



**Written submission from
Bruce Power**

**Mémoire de
Bruce Power**

In the Matter of

À l'égard d'

Ontario Power Generation

Ontario Power Generation

Ontario Power Generation – Licence amendment application for the Darlington Nuclear Generating Station regarding the commercial production of Cobalt-60

Ontario Power Generation – Demande concernant la modification de son permis pour la centrale nucléaire de Darlington en vue de produire commercialement du Cobalt-60

Public Hearing – Hearing in writing based on written submissions

Audience publique – Audience fondée sur des mémoires

Spring 2024

Printemps 2024

April 05, 2024

Senior Tribunal Officer, Secretariat
Canadian Nuclear Safety Commission
280 Slater Street, P.O. Box 1046, Station B
Ottawa, Ontario K1P 5S9
Email: interventions@cnsccsn.gc.ca

Attention: Canadian Nuclear Safety Commission (CNSC) Tribunal Chair and Commission Members

Re: Bruce Power's Intervention in Support of Ontario Power Generation's Application to Amend its Darlington Nuclear Generating Station PROL, 13.03/2025, to Authorize the Production of Cobalt-60

Bruce Power is an electricity company based in Bruce County, Ontario. Our 4,200 employees are the foundation of our accomplishments. They are proud of the role they play in safely delivering clean, reliable, low-cost nuclear power to families and businesses across the province, as well as life-saving medical isotopes around the world. They are aware of the growing global demand for medical isotopes and are therefore supportive of Ontario Power Generation's application to amend the Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) 13.03/2025 to authorize the production of Cobalt-60.

Bruce Power has been a global leader in the production of medical isotopes for over 35 years, beginning with the production of Cobalt-60 (Co-60). Ontario Power Generation (OPG), like Bruce Power, has been producing Co-60 for decades, totaling over 50 years. In fact, OPG's Pickering NGS reactors have been providing as much as 15-20% of the world's Co-60 production. Looking ahead to the future, Bruce Power and OPG are advancing innovations that will allow Canada to stay at the forefront of the global supply of medical isotopes, including Co-60.

Co-60 is an essential radioisotope with many uses in the medical and food industries. Co-60 is used in Gamma irradiation to sterilize single-use medical devices, such as latex gloves, bandages, and swabs for COVID-19 testing, as well as equipment such as scalpels, syringes, and implantable devices. Co-60 is also used in radiation therapy for the treatment of complex brain cancers and conditions, through non-invasive procedures like the Gamma Knife. Through the gamma irradiation of food ingredients, Co-60 kills parasites and microorganisms that can cause foodborne illnesses, making them safer, reducing spoilage, and extending their shelf life.

OPG shares Bruce Power's values around the production of clean, reliable electricity and life-saving medical isotopes. Through our round-the-clock production capabilities, our nuclear power plants are uniquely positioned to provide a consistent, reliable source of Co-60 as well as other medical isotopes. As the Pickering NGS approaches end of life, the Co-60 production modifications proposed for OPG's Darlington NGS will help ensure that Canada continues to maintain its long-term supply of Co-60 and that Bruce Power and OPG will continue to be major contributors to the significant health, safety, and social benefits afforded by Co-60.

To that end, the design documents, engineering assessments, and nuclear safety analyses completed for the proposed modifications to the Darlington NGS that will allow the production of Co-60 have demonstrated that this licensed activity can be carried out safely. A few of the highlights include:

- **Safe Reactor Operation** - The safety analyses demonstrated that the addition of this new licensed activity will have a negligible effect on safe reactor operation.
- **Environmental Protection** - The predictive effects assessment concluded that the Co-60 production system will not result in any unacceptable risks to human and ecological receptors.
- **Public Safety** – The safety analyses demonstrated that public safety will be maintained during reactor operation, including throughout the production and transportation of Co-60.

In summary, OPG has shown that it will not compromise the continued safe reactor operation, nuclear safety, public safety, the environment, or international agreements to which Canada is a signatory. They also plan to continue the dialogue around their continued safe operation with Indigenous Nations and communities, members of the public, and interested parties. Bruce Power is therefore supportive of OPG's application to amend its Darlington Nuclear Generating Station PROL, 13.03/2025, to add a new licensed activity to possess, transfer, produce, package, manage, and store the Cobalt-60 radioisotope.

Thank you for the opportunity to share our views on the application. If upon reviewing this letter you have any questions, please feel free to contact Chad MacLean, Senior Director, Business Development and Energy Innovation, at 226-930-0834.

Regards,



James Scongack
Chief Development Officer & Executive Vice President Operational Services
Bruce Power