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Written submission from Hatch

Exposé oral

Mémoire d'Hatch

In the Matter of the

À l'égard de

Darlington New Nuclear Project

Projet de nouvelle centrale nucléaire de Darlington

Application to renew the nuclear power reactor site preparation licence for the Darlington New Nuclear Project

Demande de renouvellement du permis de préparation de l'emplacement d'une centrale nucléaire pour le projet de nouvelle centrale nucléaire de Darlington

Commission Public Hearing

Audience publique de la Commission

June 10, 2021

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Canada

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Monday May 3, 2021

Canadian Nuclear Safety Commission

Dear Ms. Rumina Velshi:

Subject: OPG Darlington New Nuclear Project License Renewal - Hearing Notice No. 2021-H-04

As a 9,000-person global professional services firm headquartered in Mississauga, Hatch is pleased to offer our support to Ontario Power Generation's request to extend their Site Preparation License to support the Darlington New Nuclear Project (DNNP). The license renewal 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. Renewing 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 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 is a critical piece 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. Recent assessments found that 92% of OPG spending was through suppliers within Canada, with 89% of them within Ontario. In addition, OPG's role in keeping electricity prices down is important to maintaining and attracting businesses to the province.

Canada's nuclear sector is responsible for more than 30,000 direct, long-lasting, highly skilled jobs across the country, 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 the DNNP, and we anticipate our team of professionals growing as the project advances. This represents a significant economic benefit to our employee-owned firm, our staff, and the local Ontario communities in which our employees live, work, and play. Hatch and OPG share in a commitment to creating positive and engaging workplaces for all staff.

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. The single demonstration unit built in Ontario and operated for 60 years would result in the following economic impact for Canada[1]:

- Direct, indirect, and induced employment on an average annual basis as follows:
  - 742 jobs during project development
  - 1,939 jobs during manufacturing and construction
  - 296 jobs during operations
  - 183 jobs during decommissioning
- A positive impact on GDP of $3.4 billion; and
- An increase of government revenue of $1.1 billion.

Estimates for between 2025 and 2040 place the potential value for SMRs at $5.3 billion in Canada and $150 billion worldwide. This represents the 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 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 OPG included new nuclear generation and SMRs in its Climate Change Plan issued in late 2020.

[1] The Conference Board of Canada, *A New Power: Economic Impacts of SMRs in Electricity Grids,* Summary for Executives, March 17, 2021.

Through our Statement on Climate Change, Hatch is committed to designing and building practical solutions that reduce the presence of greenhouse gases (GHG) 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. Small Modular Reactors 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. In Canada, this role is performed by the CNSC, who provides a high level of scrutiny that is recognized internationally, ensuring the safety of Canada's nuclear fleet. 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 Corporate Citizenship Program (CCP) is one way they demonstrate their commitment to the communities that host their facilities. The CCP provides investment to support charitable, not-for-profit, and in-kind initiatives.

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 Native Americans are based on the values of honesty, respect, and transparency. Based on these values, we can help to foster an 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 Aboriginal Businesses' (CCAB) Progressive Aboriginal Relations program—the only engineering solutions provider to obtain this level with CCAB's PAR program.

OPG currently maintains a Silver standing with the CCAB PAR program and has an extensive history of programs and initiatives to support Indigenous communities across the province. OPG's Indigenous Opportunities in Nuclear program (ION) is an initiative to increase the number of Indigenous people working in the nuclear industry. OPG has an Indigenous Relations Policy also encouraging inclusion, with a focus on building mutually beneficial relationships and partnerships on a foundation of respect.

Closing Comments

It is clear that extending OPG's Darlington New Nuclear Site Preparation license 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 people of Canada. All of these benefits are achieved while operating in an extraordinarily safe manner to produce reliable, clean, affordable energy to our citizens.

Hatch is proud to have Ontario Power Generation as a long-term client and partner and fully support the extension of their license.

Sincerely,

Jim Sarvinis, P.Eng.

Managing Director, Power

JS:mg

cc: