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**Written submission from  
BWXT Canada Ltd.**

**Mémoire de  
BWXT Canada Ltd.**

**Bruce Power**

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

Commission Meeting

**September 20 and 21, 2023**

**Bruce Power**

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

Réunion de la Commission

**Le 20 et 21 septembre 2023**

August 1, 2023

Canadian Nuclear Safety Commission  
280 Slater Street  
P.O. Box 1046, Station B  
Ottawa, Ontario  
K1P 5S9

**RE: Reference No. 2023-M-27**

Dear Senior Tribunal Officer, Secretariat:

BWXT Canada Limited (BWXT) appreciates the opportunity to provide written feedback on Bruce Power's mid-term update on licensed activities at the Bruce Nuclear Site in advance of public meetings being held September 20-21. For background, BWXT is Canada's most comprehensive nuclear supply chain company, with over 60 years of expertise and experience in the designing, manufacturing, commissioning, and servicing nuclear power generation equipment.

As a supplier of more than 300 CANDU and pressurized water reactor steam generators worldwide - in addition to other major plant components and fuel - BWXT is on the front line of developing innovative solutions for all areas of plant operations, from the nuclear reactor itself to conventional systems, replacement reactor vessel closure heads, pressurizers, primary piping, critical heat exchangers and spent fuel storage. Our core business is maintaining the supply of nuclear fuel, components, services, engineering, equipment, and parts for the nuclear power industry, as well as producing nuclear medicine for life science companies, radio pharmacies, hospitals, and researchers.

In the Province of Ontario, nuclear power is the backbone of the electricity system, representing fully one-third of installed capacity and satisfying more than 50 per cent of the energy needed to power Canada's largest economy. With a site output of now 6,550 MW, the Bruce Nuclear Generating Station (NGS) is Canada's most significant piece of generation infrastructure, supplying 30 per cent of Ontario's electricity reliably, affordably, and without producing greenhouse gas (GHG) emissions through the creation of its energy.

The output from Bruce NGS, and from nuclear energy generally, is a highly valuable combination of reliable, cost-effective, and non-emitting, broadly acknowledged alongside baseload hydroelectric resources as a cornerstone element of modern electricity systems that generate long-term economic advantages and enable future environmental sustainability objectives such as net-zero GHG emission goals. In fact, it was the reenergization of approximately 3,000 MW of capacity at the Bruce Power site which accounted for more than two-thirds of the emissions-free replacement energy required to

phase out coal-fired electricity generation in Ontario - North America's single largest successfully executed climate initiative to date.

Of course, underpinning this mid-term update is consideration of Bruce Power's nuclear safety credentials as assessed under one of the most rigorous regulatory and safety regimes anywhere in the world. In all its history of active nuclear operations, no member of the public has ever been harmed as a result of a radiation emission from Bruce NGS or its waste storage facilities. Bruce Power monitors all aspects of the environment surrounding the site on an ongoing basis, and through measurement, sampling and analysis, ensures that the health of the surrounding environment and communities are protected. This is an important component of the regulatory requirements under the terms of the standing Operating Licence issued by the Canadian Nuclear Safety Commission (CNSC), and whose results have continually determined that Bruce NGS is posing no radiological risk to plants, animals, and people near the site.

As Bruce Power indicates in its own *Mid-Term Update*, it underwent a revised retrospective and predictive environmental risk assessment regulatory review in 2022 which was accepted. Similarly, Bruce Power is acting on its sincere commitment to engage and collaborate with local and Indigenous communities on all environmental matters and is determined to seeking ways to lower the environmental impact of its operations where opportunities are identified. Just this past May, Bruce Power was recognized at the Nuclear Energy Institute's (NEI) Nuclear Energy Assembly in Washington, DC with a *Top Innovation Practice Award* for its Containment Filtered Ventilation System (CFVS), which has enhanced the existing robust safety and emergency response systems already in place.

In addition to its proven environmental stewardship, Bruce Power has also demonstrated a values-based commitment to nurturing a positive relationship with Indigenous peoples. Bruce Power has established a deeply held corporate policy to build and maintain a constructive, long-term relationship with local Indigenous groups or communities that is based on mutual understanding, respect, and open and honest communication. Particular areas of focus, supported by tangible actions, include the creation of opportunities for Indigenous employment, business development, education, training, and community sponsorship that reflect community interests.

Likewise, where Treaty or Indigenous rights may be directly affected by elements of Bruce NGS' operations, Bruce Power maintains a standing commitment to engage in timely and meaningful consultation with those communities. Additionally, Bruce Power demonstrates on an ongoing basis its desire to deepen its knowledge of the natural environment and find opportunities to collaborate with its Indigenous partners to maintain or improve that environment for future generations.

BWXT believes that Bruce Power has clearly demonstrated, through their ongoing monitoring, reporting, and exceptional record in all areas regulated by the CNSC thus far over the current licence period, their unequivocal ability to operate the Bruce NGS facilities in a manner fully respecting both public and environmental safety. We would submit based on our experience that the CNSC regulatory process is in all respects world-class when it comes to oversight of the use of nuclear energy and materials to protect health, safety and security of Canadians, as well as Canada's environment. Furthermore, we believe that Bruce Power can reasonably be expected to continue to satisfy all requirements of their Operating Licence as determined by the CNSC, through 2028.

It is for these reasons, as well as corresponding alignment with Canada's environmental commitments and climate objectives, and the necessity for Ontario's electricity system to continue to accommodate clean, dependable, and cost-effective power generation, that BWXT endorses Bruce Power's ability to continue to operate Bruce NGS safely and reliably.

Sincerely,

A handwritten signature in blue ink that reads "John MacQuarrie". The signature is written in a cursive, flowing style.

John MacQuarrie  
President