



CMD 26-H110.11

Date: 2026-06-29

**Written Submission from
BWXT Canada**

**Mémoire
De BWXT Canada**

In the matter of

À l'égard du

Bruce Power

Application to change the lutetium-177
production process at Bruce A and B
Nuclear Generating Stations

Bruce Power

Demande visant à modifier le processus de
production de lutécium 177 aux centrales
nucléaires de Bruce A et B

Hearing in Writing

Audience par écrit

July 2026

Juillet 2026



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June 30, 2026

Commission Secretariat
Canadian Nuclear Safety Commission
280 Slater Street
P.O. Box 1046, Station B
Ottawa, Ontario
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Support for Bruce Power's Application to Operate a Hot Cell at the Central Maintenance Facility

Dear Commission Secretariat,

BWX Technologies, Inc. (BWXT) is pleased to provide this submission in strong support of Bruce Power's application to operate a hot cell at its Central Maintenance Facility (CMF).

BWXT has over 70 years of experience in designing, manufacturing, commissioning and servicing nuclear power generation equipment. This includes CANDU and Pressurized Water Reactor steam generators, nuclear fuel and fuel components, critical plant components, parts and related plant services. Our engineers, welders, pipefitters, and others are currently helping refurbish Ontario's nuclear power stations, including by building 32 steam generators for Bruce Power.

Kinectrics, as a BWXT company, has supported the development of Bruce Power's proposed hot cell through detailed design activities conducted under its rigorous quality assurance program, meeting the requirements of CSA N299.2 and aligned with Bruce Power's oversight and approval processes. This work reflects our collective commitment to safety, quality, and regulatory compliance in all aspects of nuclear operations.

Bruce Power has a long track record of consistent, world-class leadership in the safe production of medical isotopes. Since 1986, cobalt-60 produced at the Bruce Power site has been used to sterilize single-use medical devices, and medical implants and equipment. Since 2021, Bruce Power has also produced medical-grade cobalt-60 for radiation therapy treatments for diseases including brain and breast cancer.

In 2022, Bruce Power achieved another global milestone when its Isotope Production System (IPS) in Unit 7 became the first commercial nuclear reactor in the world to produce lutetium-177. Lutetium-177 is a critical component of theranostic treatments used in precision medicine, particularly for prostate cancer, and global demand continues to grow rapidly. Planning to expand this capability to Unit 6 in 2027 further reinforces the importance of strengthening supporting infrastructure today.

Bruce Power's proposed hot cell is a critical addition to the medical isotope supply chain. Hot cells are shielded enclosures that allow for the safe handling of irradiated materials using remotely operated manipulators. At Bruce Power, the facility will support the target carrier removal of irradiated ytterbium-176 targets, prior to shipment for final processing.



Currently, these activities happen at multiple off-site facilities, requiring the transport of irradiated materials across locations. An on-site hot cell would enable Bruce Power to make significant advancements by:

- **Enhancing safety** through a purpose-built, controlled environment aligned with Canadian nuclear standards
- **Reducing transportation requirements**, helping to lower emissions and minimize handling risks
- **Streamlining the supply chain**, improving reliability and efficiency for time-sensitive medical isotopes
- **Strengthening Ontario's and Canada's isotope production infrastructure**, supporting leadership in nuclear medicine.

The continued growth of Bruce Power's isotope program also supports meaningful economic and community benefits. Through the Gamzook'aamin aakoziwin partnership, Saugeen Ojibway Nation has invested in isotope production, generating stable revenues that support community initiatives and reflect a strong model of economic reconciliation.

BWXT is confident in Bruce Power's demonstrated safety culture, technical expertise, and regulatory compliance. We believe the organization is well-positioned to safely operate the hot cell in full accordance with CNSC requirements.

Timely approval of this application will help ensure continued progress in strengthening the medical isotope supply chain, improving access to cancer-fighting therapies, and reinforcing Canada's leadership in the peaceful and innovative use of nuclear technology.

Thank you for the opportunity to provide this submission. We respectfully encourage the Canadian Nuclear Safety Commission to approve Bruce Power's application to operate a hot cell at the Central Maintenance Facility.

Sincerely,

A handwritten signature in blue ink that reads "John MacQuarrie".

John MacQuarrie
President, BWXT Canada Ltd.