



CMD 25-H107.2

Date: 2025-11-25

**Written Submission from the
Society of United Professionals**

**Mémoire de la
Society of United Professionals**

In the matter of

À l'égard de

Ontario Power Generation

Ontario Power Generation

Application to install and operate a medical isotope target delivery system on additional units at the Darlington Nuclear Generating Station

Demande visant à installer et à exploiter un système d'irradiation de cibles pour la production d'isotopes médicaux sur d'autres tranches à la centrale nucléaire de Darlington

Hearing in Writing

Audience par écrit

December, 2025

Décembre 2025



November 7, 2025

DARLINGTON APPLICATION TO AMEND LICENCE TO APPROVE INSTALLATION/OPERATION OF TARGET DELIVERY SYSTEMS (TDS) ON ADDITIONAL UNITS 2025-H-107

The Society of United Professionals represents over 10,000 engineers, scientists, supervisors, and other professionals in Canada's energy and legal sectors. For over 80 years, our organization has represented professionals in Ontario's electricity sector, including workers in Ontario's Nuclear Generating Stations (NGS) in Pickering, Darlington, and Bruce County.

Our members work in every aspect of the electricity industry. They are involved in generation, transmission and distribution of electricity, management of the electricity system, regulation and enforcement of standards, and management of the electricity market. They are employed as first-line managers and supervisors, professional engineers, scientists, information systems professionals, economists, auditors and accountants, as well as many other professional, administrative, and associated occupations.

The Society's members are knowledge workers who take great pride in exercising their civic, social, and professional responsibilities. As a union, we stand behind our members' professionalism, integrity, and commitment to excellence in all areas, particularly workplace safety, public health, and environmental sustainability.

Advocating for safe and healthy operation of our nuclear workplaces is one of the Society's highest priorities as a union. Our members work inside of, and in close proximity to, nuclear facilities, and they would be among the first in harm's way if the highest standards of safe operation, and occupational health and safety are not adhered to. They and their families are residents of Clarington and Durham and Port Elgin and they are very conscious of the importance of ensuring a safe and healthy environment in the areas where they live.

Currently, isotope production at the Darlington station is limited to the TDS that is installed and operating on Unit 2. When the Commission rendered their decision on OPG's application to install TDS on all 4 Darlington units, a condition was included to limit approval to one unit and for OPG to seek Commission approval for installation and operation on additional units. Darlington Unit 2 will be shut down for an extended maintenance outage from January 2027 through December 2027. While the unit is



shut down, isotope production on Unit 2 will cease for the duration of the outage. Installation of the TDS on the other three Darlington units is critical to sustain the world supply of life saving isotopes¹.

OPG's current application seeks explicit consent from the Commission to install a TDS on the remaining units at Darlington NGS². Society supports OPG installing and operating a TDS on the additional units.

SOCIAL RESPONSIBILITY

The TDS installed on Darlington NGS Unit 2 is a form of isotope irradiation system tailored for medical isotope production³. Doctors in diagnostic procedures use Canadian medical isotopes to determine what is ailing patients and in therapeutic procedures to treat those diseases. Approximately 1.5 million nuclear diagnostic scans are performed annually in Canada. Worldwide, there are more than 40 million medical procedures performed each year using isotopes.⁴ It is estimated that the nuclear medicine market will see 15% growth per year until 2026. By 2031, the market will reach between \$14-\$33 billion USD^{5,6,7}.

The Society takes great interest in proposals to capitalize on the wide-ranging benefits of nuclear technology. Not just as a source of carbon-free electricity generation but a source of important medical isotopes used in diagnostic imaging and treatment. As Social justice advocates, the Society believes access to timely and affordable health care is a right for all Canadians. As such, with the growing need for medical isotopes Society believes it is vital to secure a reliable Canadian supply chain to produce them.

NUCLEAR SAFETY

In support of the installation of TDS on additional units, NK38-EVAL-03600-00001, "Nuclear Safety Review - Target Delivery System Installed on Multiple Units" was performed. The review concluded that the installation of a TDS on other units will have no impact on the safe operation of Darlington NGS. All installations of a TDS on additional units will be made through OPG's existing Engineering Change

¹Darlington Application to Amend PROL 13.04/2025 to Approve Installation and Operation of Target Delivery Systems (TDS) on Additional Units - Need For a Timely Commission Decision, CD# N-CORR-00531-24642 LOF, July 22, 2025, <https://api.cnsccsn.gc.ca/dms/digital-medias/CMD25-H107-OPG-TDS-APP.pdf/object>

² Ontario Power Generation Inc. Request for Commission Approval for Installation and Operation of a Target Delivery System (TDS) on Additional Units at Darlington NGS, CMD 25-H107 - CNSC Staff Submission October 21, 2025, <https://api.cnsccsn.gc.ca/dms/digital-medias/CMD25-H107-CNSC-SUB.pdf/object>

³ CNSC to conduct a hearing in writing on Ontario Power Generation's application to install and operate a medical isotope target delivery system on additional units at the Darlington Nuclear Generating Station, Ref. 2025-H-107, September 29, 2025, <https://api.cnsccsn.gc.ca/dms/digital-medias/CMD2025-H-107-CR-NTC-ENG.pdf/object>

⁴ Medical isotopes | Canadian Nuclear Association (CNA), <https://cna.ca/nuclear-medicine/medical-isotopes/>

⁵ Canadian Medical Isotope Ecosystem (CMIE), <https://cmie.ca/medical-isotopes-in-canada/>

⁶ Canadian Nuclear Isotope Council (CNIC), <https://www.canadianisotopes.ca/isotopes-in-canada/>

⁷ Government of Canada, News Release, Canada strengthens global leadership in medical isotope production, Government achieves new milestone in partnership with Bruce Power and First Nation on producing cancer-fighting medical isotopes, August 19, 2025, <https://www.canada.ca/en/innovation-science-economic-development/news/2025/08/canada-strengthens-global-leadership-in-medical-isotope-production.html>



Control (ECC) program, N-PROG-MP-0001, “Engineering Change Control”, confirming that all regulatory requirements are met, as well as ensuring the project is executed safely with high quality⁸.

CNSC staff have confirmed that OPG has not altered the design or the expected operations relative to the currently authorized TDS. As such, CNSC staff conclude that installing a TDS on additional units at Darlington NGS is a low-risk activity that remains within existing station safe operating envelope (SOE)².

As the union representing nuclear professionals, the Society considers the issue of nuclear safety to be of paramount importance; but believes based on above, adherence will be maintained to all safety standards.

ENVIRONMENT/PUBLIC HEALTH

Further, in accordance with CNSC’s mandate under the NSCA and associated regulations, CNSC staff conduct environmental protection reviews (EPRs) when considering any request by a licensee where there are potential environmental interactions. EPRs help support the Commission’s conclusion on whether the applicant’s proposal provides adequate protection of the environment and the health of people. An EPR was conducted for this request, which determined that the environmental impacts of introducing and operating additional TDS equipment for the production of increased volume of medical radionuclides are minimal and OPG’s programs are sufficient to protect the environment and the public. CNSC staff will continue to verify and ensure through ongoing licensing and compliance verification activities and reviews, that the environment and the health of persons are protected and will continue to be protected².

WORKPLACE SAFETY

The tripartite committees such as the Joint Health and Safety Committee (JHSC) serve as vanguards ensuring that Society members who operate the TDS will have a forum to raise concerns of potential hazards and insist on training in accordance with the appropriate radiation protection qualification. Society works with OPG as part of the JHSC to address workplace health and safety issues and our priority will remain safe working conditions of our members.

INDIGENOUS RELATIONS

The Darlington site resides on lands in which many Indigenous Nations and communities have a vested interest and rights, lying within the lands and waters of the Michi Saagiig Anishinaabeg, the Gunshot Treaty (1877-88), the Williams Treaties (1923), and the Williams Treaties Settlement Agreement (2018). A project notification letter was sent to all identified Indigenous Nation and communities on May 23, 2025. These letters provided information regarding OPG’s

⁸ Darlington NGS – Amendment to the Licensing Basis of the Power Reactor Operating Licence 13.06/2025 for the Installation and Operation of Target Delivery Systems in Additional Units, CD# NK38-CORR-00531-26277, August 8, 2025, <https://api.cnsccsn.gc.ca/dms/digital-medias/CMD25-H107-OPG-TDS-AMD.pdf/object>



request and opportunities to participate in the Commission's hearing process².

An Indigenous Engagement Plan has been prepared to document the engagement scope and activities regarding these medical isotope projects, NK38-PLAN-00120-00027, "Target Delivery System Engagement and Communications Plan with Indigenous Nations and Communities"⁸. In addition, the CNSC staff conclude that OPG has made adequate efforts to consult and engage with Indigenous Nations and communities and the public as required by their current operating licence and will continue to do so throughout progress of future projects².

The Society believes that continued work towards reconciliation is incumbent on all of us, and meaningful engagement with the local Indigenous communities whose land and water the Darlington NGS's site belong to must be a necessary condition.

CONCLUSION

The Society is grateful for the opportunity to intervene and looks forward to working with all parties.

Sincerely,

Rebecca Caron
President
The Society of United Professionals