



**Written submission from
Hatch Ltd.**

Mémoire de Hatch Ltd.

In the Matter of the

À l'égard d'

Ontario Power Generation Inc.

Ontario Power Generation Inc.

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

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

**Commission Public Hearing
Part-2**

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

January 8, 2024

8 janvier 2024

November 4, 2024

Canadian Nuclear Safety Commission

Dear Mr. Pierre Tremblay:

**Subject: OPG Darlington New Nuclear Project License to Construct one BWRX-300 Reactor -
Hearing Notice No. 2024-H-03**

As a 10,000+ person global professional services firm headquartered in Mississauga, Hatch is pleased to offer our support to Ontario Power Generation's (OPG's) application for a License to Construct the General Electric Hitachi BWRX-300 for deployment at the Darlington New Nuclear Project (DNNP) site. The license will allow OPG to proceed with the development of the next generation of grid-scale nuclear power plants in Canada faster than at any other location, accelerating the innovative tool of Small Modular Reactors (SMRs) to fight climate change. OPG provides approximately half of the total electricity generation in Ontario, with the nuclear generating stations at Darlington, Pickering, and Bruce providing almost two thirds of the province's power. Approving OPG's license will help OPG provide the province with a reliable, affordable means of base load power now and for future generations through the innovation of SMRs. Hatch is confident that the suitability of the site remains confirmed from the extensive studies, assessments, and consultations with Indigenous communities and stakeholders that took place for the original Site Preparation License and Environmental Assessment (EA).

Innovation

Nuclear technology is constantly evolving and improving. It is used to make many everyday products and provide essential services from healthcare to safe aircraft. Nuclear energy and science are critical pieces of Canada's innovation ecosystem in which more than 30 universities and six major research centers are actively engaged. With growing international interest in SMRs, there is an exciting opportunity for Canada to export technology and expertise to address global issues such as climate change and energy security. The readiness of the Darlington site allows Canada to move quickly in SMR deployment and remain a first mover and leader in SMR development. Hatch supports the development and deployment of SMRs as a technology that can provide economical, non-carbon-based energy both for regional and national grids, and for remote and off-grid areas. By providing options for energy in off-grid and remote regions, SMRs can play a significant role in the transition off diesel generation while supporting initiatives to relieve energy poverty and provide social and economic uplift to remote regions. SMRs can provide for new energy demands with increased flexibility, including supporting intermittent renewable energy sources such as wind and solar.

High-Value Jobs and Economic Benefit

As a publicly owned electricity generator, OPG's investments largely stay in Ontario and their development projects employ thousands, as evidenced that 89% of OPG spending is on suppliers based

Ontario¹. In addition, OPG's role in keeping electricity prices down is important to maintaining and attracting businesses to the province.

Canada's nuclear industry now boasts a workforce of 89,000 individuals², the majority of which are in Ontario and exist almost entirely as a result of public investment in power generation and scientific research.

OPG has been a long-term client and partner of Hatch in the hydropower, thermal power, and nuclear markets. Hatch is currently involved in supporting preliminary activities for new nuclear development in Canada, and we anticipate our team of professionals growing as the projects advance. This represents a significant economic benefit to our employee-owned firm, our staff, and the local communities in which our employees live, work, and play. Hatch and OPG share a commitment to creating positive and engaging workplaces for all staff. OPG has programs in place to ensure that their staff are qualified and that all work is performed with quality to the appropriate standard and with minimal impact to the public, workers, and the environment.

The use of the Darlington site for an SMR is a part of a larger plan between OPG, Bruce Power, and SaskPower to have the first grid-scale SMR project constructed at the Darlington site, followed by up to four subsequent units in Saskatchewan. Energy generated by SMRs in Ontario and Saskatchewan is expected to be economical compared to other low-carbon alternatives. The speed of deployment will play a significant role in the cost, so the shovel-ready status of the Darlington site makes it a vital strategic asset.

Estimates for between 2025 and 2040 place the potential value for SMRs at \$5.3 billion in Canada and \$150 billion worldwide³. This represents an export potential for Canada, which is already established in exporting nuclear reactor technology to six other countries.

Environment and Climate

Unlike other energy sources that release their waste into the environment and are not accountable for their waste, nuclear generates very little waste and the industry is fully accountable for all financial and custodial costs. From mining to plant decommissioning, lifecycle Greenhouse Gas (GHG) emissions from nuclear power are very low.

Nuclear power production has a very small physical footprint thereby limiting its impact on natural resources. It is a key contributor to Ontario's low-emitting electricity grid, and is considered by many experts, including the International Energy Agency, to be critical to achieving net-zero by 2050. The Canadian Federal Government considers nuclear essential to net-zero for Canada and included new nuclear generation at DNNP in its *2030 Emissions Reduction Plan* issued in 2022⁴.

¹ [Our commitments in action | Strengthening the economy – OPG \(www.opg.com/about-us/our-commitments/strengthening-the-economy/\)](http://www.opg.com/about-us/our-commitments/strengthening-the-economy/).

² [Canadian Nuclear Industry: A Powerhouse of Job Creation and Economic Growth | Canadian Nuclear Association.](#)

³ [SMR Roadmap - Canadian Small Modular Reactor \(SMR\) Roadmap.](#)

⁴ 2030 Emissions Reduction Plan Canada's Next Steps for Clean Air and a Strong Economy, Environment and Climate Change Canada

Through our Statement on Climate Change, Hatch is committed to designing and building practical solutions that reduce the presence of GHGs in our atmosphere. Hatch is an active participant in the United Nation's Sustainable Development Goals and incorporates the Global Compact's Ten Principles into the way we work and do business. Hatch seeks to actively engage in projects and initiatives to address climate change in many ways, including developing and supporting the development of innovative technologies for non-carbon-based energy production, delivery, and storage. SMRs have the potential to play a large role in supporting a sustainable, low-carbon energy future and at Hatch, we are excited to support the realization of this potential.

Safety

Nuclear power has the best safety record of any major form of electricity generation. The nuclear industry is subject to some of the most rigorous regulatory regimes in the world. From construction to operation to decommissioning, the industry is licensed and closely monitored by an independent regulator. OPG has been a crucial part of Ontario's 50-year track record of safe nuclear operation, ensuring our reactors are among the best in the world in terms of reliability, durability, and efficiency. SMR designs allow for further innovative features, with potential for reactor designs to be passively or inherently safe.

Community & Indigenous Relations

OPG and Hatch believe in being engaged in communities where our employees live and work, encouraging and supporting local organizations and initiatives. OPG's *Power for Change Project* is one way they demonstrate their commitment to give back to the communities that host their facilities. The *Power for Change Project* is designed to address the most pressing needs of communities, as well as support OPG's key strategic priorities, which include OPG's ESG Commitments, Reconciliation Action Plan, Climate Change Plan, Equity Diversity, and Inclusion Strategy.

At Hatch, we understand that our ability to deliver successful projects is enhanced by our knowledge and understanding of the histories, cultures, protocols, values, aspirations, and governments of First Peoples across North America and Aboriginal communities around the world. Our relationships with First Nations, Métis, Inuit, and Indigenous Peoples are based on the values of honesty, respect, and transparency. Based on these values, we help to foster open dialogue and ensure that all stakeholders are engaged and benefit from the promise that SMRs bring.

Hatch is proud to have achieved bronze-level supplier status from the Canadian Council of Indigenous Businesses' (CCIB) Partnership Accreditation in Indigenous Relations (PAIR) program.

OPG currently maintains a gold standing with the CCIB PAIR program and has an extensive history of programs and initiatives to support Indigenous communities across the province. One example of this is OPG's Indigenous Opportunities in Nuclear program, which is an initiative to increase the number of Indigenous People working in the nuclear industry. In addition, OPG has an Indigenous Relations Policy that encourages inclusion, with a focus on building mutually beneficial relationships and partnerships on a foundation of respect.

OPG keeps the public and community stakeholders informed about DNNP as part of the existing engagement and communications activities for the Darlington Nuclear Generating Station (DNGS). They provide regular updates on the DNNP through various methods and forums, including hosting tours of the

DNNP site, current operations and fuel storage facilities, thereby ensuring transparent disclosure of its activities and their potential impacts.

Closing Comments

Approving OPG's DNNP License to Construct will provide important benefits to Canada in terms of fostering innovation, bolstering the economy, sustaining and creating high value jobs, meeting environmental and climate change objectives, providing local benefits to Ontario communities, and creating opportunities to improve relationships with the Indigenous Peoples of Canada. All these benefits are achieved while operating in an extraordinarily safe manner to produce reliable, clean, and affordable energy to our citizens.

Hatch is proud to have OPG as a long-term client and partner and fully support the approval of their license.

Kind regards,



Mario Pieries

Global Director, Nuclear

Attachment(s)/Enclosure

cc: Amar Jolly