Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 26-H7.24

Date: 2026-08-10

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 refurbish Pickering Nuclear Generating Station and to renew licences for the Pickering Nuclear Generating Station and Waste Management Facility

Demande concernant la réfection de la centrale nucléaire de Pickering et le renouvellement de ses permis pour la centrale et l'installation de gestion des déchets

Commission Public Hearing
Part 2

Audience publique de la Commission
Partie 2

October 2026

Octobre 2026

Document ID: QQQVZZNDK725-166150894-10767

Canada

SOCIETY of UNITED PROFESSIONALS
IFPTE 160

August 10, 2026

PICKERING REFURBISHMENT & LICENCES (2026-H7)

For Nuclear Generating Station and Waste Management Facility

The Society of United Professionals represents over 11,000 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.

Ontario Power Generation (OPG) submitted an application seeking authorization to refurbish Units 5–8 of the Pickering Nuclear Generating Station (PNGS) and to renew the Power Reactor Operating Licence (PROL) for the PNGS and the Waste Facility Operating Licence (WFOL) for the Pickering Waste

Management Facility (PWMF) for a 10-year period[1].

The Pickering site is an ideal location for continued nuclear operation. The region contains a supportive local community that has seen firsthand the economic benefits nuclear generation provides, and the expertise of thousands of skilled workers with experience working in Ontario's nuclear generating stations. The site also provides an opportunity to leverage existing transmission infrastructure and corridors.

PWMF has safely managed nuclear waste since 1996 (30 years) when the facility began operation[2] and the Nuclear Waste Management Organization (NWMO) is implementing Canada's plan for the safe, long-term management of used nuclear fuel, to protect people and the environment for generations to come.[3]

The Society strongly supports the refurbishment and continued operation of the PNGS Units 5–8 and renewal of both the PROL and WFOL for a 10-year period from January 1, 2027 to December 31, 2036[6].

CLIMATE CHANGE

Catastrophic climate change is the greatest threat facing humanity, and we have already begun to feel its effects. If we are to mitigate the impact of climate change on future generations, we need to end our reliance on fossil fuels. This requires electrifying the major sectors of our economy, and powering electrification with emissions-free electricity generation. We will also need to ensure climate change resilience to anticipate, prepare for, and respond to the impacts of climate change.

The Canadian Net-Zero Emissions Accountability Act, which became law in June 2021, enshrines in legislation Canada's commitment to achieve net-zero emissions by 2050[4]. The Independent Electricity System Operator (IESO) found that to fully decarbonize the electricity sector by 2050, there would need to be "aggressive" electrification targets and a system more than double the size it is today.[5]

Refurbishing PNGS Units 5–8 that currently produce 10% of Ontario's electricity for an additional 30 plus years[6] directly supports Canada's net-zero goal with continued reliable, non-

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[1] CNSC Revised Notice of Public Hearing, CNSC to conduct public hearing on application from OPG to refurbish PNGS and to renew licences for the PNGS and PWMF, CMD2026-H7, Rev. 1, January 22, 2026, https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD2026-H-07-CR-NTC-REV1-ENG.pdf/object

[2] Presentation from OPG, CNSC Hearing Part 1, CMD26-H7.1A, June 23, 2026, https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-H7-1A-OPG-SUB-PRE.pdf/object

[3] NWMO, Canada's plan for used nuclear fuel, https://www.nwmo.ca/Canadas-Plan

[4] Government of Canada website, Net-zero emissions by 2050, Date modified: September 3, 2024, https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050.html

[5] WNN, Ontario can decarbonise with help of nuclear, report finds, December 19, 2022, https://www.world-nuclear-news.org/Articles/Ontario-can-decarbonise-with-help-of-nuclear,-repo

[6] OPG, Renewal Application for PNGS PROL and Pickering WFOL, CD# P-CORR-00531-23980, June 27, 2025, https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-H7-APP-OPG-NGS-PWMF.pdf/object

emitting electricity to help decarbonize Ontario's grid and meet growing energy demands.

In June 2024, CNSC staff requested OPG to conduct a climate change resilience assessment of the PNGS Units 5–8 design against available climate projections. The purpose of this assessment is to demonstrate the resilience of the PNGS to the impacts of climate change for the proposed extended operational life. OPG submitted the results of this assessment in April 2025, which included a report summarizing these results. OPG's assessment identified climate susceptible structures, systems and components of the PNGS and related short- and long-term adaptation measures. OPG concluded that nuclear safety analyses remain valid and that the PNGS is prepared for extreme weather events. Routine monitoring and maintenance programs are expected to be sufficient to discover any changes to the PNGS due to climate change prior to any impacts. OPG is planning further detailed analysis prior to the implementation of adaptation measures and has committed to provide a Pickering climate change risk assessment to CNSC staff in January 2028. CNSC staff reviewed OPG's submission and provided several recommendations for OPG's consideration. Overall, CNSC staff found that OPG's assessment is in line with best practice, including the *Environment and Climate Change Canada (ECCC) Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience*.[7,8]

A climate change resilience assessment was also performed for the PWMF in April 2026, which is currently being reviewed by CNSC staff.[8]

PUBLIC HEALTH

The Society has worked with the CNSC and OPG for decades to ensure Public Health and Safety in our stations and surrounding communities. We are confident that CNSC and OPG will continue to maintain high standards during the licensing period, through required steps such as:

- The CNSC conducts regular regulatory oversight through:
  - Multiple inspection types (Type I, Type II, field, compliance assessments)
  - Continuous surveillance and monitoring
  - Scheduled and unscheduled reporting
  - Performance Indicators[9]

[7] Government of Canada, Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience, Date modified: March 15, 2022, https://www.canada.ca/en/services/environment/conservation/assessments/strategic-assessments/draft-second-technical-guide-strategic-assessment-climate-change.html

[8] CNSC Staff Submission, OPG Application to Refurbish Pickering Units 5 to 8 and Renew the Operating Licences of the PNGS and PWMF, CMD 26-H7, June 23, 2026 https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-H7-CNSC-SUB.pdf/object

[9] CNSC Staff Presentation, Darlington Nuclear Generating Station 2025 Licence Renewal, CMD25-H2.A, February 25, 2025, https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD25-H2-A-eng.pdf/object

- CNSC staff promote compliance through graduated methods:
  - Notices of non-compliance, warning letters, administrative monetary penalties, etc.
  - Non-compliances are tracked to completion[9]

Specifically for Pickering Refurbishment:

- CNSC on-site inspectors will verify that refurbishment work is performed in accordance with regulatory requirements
- Technical specialists will review and assess project execution and technical submissions
- All prerequisites must be met prior to the release of any regulatory hold points.[10]

Also, OPG is currently undertaking PSR3 in support of the refurbishment of PNGS Units 5–8. This process was used for Darlington NGS refurbishment as well as other nuclear power plant refurbishments worldwide. The Periodic Safety Review (PSR) provides a comprehensive and systematic assessment of overall plant safety, the adequacy of safety documentation, and opportunities to implement reasonable and practical safety enhancements. PSR3 is being performed in accordance with CNSC regulatory document *REGDOC-2.3.3, Periodic Safety Reviews*.[11] Through this process, the effectiveness of existing programs and structures, systems, and components will be evaluated to confirm their continued capability to ensure safe plant operation during and following refurbishment.[12]

OPG's Darlington units were refurbished in a 10-year, $12.8 billion project that will extend the plant's operating life to at least 2055.[13] The fact that OPG was able to finish another large-scale refurbishment project provides confidence that the right controls are in place to assure public health and safety.

OPG has decades of experience in safely providing interim storage of waste generated from the PNGS at their waste management facilities including at the PWMF. The NWMO, in accordance with the federal Nuclear Fuel Waste Act (2002), is responsible for implementing Canada's plan for the safe, long-term management of used nuclear fuel. Under the NWMO's plan, a Deep Geological Repository (DGR) for used fuel is expected to be in-service in the mid-2040s.[6] This

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[10] CNSC Staff Presentation, OPG Application to Renew the Operating Licences of the PNGS and PWMF and Authorize the Refurbishment of Units 5-8, CMD 26-H7.A, June 23, 2026, https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-H7-A-REVISED-CNSC-PRE-ENG.pdf/object

[11] Government of Canada, REGDOC-2.3.3, Periodic Safety Reviews, Date modified: May 9, 2026, https://www.cnsc-ccsn.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc2-3-3/

[12] OPG, Submission of Commission Member Document in support of Pickering Licence Application for Pickering NGS and Waste Management Facility, CD# P-CORR-00531-24304, May 15, 2026, https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-H7-1-OPG-SUB.pdf/object

[13] World Nuclear News, Darlington refurb completed ahead of schedule, under budget, February 2026, https://www.world-nuclear-news.org/articles/darlington-refurb-completed-ahead-of-schedule-under-budget

will provide a long-term solution that contains and isolates the country's used nuclear fuel in a DGR using a multiple-barrier system[3].

WORKPLACE SAFETY

A project of this scale will bring a large construction workforce to the site and involve complex, high risk work activities. The Society expects worker health and safety to be treated as a core priority, consistent with the Internal Responsibility System (IRS). Key risks to staff will include construction safety (including work at heights, lifting and rigging, heavy equipment and traffic management), contractor oversight and work planning, hazardous energy control and Lock out Tag-out (Work Protection) practices, radiation protection planning as the project advances through commissioning and operation, and emergency management integration with local responders. The Society supports a clear commitment to robust safety governance, including strong oversight of contractor performance, comprehensive training and qualification standards, effective Incident Reporting and Learning (IRS), and a safety culture that protects workers' right to raise concerns without reprisal. Ensuring these elements are in place early will help prevent injuries, reduce delays, and build confidence among workers and the surrounding community.

For Conventional Health & Safety:

- OPG has developed a health and safety plan to address the changing hazards across the site during the proposed licence period
- OPG plans to use a mock-up to practice high risk tasks and incorporate operating experience from the Darlington NGS refurbishment project
- CNSC staff are satisfied that OPG's conventional health and safety programs continue to meet CNSC regulatory requirements[10]

For Radiation Protection:

- OPG has implemented and maintains a radiation protection program that meets the requirements of the *Radiation Protection Regulations*[14]
- OPG will use the existing radiation protection program for the refurbishment of Units 5–8
- OPG plans to incorporate lessons learned from other refurbishment projects in radiation protection planning
- Individual doses at the PNGS and PWMF remain well below the regulatory limit and as low as reasonably achievable (ALARA)[10]

Year over year, PNGS and the PWMF continue to meet or exceed the regulatory requirements of

[14] Government of Canada, Radiation Protection Regulations SOR/2000-203, Nuclear Safety and Control Act, current to May 26, 2026, https://laws-lois.justice.gc.ca/eng/regulations/sor-2000-203/FullText.html

the CNSC as demonstrated through CNSC Compliance Verification activities. These robust evaluations of all the Safety and Control Areas (SCAs) demonstrate the PNGS and PWMF have taken the necessary actions for the protection of the health, safety and security of persons and the environment from the production of nuclear energy and the storage of nuclear waste.[6]

In addition, tripartite committees such as the Joint Health and Safety Committee (JHSC) serve as vanguards ensuring that Society members who work at the Pickering site 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.

ENVIRONMENT

CNSC staff publish an *Environmental Protection Review Report*[15] for the Pickering Nuclear Site every 5 years. The potential risks from releases to the environment are low to negligible. The *2025 CNSC Independent Environmental Monitoring Program (IEMP)*[16] results support CNSC staff's assessment that OPG's environmental protection program is effective.[10]

OPG has a well-established and robust environmental protection program that includes an Environmental Risk Assessment (ERA).[10] OPG has conducted a Predictive Environmental Risk Assessment (PERA) that evaluates the environmental risks associated with activities at the Pickering site, including the refurbishment and continued operations of Units 5–8, decommissioning of Units 1–4, and operation of the PWMF.[8] CNSC staff reviewed OPG's 2025 PERA and found that the PERA met regulatory requirements, that most proposed activities are not predicted to result in adverse effects to people or environment and the PERA recommends monitoring and mitigation measures to minimize any anticipated impacts.[10]

CNSC staff will continue to verify and ensure that, through ongoing licensing and compliance activities and reviews, the environment and the health of persons are protected and will continue to be protected[8].

SOCIAL LICENCE

OPG was asked by the Province of Ontario to continue producing safe, reliable energy at the PNGS[6]. According to the Government of Ontario's Energy for Generations plan, Ontario's electricity demand is forecast to increase by 75% by 2050, driven by economic and population growth, as well as the electrification of transportation, industry, and heating. The plan integrates electricity, natural gas, hydrogen, storage, and other sources into a single long-term framework, with nuclear being identified as the foundation of Ontario's clean, affordable, and reliable electricity system. Nuclear currently supplies

[15] Government of Canada, Environmental Protection Review Report: Pickering Nuclear Site, Date modified: April 20, 2026, https://www.cnsc-ccsn.gc.ca/eng/resources/publications/reports/eprpickering23/
[16] Government of Canada, Independent Environmental Monitoring Program: Pickering nuclear site, Date modified February 2, 2023, https://www.cnsc-ccsn.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/pickering/

over half of Ontario's electricity and forms the backbone of the province's low-emissions grid. Nuclear is positioned as a key technology to ensure reliability during peak demand and to support industrial operations that depend on stable baseload electricity. As the province meets rising demand and decarbonizes its economy, nuclear will continue to deliver not just clean electricity, but lasting jobs, homegrown innovation, and the resiliency needed to power Ontario for generations to come[17].

Pickering's refurbishment will provide some 30-plus years of power and maintain thousands of skilled jobs across Ontario and Canada. The refurbishment is expected to cost $26.8 billion. However, a study by the Conference Board of Canada, said it will increase Ontario's GDP by $38.2 billion in 2024 dollars over the project's lifespan. This will include $17 billion during the refurbishment phase and increase Canada's national GDP by $41.6 billion.[18]

Refurbishing and continuing operations at Pickering will also sustain some 7,500 jobs a year across Canada over its lifespan including 30,500 jobs a year over the refurbishment period. In addition, about 85-90% of spending is expected to stay within Ontario, strengthening the local economy. OPG has already agreed to significant contracts for the Pickering Refurbishment with Ontario-based suppliers.[18]

OPG's CANDU reactors do more than just generate electricity. PNGS reactors are utilized to support the radioisotope industry in both the medical and food safety fields through the production of Cobalt-60 (Co-60). The refurbishment of these units would enable another 30-plus years of cobalt production, accounting for 20% of the world's supply, making it one of the world's leading sources of this important life-saving product.[6] In the medical field Co-60 is the most commonly used isotope in radiation therapy.[19]

INDIGENOUS RELATIONS

The lands and waters on which the PNGS and PWMF are situated are the treaty and traditional territory of the Michi Saagiig and Chippewa Nations, collectively known as the Williams Treaties First Nations (WTFN). PNGS and PWMF are within the territory of the Gunshot Treaty and the Williams Treaties of 1923. The Gunshot Treaty Rights were reaffirmed in 2018 in a settlement with Canada and the Province of Ontario.[6]

CNSC staff indicate they are committed to building long-term relationships with Indigenous Nations and communities who have the potential to be impacted by or have an interest in CNSC regulated facilities.[8] OPG acknowledges that the WTFN are Rightsholders, stewards and caretakers of these lands and the waters that touch them, and that they continue to maintain

[17] Canadian Nuclear Association (CNA), Nuclear Power Central to Ontario's 2025 Energy Plan, , June 18, 2025, https://cna.ca/2025/06/18/nuclear-power-central-to-ontarios-2025-energy-plan/
[18] Nuclear Engineering International, "Ontario approves Pickering refurb The 26.8 billion project will leverage experience from Darlington's refurbishment, December 3, 2025, https://www.neimagazine.com/news/ontario-approves-pickering-refurb/?cf-view
[19] Medical isotopes | Canadian Nuclear Association (CNA), https://cna.ca/nuclear-medicine/medical-isotopes/

responsibility to ensure their health and integrity for generations to come. Engagement on the Pickering Site PROL and WFOL renewal is focused on the WTFN Rightsholders in whose treaty and traditional territory PNGS is located. In consideration of CNSC REGDOC-3.2.2*, Indigenous Engagement*,[20] OPG also engages with Indigenous Nations and communities that assert treaty and/or Aboriginal rights, as well as other Indigenous Nations and communities who do not assert Aboriginal or treaty rights, but who have expressed an interest in OPG's operations at Pickering.[6]

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 project site belong to must be a necessary condition in projects like the PNGS refurbishment.

CONCLUSION

The refurbishment of PNGS will allow Units 5–8 to continue providing a significant portion (10%) of Ontario's electricity supply, thereby maintaining the grid's stability, moderating overall cost of electricity, sustaining the province's economic competitiveness, and maintaining Canada's energy sovereignty. Also, the investment in refurbishment helps achieve a net-zero greenhouse gas economy in Ontario by 2050.[12] Pickering's refurbishment will provide some 30-plus years of power and cobalt production, maintain thousands of skilled jobs across Ontario and Canada during and post refurbishment, and will increase Ontario's GDP by $38.2 billion over the project's lifespan and increase Canada's national GDP by $41.6 billion.

Thus, the Society strongly supports the PNGS Refurbishment Project as a critical part of meeting Ontario's growing electricity demand while supporting Canada's net-zero objectives and long-term economic prosperity.

The Society looks forward to continued engagement and to working constructively with OPG, the CNSC, Indigenous communities, and other stakeholders to support a project that meets the highest standards of safety, environmental protection, long-term value for Ontario and Canada, and thousands of good jobs.

Sincerely,

Rebecca Caron

Rebecca Caron
President
The Society of United Professionals

[20] Government of Canada, REGDOC-3.2.2, Indigenous Engagement, Modified date: May 14, 2025, https://www.cnsc-ccsn.gc.ca/eng/acts-and-regulations/regulatory-documents/history/regdoc3-2-2/