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The Regional Municipality of Durham Information Report

From: Chief Administrative Officer
Report: #2024-INFO-13
Date: March 8, 2024

Subject:

The Region's submission to the Canadian Nuclear Safety Commission (CNSC) regarding Ontario Power Generation's (OPG) application to amend its power reactor operating licence for the Darlington Nuclear Generating Station to allow for the commercial production of cobalt-60

Recommendation:

Receive for information

Report:

1. Purpose

1.1 To provide Regional Council with an update on the Region's participation in the upcoming Canadian Nuclear Safety Commission (CNSC) hearing in writing to allow for the commercial production of the cobalt-60 (Co-60) radionuclide at the Darlington Nuclear Generating Station (DNFS).

2. Background

2.1 Established under the Nuclear Safety and Control Act, the mandate of the CNSC is to '*regulate the use of nuclear energy and materials to protect health, safety, security and the environment; to implement Canada's international commitments on the peaceful use of nuclear energy; and to disseminate objective scientific, technical and regulatory information to the public*'.¹

2.2 OPG's current operating licence for the Darlington NGS is valid until November 30, 2025. The CNSC will be conducting a hearing in writing in Spring 2024 to consider OPG's application to amend Section IV of the operating licence to allow for the commercial production of Co-60.

¹ www.cnscccsn.gc.ca/eng/acts-and-regulations/regulatory-framework/

2.3 Co-60 is a medical isotope widely used in radiography, sterilization and some medical treatments. This medical isotope is currently produced at the Pickering Nuclear Generating Station (NGS).

2.4 In December 2021, Regional Council approved [Durham's Nuclear Sector Strategy](#). The Region's submission to the CNSC aligns with the goals and actions of this strategy.

3. Next Steps

3.1 Staff will submit Durham Region's intervention (Attachment #1) to the CNSC.

3.2 Staff will continue to monitor the approval process and will report back on new developments as appropriate.

4. Previous Reports and Decisions

4.1 The following Regional staff reports related to the nuclear sector have been approved by Regional Council:

- a. Report #[2021-COW-37](#), Durham Region Nuclear Sector Strategy 2022-2032

5. Relationship to Regional Plans

6. This report aligns with [Durham Region's Nuclear Sector Strategy](#), [Durham Region's Economic Development and Tourism Strategy and Action Plan](#) and the following strategic goals and priorities in the [Durham Region Strategic Plan](#):

- a. Under the goal of Environmental Sustainability, Priority 1.1 is to accelerate the adoption of green technologies and clean energy solutions through strategic partnerships and investment.
- b. Under the goal of Environmental Sustainability, Priority 1.1 is to demonstrate leadership in sustainability and addressing climate change.
- c. Under the goal of Economic Prosperity, Priority 3.4 is to capitalize on Durham's strengths in key economic sectors to attract high-quality jobs.

7. Attachments

Attachment #1: The Regional Municipality of Durham submission regarding Ontario Power Generation's application to amend its power operator licence for the Darlington Nuclear Generating Station to allow for the commercial production of cobalt-60

Prepared by: Caitlin Rochon, Manager, Corporate Initiatives, at 905-668-7711 extension 6263 in collaboration with staff from the Nuclear Sector Working Group (Planning and Economic Development, Works, Social Services, Transit, Health, Finance and the CAO's Office).

Approved by: Sandra Austin, Executive Director, Strategic Initiatives at 905-668-7711 extension 2449.

Respectfully submitted,

XXX

Elaine C. Baxter-Trahair
Chief Administrative Officer



The Regional Municipality of Durham

Submission regarding Ontario Power Generation's application to amend its power reactor operating licence for the Darlington Nuclear Generating Station to allow for the commercial production of cobalt-60

March 2024

Contents

1. Acknowledgement.....	1
2. Message from the Regional Chair.....	2
3. Introduction	3
4. Durham Region’s support for the licence amendment	3
5. Durham Region: the Clean Energy Capital of Canada.....	3

Glossary of Acronyms

CNSC	Canadian Nuclear Safety Commission
Co-60	Cobalt-60
Mo-99	Molybdenum-99
OPG	Ontario Power Generation

1. Acknowledgement

The Region of Durham exists on lands that the Michi Saagiig Anishinaabeg inhabited for thousands of years before European colonization. These lands are the traditional and treaty territories of the Nations covered under the Williams Treaties, including the Mississaugas of Scugog Island First Nation, Alderville First Nation, Hiawatha First Nation, Curve Lake First Nation, and the Chippewa Nations of Georgina Island, Beausoleil and Rama.

We honour, recognize, and respect Indigenous Peoples as rights holders and stewards of the lands and waters on which we have the privilege to live. In our efforts towards reconciliation, we continue to build and strengthen relationships with First Nations, as well as the large Métis communities and growing Inuit communities here in Durham Region. We commit to learning from Indigenous values and knowledge, building opportunities for collaboration, and recognizing that we are all connected.

2. Message from the Regional Chair

Dear Acting President Berube and Independent Members of the Canadian Nuclear Safety Commission,

On behalf of Durham Region, I am pleased to show support for Ontario Power Generation (OPG) in its application to amend its power operator licence for the Darlington Nuclear Generating Station, to allow for the commercial production of Cobalt-60.

OPG has a strong and productive track record of producing and harvesting Cobalt-60 in Durham Region; with the Pickering Nuclear Generation Station being the first generating station in Ontario to produce it.

For decades, the Pickering Nuclear Generating Station has been one of the world's leading sources of this important, life-saving product. The medical and industrial applications of this isotope helps to keep millions of Ontarians safe and healthy. Cobalt-60 plays a key line of defence in hospitals and health-care facilities, and for food processors and distributors.

Fast-forward to today, aside from producing the clean, reliable energy that our communities greatly benefit from every day, OPG works in partnership with Bruce Power and Nordion to supply more than 50 per cent of the world's Cobalt-60. This process involves a highly skilled and talented workforce; one that is being developed right here in Durham Region at our nuclear energy-supporting institutions and organizations.

As highlighted in our Nuclear Sector Strategy, increased investment, research and job creation in the nuclear energy sector are needed in Durham. This is an exciting economic opportunity that highlights the potential for future investment in isotope processing in our region.

I am supportive of OPG's application and am confident that this investment in the Darlington Nuclear Generating Station will help us work toward our vision of a healthier, cleaner and safer future for all.

Sincerely,

John Henry
Regional Chair and Chief Executive Officer
The Regional Municipality of Durham

3. Introduction

In Durham Region, nuclear energy is a vital part of our story. Since the 1960s, we have been proud to be at the forefront of nuclear innovation. The nuclear facilities, supply chain, research and development capacity, and academic expertise found within our borders make Durham Region Canada's premier nuclear jurisdiction. Currently, the Pickering Nuclear Generating Station (NGS) produces Cobalt-60 (Co-60) and Darlington NGS is the only commercial power reactor source of Molybdenum-99 (Mo-99) in the world. Together, Durham Region is a key source and exporter of these important life-saving radioisotopes.

4. Durham Region's support for the licence amendment

In 2021, we engaged broadly with partners, Indigenous rights holders and the community to gain insight into how the Region should participate in the nuclear sector. Through this process, we developed [Empowering the Community: Durham Region's Nuclear Sector Strategy](#) that aims to empower Durham Region by building an understanding of the nuclear sector, working with partners to seize opportunities, and preparing for an evolving future. As outlined in the strategy, the Region is committed to playing an active role in nuclear regulatory processes and policy development across all levels of government to protect the interests of our community.

Through this engagement, our community requested that we seek opportunities for growing the local nuclear supply chain and research sector by creating an economic vision focused on clean energy, a low carbon economy and life-saving medical isotopes. A key action of Durham Region's Nuclear Sector Strategy is to attract medical isotope production and processing operations to the Region.

Medical isotopes are extremely valuable and save lives every day by sterilizing medical equipment and diagnosing and treating deadly diseases. Co-60 is widely used in radiography, sterilization and some medical treatments. The Region understands that OPG is requesting an amendment to Section IV of its existing power reactor operating licence for the Darlington NGS to add a new licensed activity and allow OPG to possess, transfer, produce, package, manage and store Co-60. This activity aligns with our community's vision and actions in our strategy. Durham Region is pleased to support this application.

5. Durham Region: the Clean Energy Capital of Canada

Durham Region is home to a large energy economic cluster. For decades, OPG has been a top contributor to the local economy through local purchasing of goods and services from Durham-based suppliers. We recognize that major nuclear projects including the refurbishment of Darlington and Pickering NGSs and construction of four small modular reactors (SMRs) here in the Region will deliver significant direct, indirect, and induced economic benefits in addition to thousands of new and sustained high-value jobs.

Alongside these exciting advancements, billions of dollars have been committed to the industry by both the provincial and federal governments¹. It is critical that this economic stimulus deliver economic multiplication throughout the local economy in Durham Region by attracting and enabling inbound business investment and the establishment of permanent operations by organizations throughout the nuclear value chain. A large proportion of our residents leave Durham Region to travel to their place of employment. Canada's nuclear technology development and manufacturing, including isotope processing and sales, should have strong roots in Durham Region, and the sector should offer a variety of permanent, local, high-value careers to the people who have supported this industry for decades.

Durham Region looks forward to continuing its strong partnership with OPG and will continue to work together with partners to facilitate this initiative and attract business investment to the Region.

¹ Canada's Small Modular Reactor Action Plan progress update. October 2022.
<https://smractionplan.ca/sites/smractionplan/files/2023-01/full-approved-progress-update-eng-access.pdf>