



Oral presentation

Written submission from the Regional Municipality of Durham

In the Matter of the

Ontario Power Generation Inc.

Application for a licence to construct one
BWRX-300 reactor at the Darlington New
Nuclear Project Site (DNNP)

**Commission Public Hearing
Part-2**

January 8, 2024

Exposé oral

Mémoire du Regional Municipality of Durham

À l'égard d'

Ontario Power Generation Inc.

Demande visant à construire 1 réacteur
BWRX-300 sur le site du projet de nouvelle
centrale nucléaire de Darlington (PNCND)

**Audience publique de la Commission
Partie-2**

8 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

October 2024

Contents

Message from the Regional Chair 1

Acknowledgement 2

Introduction 2

Empowering the Community: Durham Region’s Nuclear Sector Strategy 3

Regional Responsibilities and Existing Funding Arrangements 4

 Regional Participation in Nuclear Policy and Regulatory Affairs 4

 Emergency Management 5

 Potassium Iodide (KI) Pill Distribution Program 5

 Durham Nuclear Health Committee 5

 Policing 6

 Air and Water Quality Monitoring 6

 Land Use Planning and Economic Development 6

 Tax Equity for Host Communities 6

 Hosting equity 8

A Call to Action: Address the Inequitable Burden on Nuclear Host Communities 8

Conclusion 10

Glossary of Acronyms

AAZ	Automatic Action Zone
EA	Environmental Assessment
EPREV	Emergency Preparedness Review
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
IAEA	International Atomic Energy Agency
ITER	International Thermo-nuclear Energy Reactor
KI	Potassium Iodide
MOU	Memorandum of Understanding
NRCan	Natural Resources Canada
NSCA	Nuclear Safety and Control Act
NWMO	Nuclear Waste Management Organization
OPG	Ontario Power Generation
PPE	Plant Parameter Envelope
ROP	Regional Official Plan
SMR	Small Modular Reactor

Message from the Regional Chair

Dear President Tremblay and Independent Members of the Commission,

On behalf of Durham Region, I am writing to reaffirm our support for Ontario Power Generation (OPG) in its application for a licence to construct the first BWRX-300 small modular reactor (SMR) at Darlington Nuclear Generating Station.

This project represents a significant advancement in the clean energy industry, offering both exciting opportunities and substantial economic potential for the nuclear sector across Canada. OPG's leadership in SMR technology positions Durham Region at the forefront of this emerging global industry, aligning with our transition to a low-carbon economy and our commitment to achieving greenhouse gas (GHG) emissions targets as outlined in the Durham Community Energy Plan.

As the Clean Energy Capital of Canada, Durham Region takes pride in our role as a nuclear host community. Our active involvement in the Canadian Nuclear Host Communities Association (CANHC), Canada's SMR Roadmap and our dedicated nuclear sector strategy demonstrate our commitment to the nuclear sector. We continue to work in close partnership with key stakeholders, including OPG, toward our shared objectives.

As the world's first grid-connected SMR, this project presents an unparalleled opportunity for Durham Region and Canada to solidify our position as global leaders in clean energy. The success of this endeavour, however, relies heavily on a balanced approach to governance and resource allocation. As we outline in this submission, the current multi-level governance structure of the nuclear sector presents significant challenges for host communities like Durham Region. We bear considerable responsibilities related to nuclear operations, often without commensurate resources. We believe that addressing these structural imbalances is crucial for the long-term sustainability and success of Canada's nuclear sector, including innovative projects like the SMR at Darlington. We look forward to working collaboratively with the CNSC, OPG, and the province to ensure that the burdens and benefits of nuclear energy are distributed equitably, strengthening the foundation for future advancements in clean energy. Our experience and expertise can serve as a model for host communities worldwide, fostering partnerships and contributing to climate change goals.

As we face the global challenge of decarbonizing our communities, Durham Region remains committed to playing a leadership role in Canada's nuclear sector. We look forward to continuing our collaborative efforts.

Sincerely,

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

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. These lands have also historically been home to Haudenosaunee and Wendat peoples.

While this intervention focuses on the impacts of being a nuclear host community from a municipal perspective, the nuclear sector has broader social, economic and environmental implications. Policies, practices and discriminatory laws have degraded Indigenous rights and created longstanding negative impacts on Indigenous peoples. Uranium mines, processing facilities, nuclear reactors and radioactive waste have been sited on traditional territories without meaningful consultation or accommodation.

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.

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 site.

Regional Council has expressed its support of refurbishments at Pickering and Darlington, the ITER¹ 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

¹ 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.

has unfairly disadvantaged the Region, it is important that we participate in this hearing process and submit this intervention to demonstrate our continued commitment to the sector and support of Ontario Power Generation.

Municipalities deliver valuable programs and services to meet the needs of their residents. As a regional municipality, Durham Region is responsible for protecting the well-being of our residents and the environment and for supporting our local economy. Globally, our future depends on decarbonizing our communities. In January 2020, Regional Council declared a climate change emergency. To act on this direction, the Region is implementing programs to reduce greenhouse gas emissions, 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. Nuclear energy could play a pivotal role in Canada's transition.

Empowering the Community: Durham Region's Nuclear Sector Strategy

In 2021, Durham Region 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 the DNNP project with future generations in mind and will continue to advocate for policies that prioritize environmental stewardship and community fiscal and socio-economic well-being throughout the life cycle of nuclear facilities. 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](#).

Regional Responsibilities and Existing Funding Arrangements

The following section provides a comprehensive summary of the existing funding arrangements and responsibilities of Durham Region regarding the nuclear sector. This overview aims to clarify the financial structures and obligations that underpin the support and management of our initiatives, ensuring a clear understanding of the responsibilities.

Regional Participation in Nuclear Policy and Regulatory Affairs

Throughout the lifecycle of a nuclear facility, the CNSC requires different types of licences (e.g., licence to prepare the site, licence to construct, licence to operate, etc.). These licencing proceedings can also be subdivided into sub-hearings to address issues. The process is rigorous and involves reviewing thousands of pages of technical reports, analysis, and recommendations. Durham Region has also been required to participate in federal and provincial working groups related to nuclear facilities and international assessments (e.g., CNSC's KI Working Group, IAEA EPREV Mission). Given the practice of co-locating nuclear facilities, Durham Region faces a significant challenge staying abreast of the regulatory processes related to the six licenced facilities located in the region. Participating in these processes requires significant resources and expertise.

The importance of host community participation in these proceedings was illustrated when the Chair of the Joint Review Panel for the Darlington New Nuclear Project compelled Durham Region to participate:

“In consideration of the Region of Durham’s responsibilities and interest ...the Panel requires the Region to provide a written submission, make an oral presentation and participate actively in the public hearing...The representative(s) who appears at the hearing should be well versed with respect to the proposed project and its potential effects on the area(s) of interest to the Region and should possess the expertise necessary to answer questions from the Panel and other hearing participants” (Alan R. Graham, JRP Chair, 2010).

Through Commission hearings, the CNSC relies on host communities for information on local impacts to ensure the protection of human health, safety, security and the environment. **Host communities are currently not equipped to do so effectively.** Recently, the NWMO acknowledged this burden and included “milestone payments” throughout the licencing process in its hosting agreement with the Municipality of South Bruce and the Municipality of Ignace.

In OPG’s written submission, they highlight that the CNSC receives payments through Cost Recovery Fees Regulations. While the CNSC does allocate funding to eligible participants to offset some of the costs of participating in the regulatory process, municipalities are ineligible for funding through the program.

Emergency Management

For decades, the Region has played a leading role in nuclear emergency planning in Canada and has significant responsibilities under the Provincial Nuclear Emergency Response Plan (PNERP). 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 Durham community. Durham Region's Memorandum of Understanding (MOU) for emergency management with Ontario Power Generation is currently under review. An integral part of planning is to ensure that reception centres are sufficiently staffed and resourced. Emergency Social Services is responsible for establishing a well-coordinated response structure that integrates staff and community partners to provide reception, registration and inquiry, shelter, food, clothing, and personal services for members of the public. The ESS requirements related to nuclear emergencies are critical for ensuring the safety and well-being of affected populations. However, it is important to note that these responsibilities have historically not been adequately funded. A lack of funding poses significant challenges in preparing and maintaining the necessary resources, training, and staffing levels required to effectively manage reception centres during a nuclear event.

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 redistributing 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 km 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. Durham Region's MOU for the KI program with Ontario Power Generation is current until December 31, 2026.

Durham Nuclear Health Committee

Durham Region was directed by the province in 1995 to establish and manage the [Durham Nuclear Health Committee \(DNHC\)](#). The DNHC is intended to be a forum for discussing and addressing potential radiation and environmental human health impacts. Membership of the DNHC consists of nine public members and up to three alternate public members from Whitby, Oshawa, Ajax, Clarington and Pickering, who are appointed by Council; two representatives of OPG; four provincial/regional government representatives and one representative from Ontario Tech University. OPG staff regularly provide educational presentations and updates on environmental monitoring. OPG funds 50% of the Secretary position of the DNHC.

Policing

The Durham Regional Police Service (DRPS) has an excellent working relationship with both the Emergency Preparedness and Security program and the Emergency Services (SES) Unit within OPG. 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 and agreement with OPG to host air quality monitoring stations on Regional property and to share monitoring and modelling data relating to water quality.

Land Use Planning and Economic Development

Adopted by Durham Regional Council on May 17, 2023, and approved by the Minister of Municipal Affairs and Housing on September 3, 2024, the new Regional Official Plan (ROP) recognizes the history and the long-term opportunities related to nuclear power generation in the Region. It identifies the Region's interest in the planning and regulatory process for new nuclear development at the Darlington Nuclear Generating Station as well as the future of the Pickering Nuclear Generating Station.

As requested by the CNSC and OPG, the ROP includes policies that prevent sensitive land uses within the Automatic Action Zone (AAZ) of the Darlington Nuclear Generation Station unless already designated as a permitted use by the Clarington Official Plan, which was approved by the Region in 2017.

While the presence of a large nuclear facility has the potential to attract supply chain companies, the Region has not seen the expected level of local investment. Additionally, land use restrictions that extend beyond the property of nuclear operators may have long-term economic impacts on the community.

Given that OPG operates under federal jurisdiction, it also benefits from development charge exemptions. Development charges are critical to financing the growth-related capital costs for municipal services such as roads, transit, water and sewer infrastructure and emergency services, required by production facilities located in the defined protected areas.

Tax Equity for Host Communities

Ontario Power Generation pays Payments in Lieu of Taxes (PILS) to municipalities as well as a proxy property tax payment to the province. However, the Region has long

voiced that the property tax payments the Region receives do not adequately recognize the services received nor provide a fair share of property taxation for licenced facilities.

Durham's inherited landscape of nuclear facilities includes a property tax framework that was imposed by the Province of Ontario through the *Assessment Act R.S.O.1990* and the *Electricity Act 1998*. Like other non-residential properties, PILS for non-generating buildings, facilities and all lands (excluding the water intake and discharge facilities which are determined under Ont. Reg. 574/06) are set out based on the current value assessment (CVA) assigned by the Municipal Property Assessment Corporation (MPAC) multiplied by the applicable local municipal, regional and provincial education property tax rate.

Under the *Assessment Act*, the electrical generating assets are not taxed based on their current value assessment, but rather have a statutory set assessment of \$86.11 per square meter of inside ground floor area of the generating and transformer station buildings, that is then multiplied by the regional, local municipal and education tax rate for the applicable property tax class (i.e., large industrial for the generating component). The CVA for other non-residential properties is generally reassessed on a four-year cycle to ensure the CVA reflects current market conditions. **For the generating buildings and facilities, the rate of \$86.11 has not increased since 1968 and as a result, the PILS paid on the generating buildings and facilities have significantly eroded relative to other non-residential properties.**

Estimating the amount of foregone municipal revenue with respect to the frozen rate of \$86.11 is difficult. In 2018, the Region estimated that if the \$86.11 rate was indexed annually by CPI, the rate would have increased by almost 700 percent. This represents an annual shortfall of approximately \$3.5 million for Durham Region, the City of Pickering and the Municipality of Clarington.²

OPG makes additional proxy property tax payments to the Minister of Finance through the Ontario Electricity Financial Corporation (OEFC). The methodology for these payments is described within the *Electricity Act, 1998* and Ontario Regulation 423/11. It is understood that these proxy property taxes are the difference between the prescribed statutory rate for the designed facilities (\$86.11 per square meter) and what would apply if these facilities were taxed at full CVA. This redirection of property taxes from the municipal sector to the province is significant and is to be applied against the stranded debt of the former Ontario Hydro.

It is recommended that the Province, in consultation with the municipal sector, review and update the nuclear generating facility statutory rate of \$86.11, institute a process by which this rate is indexed annually, and ensure that the proxy property tax payments made by OPG to the Province through the OEFFC be redirected to the host municipalities and the Region upon retirement of the stranded debt.

² See [CMD18-H6-67](#)

Hosting equity

Other host communities and prospective host communities in Ontario receive payments and/or benefits for hosting or offering to eventually host nuclear waste through negotiated Community Benefits Agreements. For example, Kincardine received a \$5.8 million lump sum and annual payments of \$1.05 million beginning in 2005 from OPG to consider a proposed deep geological repository for low and intermediate level waste, and the NWMO has paid numerous communities grants for communications and health and well-being initiatives to consider becoming a host community. In addition to this funding, Ignace and South Bruce have recently announced hosting agreements ranging in value from \$418 million to \$170 million if chosen as the site for Canada's deep geologic repository. No parallel recognition of the hosting commitment and burden has been extended to Durham Region, the current home of more than half of Ontario's used nuclear fuel waste. In 2021, Regional Council passed a resolution calling upon the federal government to provide mechanisms to compensate nuclear host communities for hosting radioactive waste on an interim or long-term basis.³

A Call to Action: Address the Inequitable Burden on Nuclear Host Communities

The current multi-level governance structure of the nuclear sector has resulted in an untenable situation that demands immediate attention and action from the CNSC and the province. Despite their role as local governments, the province has “absolute and unfettered legal power to do with [municipalities] as it wills” and “no constitutional norms or conventions prevent a province from making changes to municipal institutions without municipal consent” (*Toronto (City) v. Ontario (Attorney General)*, 2021 SCC 34). Thus, the province has the sole authority to determine the responsibilities of municipalities. Over the years, nuclear governance responsibilities have increasingly shifted from the provincial level to municipalities without a corresponding transfer of resources. This trend has placed an undue strain on host communities like Durham Region, which now bear a significant portion of nuclear-related responsibilities, including emergency management including response activities for regional evacuation planning among police, transit and the works department, emergency social services, management of the public alerting system, public health initiatives (e.g., Durham Nuclear Health Committee, potassium iodide program), public education and awareness campaigns, and testing of drinking water for radionuclides.

Host communities have likewise been tasked by the federal government with making land use planning accommodations for nuclear facilities and participating in regulatory processes and policymaking. These responsibilities, while crucial, come at a considerable cost to Durham Region property taxpayers. For decades, Durham Region has highlighted the unique challenges that result from this multi-level governance

³ See [2021-COW-9](#).

structure including resource challenges, unfair tax treatment, expanding legislated requirements, and the need to engage in federal nuclear sector regulatory proceedings and related policymaking processes. The increasing allocation of responsibilities to the municipal level, which lacks constitutional recognition, creates a dynamic where host communities have become increasingly burdened with limited venues to address these issues nor leverage to negotiate. As a result, the benefits that come from nuclear energy such as tax revenues (approximately \$1.5 billion annually⁴) and funds from nuclear technology exports flow predominantly to federal and provincial governments, leaving host communities to manage the localized burdens. As a result of the property tax treatment and development charge exemptions, host municipality property taxpayers effectively subsidize the true cost of the nuclear sector in Ontario.

As the primary regulatory body for Canada's nuclear sector, the CNSC is uniquely positioned to address this imbalance. We commend the CNSC's previous leadership in 2018, which enabled Durham Region to secure much-needed funding for our emergency management program. However, given the current economic climate and the potential for additional nuclear facilities in our region, we urgently call upon the CNSC to take further action consistent with its responsibility to ensure the health and safety of persons and the environment per the *Nuclear Safety and Control Act* (NSCA):

1. Establish MOUs with host municipalities to ensure that they have the resources available to support the research and analysis associated with participating in nuclear sector regulatory processes and regulatory document reviews.⁵
2. Mandate a comprehensive review of the financial arrangements between nuclear operators, the province, and host communities as a condition of licencing.
3. Identify host community challenges as a priority for ministerial support. Encourage the federal and provincial governments to provide additional resources to nuclear host communities commensurate with their responsibilities.

The success of Canada's nuclear sector, including Canada's SMR Action Plan and the nation's net-zero by 2050 target, hinges on the continued cooperation and support of host communities. As stated in the Nuclear Communities Global Partnership [declaration](#) of March 21, 2024, it is crucial for all levels of government to actively listen to local communities, engage in early dialogue, provide resources for participation, and establish genuine partnerships throughout all phases of nuclear projects. The CNSC has the authority and the responsibility to relieve the burdens of the nuclear sector on host municipalities. By taking action to address the current inequities, the CNSC can

4 Natural Resources Canada, 2024. <https://natural-resources.canada.ca/our-natural-resources/energy-sources-distribution/nuclear-energy-uranium/nuclear-energy/the-canadian-nuclear-energy-technology/7713>

5 Section 21(1)(a) of the NSCA empowers the CNSC to enter into arrangements with any regulatory agency or department of a government or any international agency.

protect federal interests by ensuring the long-term sustainability of Canada's nuclear sector and set a global standard for responsible nuclear governance.

We urge the CNSC to recognize that there can be no thriving nuclear industry in Canada without the support of nuclear host communities. By addressing these issues now, we can create a more equitable, sustainable, and successful future for Canada's nuclear sector.

Conclusion

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 OPG's DNNP project. The Region understands that four small modular reactors (SMR) are planned. This hearing is 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 operate and to construct the remaining planned SMR units.

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 ([2010-J-29](#); [2011-J-29](#)). Additionally, the Region recently participated in the public hearing for the [licence to prepare the site](#) and [part one hearing for the licence to construct](#).

Durham Region faces significant challenges as a nuclear host community, largely due to the shifting of governance responsibilities to the municipal level without corresponding resources. This imbalance places a considerable strain on local governments, which must manage nuclear emergency planning, public health initiatives, and regulatory participation with limited support. Despite these challenges, Durham Region remains committed to participating actively in nuclear regulatory processes and advocating for equitable treatment.

It is important to acknowledge that OPG operates within a legislative and regulatory framework established by the province and the federal government. As a result, OPG has worked in good faith with Durham Region over the years to address some of the issues raised by the Region. However, it should not fall on nuclear operators and host communities to negotiate ad hoc agreements that result in inconsistent benefits and treatment of nuclear host communities. The CNSC and province need to address the inequities created by legislation and regulations for all current and future host communities.

The call to action in this submission emphasizes the need for the CNSC to establish formal agreements with host municipalities, mandate a review of financial arrangements, and encourage additional support from federal and provincial governments. By addressing these issues, the CNSC can ensure the long-term sustainability and success of Canada's nuclear sector.

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