



**Written submission from the
Canadian Nuclear Workers' Council**

**Mémoire du Conseil canadien des
Travailleurs du Nucléaire**

In the Matter of

À l'égard de

**Application to allow the production of
lutetium-177(Lu-177) at the Bruce Nuclear
Generating Station (NGS)**

**Demande de modification de permis visant à
permettre la production de lutécium 177 à la
centrale nucléaire de Bruce**

Public Hearing - Hearing in writing based on
written submissions

Audience Publique - Audience fondée sur des
mémoires

June 2021

Juin 2021



Canadian Nuclear Workers' Council

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May 27, 2021

Members of the Commission
c/o Louise Levert
Senior Tribunal Officer, Commission Secrétariat
Canadian Nuclear Safety Commission
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CNWC Submission regarding the Application from Bruce Power for an amendment to Power Reactor Operating Licence (PROL) 18.01/2028, to allow for the production of Lutetium-177 (Lu-177), Reference 2021-H100

Dear President Velshi and Members of the Commission,

The Canadian Nuclear Workers' Council (CNWC) supports the application from Bruce Power to amend PROL 18.01/2028 to allow the production of Lu-177 at the Bruce Nuclear Generating Station (BNGS), reference CMD: 21-H100.1. Please accept this letter as our written submission for the CNSC hearing on 25 June 2021.

The Canadian Nuclear Workers' Council

The CNWC was formed in 1993 as an association of Unions representing Workers across Canada's nuclear industry. Our Membership encompasses uranium mines and mills, nuclear fuel production, nuclear power plant (NPP) operation and maintenance, engineering, NPP construction and refurbishment, medical isotope production, nuclear research and development, nuclear waste handling and decommissioning. Our Membership also includes District Labour Councils in a number of host communities. Specific to this submission, CNWC Member Unions at Bruce Power include the Power Workers' Union, the Society of United Professionals and Members of the Provincial Building and Construction Trades Council of Ontario.

The goals of the CNWC are to:

- ensure the perspectives of Canada's Nuclear Workers are heard by decision makers,

- strengthen the collective role of Nuclear Workers via their Unions as partners in Canada's Nuclear Industries, and
- enhance public knowledge about the many benefits of Canada's Nuclear Industry.

The CNWC is a Member of the Canadian Nuclear Isotope Council (CNIC).

Bruce Power's Application

Bruce Power operates 8 CANDU Reactors at the BNGS in Tiverton Ontario. Bruce Power has been operating those units safely and effectively since the Company was created 20 years ago. They meet the conditions of their PROL and always achieve ratings of 'Satisfactory' or higher in all Safety and Control Areas (SCAs). Bruce Power's Life Extension and Major Component Replacement (MCR) Programs are well underway and will keep those units in operation for many more decades.

In addition to generating more than 30% of Ontario's electricity, Bruce Power produces medical isotopes. Currently they produce Co-60. Co-60 is a long-lived isotope that is harvested when the reactor is off-line. CANDU reactors are also ideally suited to produce a number of other isotopes. One of those is Lu-177. Lu-177 is a short-lived isotope which is produced while the reactor is operating. This is accomplished by installing an Isotope Production System (IPS). The IPS is not an overly complex design and there is experience operating this type of system. Bruce Power has a highly skilled nuclear workforce and robust training programs. This is considered a low risk activity and will not result in a material change to the overall safety of the Bruce site.

In November 2020 Bruce Power submitted an application to amend their PROL to allow for the production of Lu-177, reference CMD: 21-H100.1. The IPS will initially be installed on Unit 7 and will initially be used to produce Lu-177.

CNSC Staff's Assessment on Bruce Power's application

The CNWC supports the assessment, conclusions and recommendations of CNSC Staff as set out in CMD: 21-H100. Specifically:

- CNSC Staff determined that Bruce Power can safely produce Lu-177 and the installation and operation of the IPS will not result in significant doses to workers or members of the public or significant releases to the environment.
- CNSC Staff concluded that Bruce Power is qualified to carry out the activities authorized by the licence and in doing so will make adequate provisions for the protection of people and the environment.
- CNSC Staff recommended accepting Bruce Power's request for an amendment for the production of Lu-177 with Staff's proposed changes to the PROL and Licence Conditions Handbook (LCH) as well as appropriate hold points.

Concluding Comments

The nuclear industry offers a number of important benefits to Canadians, including:

- Generating clean, reliable, affordable electricity in Ontario and New Brunswick without green house gas emissions.
- Providing more than 70,000 stable, high-quality jobs that help support Canadian Families.
- Producing the medical isotopes that are vital to our modern healthcare.
- Supporting the research and innovation that will continue to serve future generations.

Bruce Power is an important part of Canada's Nuclear Industry. They generate more than 30% of Ontario's electricity and they've been doing that to the highest standards since the company was created 20 years ago. The socio-economic benefits to the region cannot be overstated. They have proven to be a great community partner which is confirmed by the very strong support for Bruce Power in the community.

Our modern healthcare requires medical isotopes for equipment sterilization, diagnostic imaging and treatment of various cancers. To be successful, hospitals in Canada and around the world need new, reliable suppliers of these isotopes. These medical isotopes will save countless lives and securing our future supply will benefit all of us. The IPS will give Bruce Power and their partners the capacity to produce these medical isotopes and help establish Canada as a leading supplier.

We are very confident that Bruce Power will continue to operate their facilities to the highest standards with a commitment to protecting their employees, the public, and the environment.

In conclusion, the CNWC has reviewed the application from Bruce Power as well as the submission from CNSC Staff and we are in full support of CNSC Staff's recommendation that the Commission accept Bruce Power's application for an amendment to allow for the production of Lu-177 with CNSC Staff's proposed changes to the PROL and its associated Licence Condition Handbook (LCH).

I would like to take this opportunity to thank the Members of the Commission and CNSC Staff. Your continuous efforts serve to make our workplaces and communities safer.

Bob Walker
National Director
Canadian Nuclear Workers' Council

The Canadian Nuclear Workers' Council is comprised of Locals of the following organizations: District Labour Councils (Grey/Bruce, Durham, Northumberland, Lindsay and Saint John) * International Association of Firefighters * International Association of Machinists & Aerospace Workers * International Brotherhood of Electrical Workers * United Steel Workers * Power Workers' Union * Professional Institute of the Public Service of Canada * Public Service Alliance of Canada * Provincial Building and Construction Trades Council of Ontario (Ont. Building Trades) * Society of United Professionals * Society of Professional Engineers and Associates * UNIFOR * International Federation of Professional & Technical Engineers