



Date: 2025-03-05

File / dossier : 6.02.04

Edocs pdf : 7475891

**Written submission from
Ontario Power Generation Inc.**

**Mémoire d'Ontario Power
Generation Inc.**

Nordion (Canada) Inc.

Nordion (Canada) Inc.

**Application to Renew Licence
for the Nordion Facility**

**Demande de renouvellement
de permis pour l'installation
de Nordion**

Commission Public Hearing

Audience publique de la Commission

June 5, 2025

Le 5 juin 2025

Intervention for Nordion (Canada) Inc.'s Application to Renew its Class IB Nuclear Substance Processing Facility Licence for a Period of 25 Years

This written intervention has been prepared by Ontario Power Generation (OPG). OPG fully supports Nordion (Canada) Inc.'s application to renew its Class IB Nuclear Substance Processing Facility Licence for a period of 25 years. Nordion has been safely processing Cobalt-60 from OPG's Pickering Nuclear Generating Station since 1971. In 2019, OPG entered into an agreement to provide Nordion with the future Cobalt-60 production from the Darlington Nuclear Generating Station. The proposed licence renewal for the Nordion processing facility will support that agreement.

Cobalt-60 is an essential radioisotope used in both the medical and food industries. The primary application of Cobalt-60 is the sterilization of single-use medical devices, such as surgical gowns, latex gloves, catheters, scalpels, bandages, swabs for COVID-19 testing and implants. Cobalt-60 is used to sterilize more than 30% of all single-use medical devices globally and approximately 16 billion devices annually. Cobalt-60 also plays a vital role in cancer treatment. Stereotactic radiosurgery technology is used to deliver strong beams of radiation toward a specific target such as a tumour or other abnormality in the body while minimizing the impact on healthy tissue. Certain foods and food ingredients are treated with gamma irradiation from Cobalt-60 to make them safer, reduce spoilage, and extend shelf life by killing parasites and microorganisms that cause foodborne illnesses.

Maintaining and increasing the Cobalt-60 supply provided by the OPG and Nordion producer-processor relationship should be an economic priority for Canada due to demand growth, supply protection and the competitive advantage that Canada receives from this relationship. Canada supplies more than 50% of the global supply of Cobalt-60. The global demand for Cobalt-60 has been steadily growing at a rate of 5% per year. There are a limited number of reactors globally that can produce Cobalt-60. The CANDU reactors operated by OPG are uniquely suited to producing Cobalt-60 at a large scale and at the specific activity required by the sterilization industry. The development of a new processor for OPG's Cobalt-60 production would take many years, be capital intensive, and could involve foreign governments and isotope processors whose commercial and operational philosophies are not as well aligned as those of a Canadian processor who is under the same regulatory regime as OPG. Given the global supply chain disruptions caused by the Covid-19 Pandemic and the potential imposition of tariffs from the United States of America, it is in Canada's best interests to protect, preserve and invest in Canadian technologies and supply chains wherever possible including the uniquely Canadian Cobalt-60 supply chain created by the OPG and Nordion relationship.

The close geographic proximity of the Canadian Cobalt-60 supply chain provided by the OPG and Nordion relationship also has environmental, security and cost benefits. The transportation of radioactive material is costly and complex and has environmental and security risks that increase with increased transportation distance. A processor like Nordion who is in close geographic proximity to the Darlington Nuclear Generating Station and under the same regulatory regime as OPG provides confidence in the safety and security of nuclear material transportation. A processing facility in close proximity to the Darlington Nuclear Generating station also creates supply chain efficiencies and cost savings that are not possible in other jurisdictions.

The renewal of the Class IB Nuclear Substance Processing Facility Licence for the Nordion facility for a period of 25 years provides OPG with the assurance needed to move forward with capital and resource

intensive projects to increase production capacity for medical-radioisotopes such as Cobalt-60. OPG is currently producing Cobalt-60 in the recently refurbished Unit 1 reactor at the Darlington Nuclear Generating Station. OPG currently has plans to expand its Cobalt-60 production capabilities to the other three Darlington reactors. Engineering and construction activities are currently underway with a tentative completion date of 2027. The granting of a 25-year licence renewal to Nordion will provide OPG with assurance that there will be a processor available for the Cobalt-60 produced at the Darlington Nuclear Generating Station. The 25-year duration specifically provides OPG with the assurance required to justify the capital and resource intensive, and long duration projects required to further develop radioisotope production capabilities.

Sincerely,



Steve Gregoris
Chief Nuclear Officer
Ontario Power Generation Inc.