



## **Oral presentation**

## **Exposé oral**

### **Written submission from the Regional Municipality of Durham**

### **Mémoire de la Regional Municipality of Durham**

In the Matter of the

À l'égard d'

#### **Ontario Power Generation Inc.**

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Applicability of the Darlington New Nuclear Project environmental assessment and plant parameter envelope to selected reactor technology

Applicabilité de l'évaluation environnementale et de l'enveloppe des paramètres de la centrale à la technologie de réacteur sélectionnée pour le projet de nouvelle centrale nucléaire de Darlington

#### **Commission Public Hearing**

#### **Audience publique de la Commission**

**January 2024**

**Janvier 2024**



# The Regional Municipality of Durham

Submission regarding Ontario Power Generation's application for a licence to construct a reactor facility for its Darlington New Nuclear Project

November 2023

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## **Glossary of Acronyms**

AAZ	Automatic Action Zone
EA	Environmental Assessment
CNSC	Canadian Nuclear Safety Commission
DPZ	Detailed Planning Zone
DNHC	Durham Nuclear Health Committee
DNNP	Darlington New Nuclear Project
DRPS	Durham Regional Police Service
GTA	Greater Toronto Area
JRP	Joint Review Panel
ITER	International Thermo-nuclear Energy Reactor
KI	Potassium Iodide
MOU	Memoranda of Understanding
NRCan	Natural Resources Canada
NWMO	Nuclear Waste Management Organization
OPG	Ontario Power Generation
PPE	Plant Parameter Envelope
ROP	Regional Official Plan
SMR	Small Modular Reactor

## 1. Message from the Regional Chair

Dear 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 for a licence to construct its first small modular reactor (SMR) at Darlington Nuclear Generating Station.

This project is an advancement that will help shape the future of the clean energy industry; it is an exciting opportunity and highlights the economic potential of new nuclear across the country.

OPG is leading the way in the advancement of SMR technology, and Durham Region is thrilled by the opportunity of being one of the first sites globally for this emerging industrial subsector. This development complements the shift to a low-carbon economy and achievement of greenhouse gas (GHG) emissions targets as set out in the Durham Community Energy Plan.

Durham Region is the Clean Energy Capital of Canada. We are a proud nuclear host community at the forefront of innovation; a global centre of expertise with a strong cluster of nuclear energy-supporting institutions and organizations.

With the potential for Durham to host the first grid-connected SMR in the world—and be the future home to a world-leading cluster of SMR technology companies—Durham Region and Ontario will become the clean energy capital of the world.

The benefits of this project are immense. OPG will benefit from valuable new intellectual property. The Region will realize new business growth, highly skilled workforces and global economic opportunities. Together, we can share our experience and expertise with communities worldwide to foster partnerships and meet climate change goals.

OPG's SMR project is a cornerstone of our collective commitment to clean energy, both now, and for the future. We are confident that clean energy advancements here in Durham will continue to solve the world's biggest challenges.

Globally, our future depends on decarbonizing our communities. We will continue to work diligently to play a leadership role in the nuclear sector in Canada.

We look forward to continuing to work together to achieve our vision of a cleaner, safer future.

Sincerely,

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

## **2. 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. We commit to learning from Indigenous values and knowledge, building opportunities for collaboration, and recognizing that we are all connected.

## **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.

Durham Region is an experienced and informed nuclear host community that supports the selection of the Darlington site as the first on-grid SMR application in Canada and supports the Darlington New Nuclear Project (DNNP). In addition to this project, Durham is also home to two large-scale nuclear generating stations and the Port Granby Project.

Regional Council has expressed its support of refurbishments at Pickering and Darlington, the ITER<sup>1</sup> Project, Canada's SMR Action Plan, and re-licensing applications for the existing stations to the CNSC through Regional Council resolutions and Regional submissions. While the Region remains ineligible for CNSC's intervenor funding and has long argued that the provincial property tax policy for nuclear generating stations unfairly disadvantages host municipalities, it is important for the Region to participate in this hearing process and submit this intervention to demonstrate our continued commitment to the sector.

Municipalities provide and deliver valuable programs and services to meet the needs of their residents. As a regional municipality, Durham has responsibilities to protect the well-being of our residents and the environment and to sustain our local economy.

Globally, our future depends on decarbonizing our communities and economy. In January 2020, Regional Council declared a climate change emergency. To act on this

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<sup>1</sup> International Thermo-nuclear Energy Reactor Project – in the 1990s, the site now proposed for the DNNP was the site of Canada's bid for the ITER project. The ITER bid was won by France.

direction, the Region is implementing programs to reduce greenhouse gas emissions and the impacts of climate change and is striving to be a carbon-neutral community. Durham Region has been recognized as a leader in municipal efforts to address climate change. We understand that nuclear energy will play a pivotal role in Canada's transition.

#### **4. Durham Region and OPG's Partnership**

Durham Region has a strong relationship with OPG. This includes regular meetings between staff to facilitate detailed conversations about projects and identify opportunities for partnership, presentations to staff, and a facility tour. Additionally the Region partners with OPG on the following initiatives:

##### **Community Engagement**

Durham Region appreciates the activities undertaken by OPG to raise awareness of the nuclear sector within the community over the years including the Neighbours Newsletter, information centres, community advisory committees and media campaigns. Durham Region and OPG have partnered for a variety of community engagement activities including emergency preparedness week events and to develop a nuclear emergency preparedness public awareness strategy.

##### **Emergency Management**

For decades, the Region has played a leading role in nuclear emergency planning and has significant responsibilities under the Provincial Nuclear Emergency Response Plan (PNERP). As such, the Region has developed a high level of expertise in nuclear emergency preparedness. Durham Region works closely with OPG and local emergency services to ensure that appropriate planning, practice and coordination are in place to respond to any emergency that may affect the community. OPG provides funding for this program through a Memorandum of Understanding (MOU).

##### **Potassium Iodide (KI) Pill Distribution Program**

Since 2014, Durham Region has been working in partnership with OPG on a potassium iodide (KI) distribution program that includes distributing new tablets, collecting tablets nearing expiration, developing and disseminating KI educational materials and raising awareness within the community about the availability of KI. KI tablets are distributed to all homes and businesses within the 10-kilometer Detailed Planning Zone (DPZ) surrounding Pickering and Darlington Nuclear Generating Stations and KI tablets are available free to anyone living up to 50 km from either nuclear generating station by ordering them online at [preparetobesafe.ca](http://preparetobesafe.ca). OPG provides funding for this program through a MOU.

## **Durham Nuclear Health Committee**

OPG provides funding and technical assistance to the [Durham Nuclear Health Committee \(DNHC\)](#). DNHC was established in 1995 at the direction of the province as a committee of Durham Regional Council that is chaired by the Region's Commissioner and Medical Officer of Health. The DNHC is a forum for discussing and addressing potential radiation and environmental human health impacts. Membership of the DNHC consists of ten public members and three alternate public members from Whitby, Oshawa, Ajax, Clarington and Pickering, who are appointed by Council; two representatives of OPG; and four provincial/regional government representatives. OPG staff regularly provide educational presentations and updates on environmental monitoring.

## **Policing**

The Durham Region Police Service (DRPS) has an excellent working relationship with both the Emergency Preparedness and Security program and the Emergency Services (SES) Unit within OPG. To maintain a strong working relationship, DRPS participates in security and emergency services training and exercise activities in OPG's Emergency Management Program. This includes natural, technological and human-induced (criminal) emergencies or disasters. DRPS also participates in annual "Force on Force" security exercises and training opportunities in the roles of participant, observer and evaluator. The DRPS and OPG have an MOU for Off-Site Response that provides the framework for police response.

## **Air and Water Quality Monitoring**

Durham Region has a partnership with OPG to host air quality monitoring stations on Regional property and to share monitoring and modelling data relating to water quality.

## **Regional Land Use Planning**

On May 17, Durham Region Council adopted the new Regional Official Plan (ROP). The new ROP recognizes the history and the long-term opportunities related to nuclear power generation in the Region. The new ROP is currently awaiting provincial approval.

The new ROP identifies a Regional interest in the planning and regulatory process for new nuclear development at the Darlington Nuclear Generating Station as well as the decommissioning and long-term plan for future use of the Pickering Nuclear Generating Station lands.

The new ROP has implemented policies and mapping to protect the Automatic Action Zone (AAZ) surrounding both the Darlington and Pickering Nuclear Generation Stations. In particular, related to the Darlington Station, a policy in the new ROP does not permit sensitive land uses within the AAZ, unless already designated as a permitted use by the Clarington Official Plan, which was approved by the Region in 2017. Figure 12 of the new ROP illustrates the AAZs. CNSC and OPG staff had the opportunity to review



through the consultation process for the new ROP. Several effective meetings were held throughout policy development with both CNSC and OPG staff.

## **5. Regional Participation in Nuclear Policy and Regulatory Affairs**

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](#) which 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.

We are approaching this project with future generations in mind and will continue to advocate for policies that prioritize community fiscal and socio-economic well-being throughout the life cycle of nuclear facilities. Since our last intervention, this has included active participation in Natural Resources Canada's (NRCan) policy development process for [Canada's Policy for Radioactive Waste Management and Decommissioning](#) and the Nuclear Waste Management Organization's (NWMO) engagement on the [Integrated Strategy for Radioactive Waste](#).

In addition to our involvement in policymaking, over the next decade, we anticipate at least one CNSC hearing related to a facility in Durham each year.

## **6. Durham Region: the Clean Energy Capital of Canada**

Durham Region is pleased to be at the forefront of SMR deployment in Canada. The Region, in its position as an experienced and informed nuclear host community, is a willing and supportive host for the DNNP project. The Region understands that four small modular reactors (SMR) are planned. This hearing is to assess the applicability of the Plant Parameter Envelope (PPE) and the applicability of the Environmental Assessment (EA) for all four units. The October 2024 hearing will be for a licence to construct the first G.E. Hitachi BWRX-300 unit as well as the shared infrastructure for the remaining planned units. Additional regulatory reviews and public hearings will be required for the licence to construct the remaining three SMR units and the licence to operate.

After undertaking a technical assessment, the Region submitted comments to the Joint Review Panel (JRP) in 2011 related to the environmental, human health, and Regional impacts of the original proposed DNNP ([2011-J-29](#); [2010-J-29](#)). Additionally, the Region recently participated in the public hearing for the [licence to prepare the site](#). The Region understands that eight parameters differ from the PPE bounding scenario described in the EA. The Region is not positioned to undertake technical assessments of these parameters, however, we understand that CNSC staff have reviewed OPG's evaluation

of these differences and concluded that the BWRX-300 reactor technology is bounded by the EA and that the EA remains applicable for this reactor technology.

In considering its response to the Joint Review Panel (JRP) in 2010, Regional Council directed Regional staff to establish an agreement between OPG and the Region to ensure that the local community benefits from hosting a new nuclear facility. OPG and Durham Region were discussing the contents of such an agreement when the DNNP project was suspended. The Region will be restarting these conversations.

With exciting advancements under development for the reuse of radioactive waste, lifesaving medical isotopes under production, large-scale refurbishments and new SMRs, and billions of dollars committed to the industry by both the provincial and federal governments<sup>2</sup>, it is critical that this economic stimulus deliver better economic multiplication throughout the local economy in Durham 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 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.

The region's advantages include its labour force, a strong cluster of existing clean energy businesses and leading academic facilities. The [Invest Durham](#) team has developed resources to assist the industry with understanding opportunities in Durham Region, including real estate options for commercial and industrial investment. For example, Durham is working to establish a clean energy business park on lands that it owns near the Darlington Nuclear Generating Station and DNNP site.

Durham Region looks forward to continuing its strong partnership with OPG to understand how we can work together to facilitate the project and attract business investment to the region.

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<sup>2</sup> Canada's SMR Action Plan progress update. October 2022.  
<https://smractionplan.ca/sites/smractionplan/files/2023-01/full-approved-progress-update-eng-access.pdf>