



**Written submission from  
Bruce Power**

**Mémoire de  
Bruce Power**

In the Matter of

À l'égard de

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

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

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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 1, 2018

Canadian Nuclear Safety Commission Secretariat  
c/o Louise Levert  
Canadian Nuclear Safety Commission  
280 Slater Street, P. O. Box 1046  
Ottawa, ON K1 P 5S9

Email: [cnscc.interventions.ccsn@canada.ca](mailto:cnscc.interventions.ccsn@canada.ca)

**Subject: Pickering Licence Renewal {Ref. 2018-H-03}**

Dear Ms. Levert,

I am writing on behalf of Bruce Power in support Ontario Power Generation's (OPG) application to the Canadian Nuclear Safety Commission to renew the Pickering Nuclear Generating Stations (NGS) reactor operating licence for a period of 10 years and allowing the Pickering station to run until 2024.

Pickering is a critical generating asset to the Province of Ontario. In January 2015, the Province announced it had approved OPG's plan to pursue continued operation of the Pickering Nuclear Generating Station beyond 2020, up to 2024. This life extension will save Ontario electricity customers up to \$600 million while providing low-cost, carbon-free electricity and protecting 4,500 jobs across Durham Region.

In addition, the operation of Pickering during the Bruce and Darlington nuclear refurbishments will ensure a safe, reliable supply of electricity and will also help the province avoid eight million tonnes of greenhouse gas emissions, which is the equivalent to taking 490,000 cars off Ontario roads.

The plan to extend the operation of Pickering to 2024 is a direct reflection of a positive Environmental Assessment and Integrated Safety Report, which confirms the safety and strength of the station's condition. Since 2010, more than \$200 million has been invested in Pickering, which recently achieved its best operating reliability performance in the station's history. This strong performance will be vital as the Darlington refurbishment and Bruce Power life extension ramps up.

OPG's commitment to excellence in safety has contributed to its long track record of safe operations. Nuclear safety is a core value at OPG and the entire organization, from its Board of Directors to its front line workers, places nuclear safety as the overriding priority above that of cost, schedule and production. OPG requires that all its

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employees conduct themselves in a manner consistent with the behaviours of a healthy nuclear safety culture. Such conduct requires that staff always consider how their everyday activities can impact on the fundamental safety functions of the station.

The continued safe operation and life extension of Pickering's eight-unit station will contribute significantly to Ontario's sustainability and prosperity for decades to come. The large volume, low-carbon electricity positively contributes to Canada's efforts on climate change and creates a significant positive economic impact through several thousand, direct high-skill, well-paying jobs at the Pickering and through supply chain jobs in communities across Ontario.

The contribution to socio-economic well-being through the existence of a reliable, safe source of electricity is well documented. OPG has also demonstrated its respect for the interests of Indigenous communities, near-site communities and for the current and next generation of Ontarians, Canadians and citizens of the US states who have shared interest in the waterways. They have done this through their commitment to environmental study and stewardship.

Nuclear energy plays a fundamental role in Ontario's clean-energy equation as 60 per cent of Ontario's daily electricity needs are supplied by the province's nuclear power with virtually no greenhouse gas (GHG) emissions.

Ontario was the first jurisdiction in North America to end its use of coal-fired electricity, which it accomplished in 2014, and much of this success was made possible by Ontario's nuclear industry. Moving forward, it is important for Ontario to have a balanced supply mix that allows for the continued advancement of renewable technology, along with nuclear, to maintain these emission-reduction efforts.

The benefits of nuclear power also extend to the medical industry. For the health care sector, the impact of nuclear power is two-fold – it can be counted on to power life-saving equipment and it is a reliable source of Cobalt-60, a medical isotope used to sterilize hospital equipment, including sutures, syringes, gloves, surgical gowns and masks, as well as pharmaceutical wares and cosmetics. In addition, Cobalt-60 can be used to eliminate harmful bacteria in many food products.

Bruce Power and OPG provide 70 per cent of the world's Cobalt-60 supply produced in Bruce Power's four Bruce B reactors and OPG's Pickering reactors by using adjuster rods that contain Cobalt-59 inserts. The Cobalt-59 inserts absorb a neutron and change at the atomic level to become Cobalt-60. Approximately every two to three years, the Cobalt-60 rods are safely removed and shipped to the processing facility. While there, the Cobalt-60 is processed into sources for industrial or medical use before being shipped to the customer.

Bruce Power and OPG have entered into a Memorandum of Understanding (MOU) to work together to maintain Ontario's leadership position as a global supplier of Cobalt-60

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in order to determine potential new supply opportunities within the province when the Bruce B units are being refurbished and when the Pickering units reach their end of life in 2024. The world health community is counting on Ontario to provide this essential Cobalt-60 supply over the long term.

Bruce Power and OPG collaborate on a number of other fronts including Security, Cyber Security, Fire Protection and Emergency Preparedness through routine operational discussions, Inter-Utility Meetings and Candu Owners Group (COG) meetings. Enhanced safety is the overarching focus of this collaboration and gives us complete confidence in OPG's ability to continue to make adequate provisions to protect the health, safety, and security of persons, and the environment, and to maintain its national security and international obligations.

In closing, I would like to reiterate our support for the licence application as OPG is well qualified to continue commercial operation of Pickering NGS through to the end of 2024 and transition the station to safe storage by 2028.

Sincerely,

A handwritten signature in black ink, appearing to read "Len Clewett", written in a cursive style.

Len Clewett  
Executive Vice President and Chief Nuclear Officer  
Bruce Power

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