



**Written submission from the
Canadian Nuclear Isotope Council**

**Mémoire du
Canadian Nuclear Isotope Council**

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
commerciallement du Cobalt-60**

Public Hearing – Hearing in writing based on
written submissions

Audience publique – Audience fondée sur
des mémoires

Spring 2024

Printemps 2024



January 18, 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

Re: Ontario Power Generation's application to amend its Darlington Nuclear Generating Station power reactor operating licence to authorize the production of cobalt-60 radioisotope and request for confidentiality

Dear President and Commission Members,

On behalf of the Canadian Nuclear Isotope Council (CNIC), we are pleased to support Ontario Power Generation's application to amend its operating licence at the Darlington Nuclear Generating Station to produce cobalt-60 isotopes, in addition to OPG's request for confidentiality.

The CNIC is a not-for-profit organization consisting of representatives within the Canadian health sector, nuclear industry, and research bodies, convened specifically to advocate for our country's role in the production of the world's isotope supply. The CNIC serves as a voice in safeguarding the continued availability of isotopes, ensuring our public policies are risk-informed and science-based, and support the highest levels of public health and safety.

Around the world, nuclear isotopes are used for a variety of modern medical uses, including diagnostic imaging, precise radiotherapeutic treatments of illnesses like cancer, and sterilization of single-use medical equipment.

Canada is fortunate to be home to nearly the entire production pipeline for various medical isotopes. Thanks to the contributions of companies like OPG, Canada is a global leader in the production, research and development of several essential isotopes. The world continues to rely on Canada for its supply of critical isotopes, and the CNIC was established to ensure this leadership can continue. As a founding member of the CNIC and a key participant in CNIC activities since 2018, OPG's importance to the isotope sector is clear.

OPG's CANDU reactor not only produces clean, reliable energy to power our communities but also produces a steady supply of cobalt-60 (Co-60) isotopes. Co-60 is most commonly used to sterilize single-use medical devices, including gowns, masks, syringes, and implantable devices. Roughly 40% of the world's single-use medical devices are sterilized using Co-60, with a significant portion of this supply produced here in OPG's reactor. Presently, over 70% of the world's supply of Co-60 comes from Ontario's CANDU reactors, including OPG. Protecting our domestic source of Co-60 sterilized medical items is crucial to preventing the spread of disease in Canada and around the world.

Additionally, in February 2023, OPG's Darlington Station began production of molybdenum-99, the precursor isotope for technetium-99m used in SPECT imaging scans to diagnose and stage illnesses. This milestone will enable Darlington to produce enough Mo-99 to supply a major portion of current and future North American demand.



Amending the Darlington Nuclear Generating Station's operating licence to authorize the production of Co-60 will directly benefit Canada's healthcare sector by contributing to the production of this important medical isotope, which will keep patients, frontline workers, and our communities safe and healthy.

Finally, the CNIC is supportive of OPG's request to protect certain documents and keep specific aspects of their business confidential during this upcoming hearing. The specialized equipment and tooling in OPG's facility to produce medical isotopes can be considered proprietary technology and therefore warrants consideration to be kept confidential. Additionally given the nature of the energy sector certain commercial arrangements as they relate to power production, or isotope production must remain protected to protect business competitiveness.

For these reasons, the CNIC supports OPG's application to amend its Darlington Nuclear Generating Station power reactor operating licence to authorize the production of cobalt-60 radioisotope and request for confidentiality.

Sincerely,

James Scongack
Chair
Canadian Nuclear Isotope Council
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