



CMD 23-M27.25

Date: 2023-08-03

File / dossier : 6.02.04

Edocs pdf : 7100772

**Written submission from the  
Canadian Nuclear Association**

**Mémoire de  
l'Association nucléaire  
canadienne**

**Bruce Power**

**Bruce Power**

**Bruce Power Mid-Term Update of  
Licensed Activities**

**Rapport de mi-parcours au sujet  
des activités autorisées de Bruce  
Power**

Commission Meeting

Réunion de la Commission

**September 20 and 21, 2023**

**Le 20 et 21 septembre 2023**

CNAREG-102176849-399

July 31, 2023

Senior Tribunal Officer, Commission Registry  
Canadian Nuclear Safety Commission  
280 Slater St.  
PO Box 1046 Stn B  
Ottawa ON K1P 5S9

**Subject: Canadian Nuclear Association intervention regarding Bruce Power mid-term license review**

Dear Recipient,

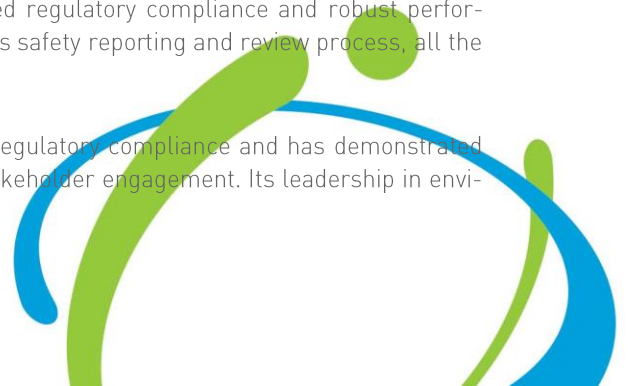
On behalf of the supporting members of Canadian Nuclear Association (CNA), and regarding CNSC's public mid-term license review meeting which will be held on September 20 and 21, 2023 in Kincardine, Ontario, we are writing to provide you with CNA's overview of Bruce Power operations in the first 5 years of its 10-year license period initiated in 2018, and the outlook for the next 5 years until 2028. The CNSC's public mid-term license review of Bruce Power 10-year power reactor operating license of generating station A and B located in Tiverton, Ontario, provides all stakeholders a better opportunity to value Bruce Power's regulatory compliance and added value over the previous 5 years, and which in turn serve a rational basis to continued operation and some of the electrifying upcoming opportunities for all stakeholders to strive for.

Bruce Power is one of Canadian Nuclear Association (CNA) members' which has approximately 100 members, representing over 76,000 Canadians employed directly or indirectly in exploring and mining, uranium, generating electricity, advancing nuclear medicine, and promoting Canada's worldwide leadership in science and technology innovation. With respect to electricity generation, today, nuclear energy produces approximately 20% of Canada's non-emitting electricity, including 30% of New Brunswick's and approximately 63% of Ontario's for which half of it originates from Bruce Power, 30% of Ontario's overall electricity.

Bruce Power and the rest of our members are committed to the safety of the public and protection of the environment throughout the entire life cycle of the nuclear industry and all play a critical role for the nuclear industry. Bruce Power's safety record can be summarized by the public dose which was less than one per cent (0.01%) of legal limits when the 10-year license renewal was initiated and for the past 31 years of operations at the Bruce site; this is well below background doses.

Bruce Power's proven track record of safety has been ongoing since the 2018 license renewal, supported by systematic regulatory compliance and robust performances in meeting all regulatory performance measures established by the CNSC including the Industrial Safety Accident Rate (ISAR), Accident Severity Rate (ASR) and Accident Frequency Rate (AFR). Moreover, Bruce Power has solidified its commitment toward environmental regulatory compliance through the implementation of best practices, resulting in the company receiving a Fisheries Act Authorization for continued operation from Fisheries and Oceans Canada. The continued regulatory compliance and robust performances are backed up by the strong internal oversight models, rigorous safety reporting and review process, all the hallmarks of proven licensee core capabilities.

As a proven and mature licensee, Bruce Power did not limit itself to regulatory compliance and has demonstrated leadership through environmental stewardship, and community and stakeholder engagement. Its leadership in envi-



Environmental stewardship is demonstrated by its commitment to operating an entirely carbon-neutral facility by 2027 – a first for a nuclear operator in North America – and its track record of consistently meeting emissions targets since setting that net-zero objective. Bruce Power's approach to sustainability is evidenced by the company's 2022 Environmental, Society and Governance (ESG) Risk Rating of 12.9, reflecting strong and improving ESG performance. It achieved top-three rankings globally within its sub-industry and scored within the top three percent in the Utilities industry. Regarding community and stakeholder engagement Bruce Power's commitment of \$2 million in local programs and over \$100,000 in scholarships demonstrate their understanding of their social responsibilities – supporting local initiatives and education while contributing to the economic development of the community. In addition, Bruce Power maintains a commitment to fostering reconciliation with Indigenous peoples; as highlighted by the agreement struck between Bruce Power and the Saugeen Ojibway Nation to market new isotopes for cancer treatment, while creating economic opportunities in local indigenous communities. This ongoing work in collaboration with indigenous communities has earned Bruce Power 3 Gold certifications from the Canadian Council for Aboriginal Business as part of its Progressive Aboriginal Relations program.

For the past 5 years, all workplaces in Canada had to reorganize and shift their practices due to COVID-19. Despite such circumstances, Bruce Powers further focussed on safety culture and practices by a commitment to safety beyond operational aspects, by taking a proactive and comprehensive approach to enhance labor and workplace safety through premium training standards. The detailed framework ensures compliance with CNSC regulatory expectations, relevant legislative requirements, and input from worker unions, creating a secure and well-informed work environment. Independent expert analyses have commended Bruce Power's workforce training programs, further attesting to their dedication to maintaining the highest safety standards.

Providing a source of affordable and clean, reliable, continued source of energy during COVID-19 is even more impressive considering in parallel Bruce Power's first delivery of medical grade cobalt-60 isotopes for cancer treatment in 2019, while continuing to supply cobalt-60 for single-use medical devices sterilization. Bruce Power, in partnership with Isogen (a joint venture between Kinectrics and Framatome) has developed an Isotope Production System (IPS) for use in Bruce Power reactors. Early in 2022, the first of its kind IPS was installed and is now producing lutetium-177, a medical isotope used worldwide to non-invasively treat prostate cancer and neuroendocrine tumours.

Furthermore, Bruce Power's contribution to industry, innovation and infrastructure, is a critical component to Ontario and Canada. Ongoing exchanges on pressure tube integrity further inform the safety case of CANDU reactors and the regulatory framework, and Major Component Replacement programmes provide valuable lessons learnt to all stakeholders, all the while elevating all involved individuals with the capability of adding value to workplaces and their communities.

Looking back at the past 5 years, Bruce Power's safety record, added value to and beyond its community, and pillar role, compels all Canadians to looking and contributing to the future. Nuclear energy will play an increasingly important role in Canada's overall clean energy mix, science and technology portfolio, and because Bruce Power's leadership needs to continue being a source of inspiration, knowledge and insight beyond the next 5 years, CNA renews its continued support to Bruce Power and all future looking stakeholders.

Sincerely,

**Sorouche Mirmiran, P.Eng**  
**Director, Regulatory Affairs CNA**

