



**Written submission from
Bruce Power**

**Mémoire de
Bruce Power**

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

Bruce Power’s intervention in support of the EIS and PPE Review process and results and the applicability of the original EA to Ontario Power Generation’s selected SMR technology (GE Hitachi’s BWRX-300) for the Darlington New Nuclear Project.

As a world leader in the production of nuclear power, Bruce Power is committed to helping Canada and Ontario reach their 2050 Net Zero greenhouse gas emissions targets and to ensuring a long-term supply of clean, reliable electricity for Ontario homes, businesses, schools and hospitals. Our 4,200 employees are the foundation of our accomplishments and are proud of the role they play in safely delivering clean, reliable, low-cost nuclear power to families and businesses across the province and life-saving medical isotopes around the world.

While Bruce Power’s focus remains on the safe, reliable operation and its Life-Extension Program and Major Component Replacement Projects, there’s an understanding that new technologies are emerging. Bruce Power provides the baseload generation that allows next generation technologies to be developed and is also an active participant in supporting a stable, long-term clean energy supply mix that will help Ontario and Canada meet climate change goals.

Canada needs nuclear now more than ever as it faces an unprecedented increase in demand for clean electricity in the coming years; a fact recognized by the federal government. The Federal Budget 2023 represents a turning point for nuclear energy in Canada. Nuclear is now being recognized as an indispensable pillar of Canada’s clean energy transition. The budget demonstrates a “Made in Canada” commitment to clean, reliable electricity and recognizes nuclear as a fundamental and necessary component of Canada’s low-carbon energy system.

In order to achieve a net-zero future and bridge the generation gap, we need to continue expanding the amount of clean electricity produced by our existing nuclear facilities, and a focus on further innovation, including the development of SMRs.

As Ontario’s largest clean power generators, Bruce Power and OPG have a strong, collaborative relationship; working together to identify efficiencies and share resources, tooling, and equipment as we both successfully undertake and complete refurbishment projects on budget and ahead of schedule. Our companies share a collective commitment to lead the energy transition in Ontario to help our economy, our climate and secure a sustainable future.

Through its Darlington New Nuclear Project (DNNP), OPG is helping to forge a path forward for a clean energy transition in Ontario and Canada by seeking to carry out Canada’s first new nuclear and SMR project. OPG submitted an Environmental Impact

Statement (EIS) summarizing results of the Environmental Assessment for the DNNP in 2009. As OPG had not selected a reactor technology at that time, OPG based its EIS on a bounding framework – a Plant Parameter Envelope (PPE) – which considers several reactor technologies.

In 2012, Joint Review Panel determined “the DNNP is not likely to result in significant adverse effects” and approved the DNNP proceeding based on the environmental assessment, and a Power Reactor Site Preparation Licence was issued. OPG committed to a comprehensive review of the PPE and EIS for the DNNP once its reactor technology was selected. OPG reported to the CNSC that the PPE review concluded the BWRX-300 design was within the established PPE envelope. As well, OPG reported the EIS review determined the conclusion of the 2009 EIS remains valid for the deployment of the BWRX-300 at the DNNP site.

In order to deliver large-scale clean energy projects and new builds, Canada’s current regulatory and licensing approaches surrounding existing nuclear, along with new nuclear and SMRs, needs to evolve. We need to seek opportunities to streamline required processes and align them with Ontario and Canada’s climate change priorities. Environmental requirements need to remain at the forefront while ensuring that they do not become so rigorous that it limits technology and projects that will help reduce GHG emissions and enable a net-zero future.

Bruce Power is evaluating the feasibility of expanding its nuclear fleet, to create an option to help grow Ontario’s nuclear capacity in the future. As with the OPG DNNP, the Bruce Power site is a highly studied and characterized property and has been safely generating nuclear power for more than 50 years. The environmental impacts of site operation are known and verified.

Like OPG, Bruce Power is applying a technology-neutral approach through a Bounding Plant Envelope, which will include potential areas for development on the existing site, as well as a PPE to define technology selection. PPE is a proven approach that has been accepted in the United States for use in the early site permit process. It involves the consideration of multiple nuclear technologies to provide options for jurisdictions in long-term electricity system planning.

Meaningful engagement is of critical importance whether delivering new projects or exploring opportunities for nuclear expansion in the future. OPG shares Bruce Power’s dedication to building and fostering relationships with Indigenous Peoples, local communities and the public and is demonstrating its commitment to openness and transparency with respect to both Indigenous and public engagement throughout the various stages of the project, sharing information, understanding concerns about potential impacts and seeking to achieve feasible mitigation measures.



For the reasons stated above, Bruce Power supports Ontario Power Generation's use of the PPE approach and its request to apply its 2009 EIS to the Darlington New Nuclear Project.

Regards,

Michael Rinker
Vice President, Regulatory, Environment and Sustainability