciated, with many being members of the Pickering community.

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 work day. We, together with OPG, continue to refine our processes and practices to ensure a continued nuclear safety culture is maintained and strengthened.

The safety of the public and staff is OPG's top priority. Pickering Nuclear has been maintained and safely operated for more than 40 years.

OPG has been recognized for a long history of safe operations of their nuclear facilities as well as being leaders in protecting the public, their workers, and the environment. The commitment to improve the plant through continual investment has resulted in year-over-year improvement in all key areas. This is further supported by two of the six operating units achieving record run times in 2017. The plant's performance, as well as OPG's commitment to safety has allowed them to establish an open and respectful relationship within the communities they operate, through ongoing transparent communications.

In both 2015 and 2016, the Pickering Nuclear Generating Station received the CNSC's highest possible safety performance rating. This included improvements in fundamental areas including operational performance, safety, reliability, and human performance.

In 2017, while utilizing more than 3,000 on-site employees, the Pickering Plant had an All Injury Rate of 0.06 (0.06 injuries per 200,000 hours worked). Internationally, this All Injury Rate was amongst the industry's best and included no injuries for the first 8 months of the year.

Lessons learned from the incident at the Fukushima Daiichi Nuclear Power Plant have been implemented at the Pickering Nuclear Generating Station. The response has included:

- Phase 1: Emergency mitigation equipment to provide further barriers in preventing severe accident progression in the event of sustained station loss of power, and;
- Phase 2: Emergency mitigation equipment which acts as a back-up power source in order to restore critical containment.

Pickering Nuclear Generating Station's Units 5-8 meet all Administrative Safety goals. While Units 1-4 exceed the Safety Goal, actions are in place to ensure that these Units also exceed the more stringent Administrative Safety goals, including piping modification installation to Units 1 & 4 to provide emergency make-up water to the Unit 1 and Unit 4 calandria, heat transport system, and steam generators which ensures continuous post-beyond design basis accident fuel cooling and containment protection. These modifications add barriers to mitigate risks that could challenge containment following a beyond design basis accident.

Environment

Nuclear power is clean energy that is greater than 99 per cent free of greenhouse gas emissions and smog.

To continue its commitment to the sustainability of the environment, OPG has worked with the Town of Pickering and the Region of Durham to reduce the environmental impact on the local community.

Indigenous Relations


E.S. Fox is very excited to be working with OPG to build strong relationships with Indigenous youth in our community and achieve the ultimate goal of meaningful long-term employment. We recognize the value of this partnership as it contributes to positive growth and diversity within our company and community.

Pickering works with the Williams Treaties First Nations, the Mohawks of the Bay of Quinte, and the Metis Nation of Ontario through meetings regarding the Pickering Nuclear Power Plant's environmental impact. It also participates in career fairs, site tours, and provides community event funding.

In addition to this, in June 2017 OPG created a supply chain initiative that has a minimum 5% Indigenous content requirement.

E.S. Fox, OPG, and Pickering Nuclear have made significant contributions to the local community over the years and have demonstrated their commitment to the people of Ontario to safely operate their reactor units. A renewal of the Pickering Power Plant's operating license is crucial to the local economy and the broader provincial economy. We are confident in OPG's ability to safely operate the nuclear power plant with due regard for the health and safety of its workers, the community, and the environment.

Sincerely,



Terry Armstrong, VP Nuclear

E.S. Fox Limited