



CMD 26-H104.2

Date: 2026-04-08

**Written Submission from
Conexus Nuclear Inc.**

**Mémoire de
Conexus Nuclear Inc.**

In the matter of the

À l'égard du

Bruce Power

Application to amend the licensing basis for Bruce A and B nuclear generating stations to increase reactor power limits

Bruce Power

Demande de Bruce Power visant à modifier le fondement d'autorisation des centrales nucléaires de Bruce-A et B afin d'augmenter les limites de puissance des réacteurs

Hearing in Writing

Audience par écrit

July, 2026

Juillet 2026



April 7, 2026

Tribunal Officer, Commission Registry
Canadian Nuclear Safety Commission
280 Slater Street, P.O. Box 1046
Ottawa, ON K1P 5S9
Email: interventions@cnsccsn.gc.ca

Subject: Bruce Power's application to amend the licensing basis for Bruce A and B nuclear generating stations to increase reactor power limits.

Conexus Nuclear Inc. formally endorses Bruce Power's application to amend the licensing basis for the Bruce A and B Nuclear Generating Stations (NGS) to increase reactor power limits. The Bruce Power site comprises Bruce A and B NGS, each with four nuclear reactors, designed, constructed, and operated primarily to generate electricity and produce radioisotopes.

These reactors have been operated and maintained to the highest safety standards, making their continued operation fundamental to achieving Ontario's clean energy goals. Currently, the licensing basis authorizes Bruce Power to operate the Bruce A and B units at a maximum reactor power level of 92.5% full power (FP) and 93.0% FP, respectively. We support the application to amend this limit, authorizing operation at 95.5% FP for Bruce A and 96.0% FP for Bruce B. This change is an essential component of Bruce Power's Project 2030 initiative, which aims to increase the site's capability from 6,300 megawatts to 7,000 megawatts by the early 2030s.

This amendment aligns directly with the Ontario government's integrated energy plan, Energy for Generations, which outlines a comprehensive roadmap to meet future energy needs through nuclear refurbishment and new generation. Project 2030 will add the equivalent of one new large-scale reactor's output without requiring additional infrastructure. The impact is significant: this capacity increase can power more than 900,000 homes in Ontario and boost Bruce Power's production of cancer-fighting medical isotopes.

Ontario's electricity grid is already one of the cleanest in the world, with over 90% of its generation emissions-free, provided by low-emission sources such as nuclear and hydroelectric power. The avoided emissions from the complete Project 2030 are estimated to remove almost 700,000 metric tons of CO₂e annually, the equivalent of taking approximately 100,000 cars off the road.

Bruce Power has been a key member of Conexus Nuclear Inc. since 2001, recognizing the importance of being part of the collective CANDU programs that improve station performance. Today, all operators of CANDU reactors, both in Canada and internationally, are members of Conexus. Our mission is to achieve excellence through collaboration in CANDU technology, small modular reactors and advanced nuclear technologies. In partnership with our members, suppliers, research institutions, and other organizations, Conexus continuously innovates nuclear plant equipment and processes to ensure the highest standards of safety, efficiency, and environmental performance.

To fulfill our mission, Conexus is organized around the following five operational program areas:

- Nuclear Safety and Environmental Affairs
- Information Exchange
- Learning and Development
- Research and Development, and
- Joint Projects

Conexus members invest approximately \$75 million annually in research and development, and joint projects aimed at enhancing the safety, reliability, environmental performance, and cost-effectiveness of CANDU nuclear generating stations. Bruce Power contributes funding in all research areas, further demonstrating its commitment to continuous improvement.

The foremost priority for our members is nuclear safety. The work conducted through Conexus has yielded significant results that showcase the dedication of Canadian nuclear utilities to this objective, including:

Safety Analysis improvements:

- Aging Management Assessments
- Probabilistic and Deterministic Safety Assessments
- Severe Accident studies and management
- Analysis of external hazards
- Modifications to the stations and procedures to enhance safety

Numerous projects to ensure ongoing safe, long-term operation, including:

- Fuel Channel Life Management
- Research into pressure tube behaviour and longevity
- Optimization of plant processes through innovation and artificial intelligence
- Plant modernization
- Waste management and minimization

Further, through Conexus' network of peer teams, Bruce Power staff collaborate with other utilities to improve plant safety and operations. They focus on key areas, including Nuclear Safety, Environmental Affairs, Human Performance, Equipment Reliability, and Radiation Protection, and forums such as the Regulatory Affairs Vice Presidents Forum, where the regulatory framework and improvements to an already robust and mature

regulatory framework are discussed. By sharing experiences and developing common strategies, Conexus members support one another and assist emerging nuclear utilities. In addition, Conexus has established a leadership and knowledge management training program to improve leadership and management skills among high-potential technical managers in the nuclear industry, to which Bruce Power leaders participate annually. Conexus supports its members by engaging skilled and knowledgeable suppliers with extensive expertise, human resources, and research facilities to conduct innovative nuclear science. This research, along with related engineering activities, is primarily carried out in Canada by organizations such as Canadian Nuclear Laboratories, Kinectrics, AtkinsRéalis, Calian, Stern Laboratories, and several Canadian universities. The Bruce A and B NGS have a long-standing history of strong safety practices and exceptional operational performance, along with a proven track record in project management. With the expertise and dedication of qualified partners and vendors, it has showcased world-class project performance through the ongoing safe refurbishment of its units.

Conexus and its members are committed to continuously enhancing safety, reliability, affordability, and environmental performance in Canada's nuclear plants, with Bruce A and B NGS at the forefront of these initiatives. Bruce Power is a key organization in Ontario's energy future, extending operations at the eight-unit site to continue producing clean, non-greenhouse-gas-emitting electricity and cancer-fighting medical isotopes through 2064 and beyond, supporting a growing population and economy.

To conclude, Conexus supports Bruce Power's application to amend the licensing basis for Bruce A and B NGS to increase reactor power limits and is confident that the facilities will maintain their exemplary safety record across all areas of operation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rachna Clavero', with a long horizontal flourish extending to the right.

Rachna Clavero
President and CEO
Conexus Nuclear Inc.