



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada



Ontario Power Generation (OPG)

Application to Renew and Consolidate the Operating
Licences of the Pickering Nuclear Generating Station and
Waste Management Facility and Authorize the
Refurbishment of Units 5-8

CMD 26-H7.C

Commission Hearing Part 2

October 6, 2026



CNSC Staff Supplemental
Presentation



- CNSC staff updates on:
 - Proposed Refurbishment of Units 5-8
 - Periodic Safety Review (PSR)
 - Non-Nuclear Decommissioning of Units 1-4
 - Pickering Waste Management Facility (WMF)
- What We've Heard
- Consultation with Indigenous Nations and Communities
- CNSC Staff's Overall Conclusions and Recommendations



Key Updates Since Part 1

- OPG submitted the Periodic Safety Review (PSR) Global Assessment Report (GAR), which is under CNSC staff's review
- CNSC staff completed additional consultation with Indigenous Nations and communities
- CNSC staff reviewed the public interventions received in this matter
- **This new information does not change CNSC staff's overall safety conclusions or licensing recommendations presented in Part 1**
 - CNSC staff are making additional recommendations pertaining to Indigenous consultation and engagement, as presented in CMD 26-H7.B
 - Additional commitments relating to Indigenous engagement have been included under proposed licence condition G.7



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PROPOSED REFURBISHMENT OF UNITS 5-8



Retube & Feeders

Replace fuel channels, calandria tubes, and feeder piping

Deep-water intake (DWI)

New coolant intake that will draw water from a deeper part of the lake

Steam generators

Replace all steam generators, which will be removed through an opening created in the containment dome



Pickering NGS units 5-8

Source: OPG



Additional Safety Improvements:

- Increased core cooling capabilities and redundancy
- Addition of a new containment filtered venting system
- Installation of a shield tank overpressure protection system
- High wind protection

Other planned scope:

- Turbine generator system overhauls and upgrades
- Digital control computer upgrades
- Replacement of standby generators
- Inspections, repairs, and replacement of civil structures and components



Deep-Water Intake (DWI)

- OPG has committed to construct the DWI during the proposed licence period to improve cooling performance, reduce fish impingement, and enhance resilience to climate change
- OPG estimates that the DWI will be in-service by 2032, but this date is subject to change as the design and construction activities progress
- Until the DWI is complete, OPG intends to use the existing surface-water intake (SWI) with improvements

CNSC staff have assessed OPG's plans related to the SWI and DWI and found that the environment will continue to be protected



Steam Generator Replacement

- OPG plans to replace all steam generators which will be removed through 2 openings in each reactor building (RB) dome
- The openings will be restored, and the RB will be subject to pressure testing prior to the return to service of each unit in accordance with CNSC regulatory requirements and as part of a regulatory hold point
- OPG will use dome mock-ups to train workers on cutting and restoration
- CNSC staff are satisfied that the cutting and restoration activities would have negligible effect on the RB dome structure

CNSC staff will verify that the RB continues to meet regulatory requirements



- **Removed Reactor Components**
 - Includes fuel channels, calandria tubes, feeder pipes, and steam generators
 - Will remain on site and safely stored at the Pickering Component Storage Structure
- **Other Low-Level Radioactive Waste**
 - Will continue to be transported and stored at the Western Waste Management Facility



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PERIODIC SAFETY REVIEW (PSR)



- The PSR process includes submission of:
 - The PSR basis document (*submitted May 2024 and accepted by CNSC staff*)
 - Safety factor reports (*submitted May 2025 and reviewed by CNSC staff*)
 - The global assessment report (GAR) (***submitted August 2026***)
 - The integrated implementation plan (IIP) (*expected August 2027*)
- The GAR presents the findings of the PSR, including the overall conclusions and identified safety improvements to be considered
- CNSC staff are reviewing the GAR and will verify that it was completed in accordance with the methodology described in the PSR basis document
- The PSR process independent from the licensing process and is not a prerequisite for licence renewal



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NON-NUCLEAR DECOMMISSIONING OF UNITS 1-4



Non-Nuclear Decommissioning of Units 1-4

- CNSC staff accepted Volumes 0, 1, and 2 of OPG's Detailed Decommissioning Plan (DDP) in July 2025 and concluded that the work could be performed under the current operating licence
- These volumes describe limited non-nuclear decommissioning activities involving the removal of non-nuclear equipment and outbuildings
- OPG is currently executing this work, and CNSC staff continue to verify that it is conducted in accordance with regulatory requirements
- OPG is required to submit future DDP volumes and seek Commission authorization prior to performing nuclear decommissioning work



Units 1-4 and Units 5-8 Interdependencies

- Interdependencies exist between Pickering units 5-8 and units 1-4 in the form of shared systems
- During the proposed licence period, OPG plans to separate and isolate Pickering units 1-4 from units 5-8
- Interdependencies will be removed over time in accordance with OPG's Storage with Surveillance (SwS) plan

CNSC staff will verify that all systems necessary for the safe operation of the Pickering NGS are maintained



- The non-nuclear decommissioning activities described in OPG's DDP are expected to primarily generate conventional waste
- Conventional waste
 - Primarily metals and other building materials that result from the demolition and disassembly of non-nuclear structure, systems, and components
 - Will continue to be sorted and diverted to off-site waste management and recycling facilities
- Possible small amounts of low-level radioactive waste
 - OPG has indicated that small amounts of low-level waste may be encountered
 - This waste would be managed and assessed through OPG's Radiation Protection and Waste Management programs using existing waste disposal pathways



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THE PICKERING WASTE MANAGEMENT FACILITY (WMF)



- In April 2026, OPG submitted the results of the Pickering WMF Climate Change Resilience Assessment (CCRA)
 - OPG concluded that the Pickering WMF is not vulnerable to projected climate change related hazards and is prepared for extreme weather events
 - CNSC staff found that OPG's assessment is in line with industry best practice
- OPG is requesting authorization to store up to 1,410 dry storage containers (DSCs) within the fifth DSC storage building
 - CNSC staff are satisfied that OPG's geotechnical assessments remain valid
 - CNSC staff found that OPG's safety analysis meets regulatory requirements and are satisfied that workers will continue to be protected



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WHAT WE'VE HEARD: PUBLIC INTERVENTIONS



Public Interventions: Summary of Themes

- The CNSC received **48** interventions provided by members of the public and Indigenous Nations and communities; including 10 who were awarded funding through participant funding program (PFP)
- Key themes include:
 - Ongoing assessments, including the Periodic Safety Review
 - Emergency Management and Preparedness
 - Environmental Protection
 - Aging Management
 - Waste Management
 - The Duty to Consult and Accommodate Indigenous Nations and Communities
- CNSC staff responses to high-level intervention themes are included in CMD 26-H7.B



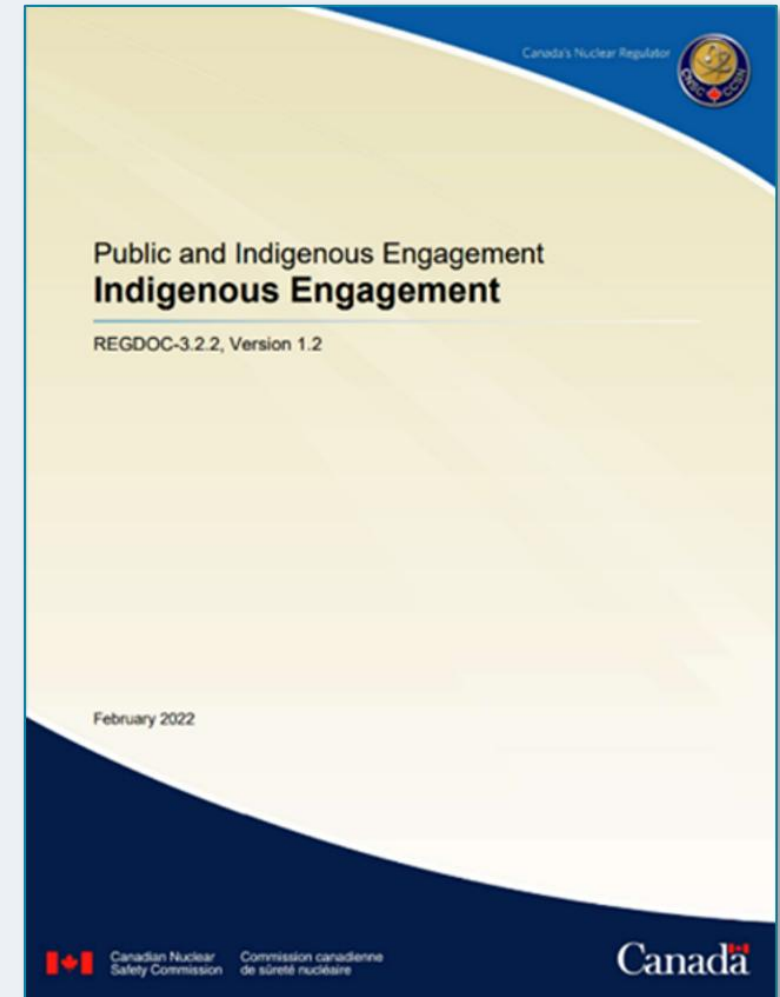
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CONSULTATION AND ENGAGEMENT WITH INDIGENOUS NATIONS AND COMMUNITIES



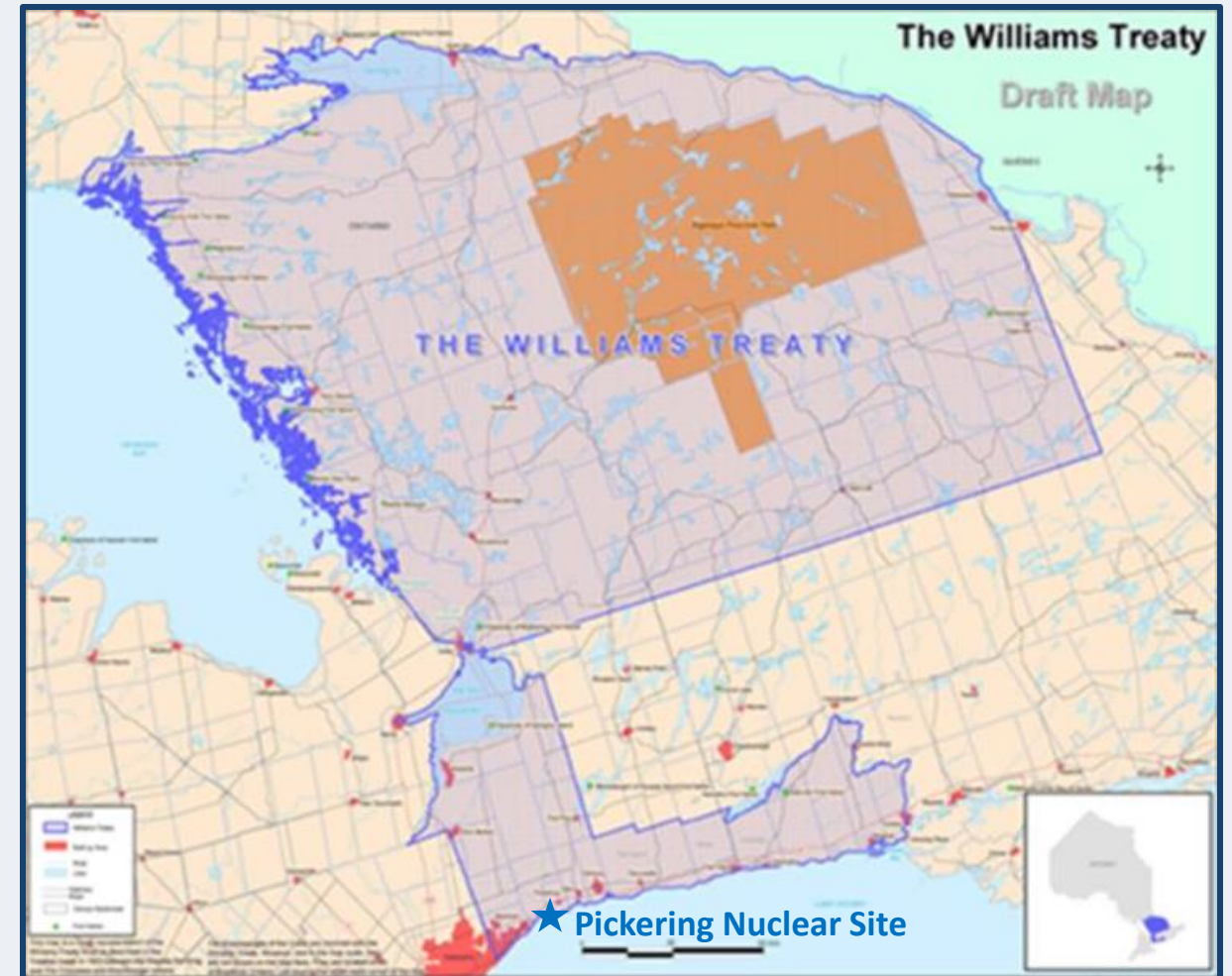
CNSC staff's approach to consultation with Indigenous Nations and communities is guided by:

- Section 35 of *Constitution Act, 1982*
 - Reconciliation, the Honour of the Crown, and the Duty to Consult, and where appropriate, Accommodate
- *United Nations Declaration on the Rights of Indigenous Peoples Act*
- The principles articulated in the United Nations Declaration on the Rights of Indigenous Peoples Act (UNDA), including Free, Prior and Informed Consent (FPIC)
- REGDOC-3.2.2, *Indigenous Engagement*





Pickering NGS and Pickering WMF are located in Pickering, Ontario within the traditional lands and waters of the Michi Saagiig Anishinaabeg, the Gunshot Treaty (1787-88), the Williams Treaties (1923), and the Williams Treaties Settlement Agreement (2018).





Timeline of Consultation and Engagement for OPG's Application²³

July 2025	Notification of OPG's licence application and Participant Funding Program opportunity.
November 2025	Participant Funding awarded.
January 2026	Revised Hearing Notice Posted indicating hearing dates delayed by three months to allow for ongoing consultation and engagement activities with Indigenous Nations and communities.
January 2026 – October 2026	Monthly and project specific meetings with Indigenous Nations and communities.
April 2026	Public webinar held and regular project updates.
May 2026 – October 2026	Opportunity for collaboration on issues and concerns tables, Rights Impact Assessments, consultation report and LC G.7.



Key consultation activities:

- Early notification of OPG's application, hearing process, and funding opportunities
- Regular, agreed-upon monthly meetings and project-specific consultation meetings and technical discussions on Pickering NGS, Pickering WMF, decommissioning, and the proposed DWI, including coordination of consultation and engagement with the Department of Fisheries and Oceans (DFO)
- Joint Consultation Framework meetings with the four MS-WTFNs
- Offer to develop project specific consultation protocols
- Responsiveness to questions, concerns and requests shared with CNSC staff and OPG
- Leadership meeting on March 10th, 2026
- Issues tracking tables and formal responses to concerns raised
- Opportunities to review and provide feedback on CNSC Staff documents, including CNSC staff's consultation report and Rights Impact Assessments
- Engagement on proposed Licence Condition G.7: Indigenous Engagement
- Additional funding to support continued engagement and participation in the regulatory process and Commission hearing

The MS-WTFNs do not give their consent and support for the Project to proceed until their concerns have been addressed, a licence condition is included requiring the Cumulative Rights, Responsibilities and Relations Assessment (C3RA), and a DWI is completed prior to the restart of any units

Concerns identified by the MS-WTFNs:

- Consultation process, timelines, and capacity/funding
- Duty to Consult, Rights Impact Assessment, UNDRIP, and consent
- Environmental and aquatic impacts from deepwater intake (DWI) construction
- Waste management and licence consolidation



Key consultation and engagement activities:

- **Early notification of OPG's application, hearing process, and funding opportunities**
- **Project-specific consultation and engagement discussions through regular meetings and application specific meetings to discuss intervention, concerns raised and technical matters of interest**
- **Opportunities to participate in the hearing**

SON requests OPG be required to define the radioactive waste and material from Project activities that will be stored at the Pickering Component Storage Structure and to develop on-site waste management plans for Pickering NGS that do not involve the management, transportation, or storage of nuclear waste in SON Territory unless FPIC is provided

Concerns identified by SON:

- Lack of Free, Prior and Informed Consent (FPIC) in waste management and storage in their territory
- Continued importation and accumulation of nuclear waste in SON territory
- Impacts on Rights, Culture, and Well-Being
- Lack of recourse to address its concerns



- To support the Commission's decision-making, CNSC staff assess and make recommendations to the Commission on the potential impacts to Indigenous and/or Treaty rights which take into account the proposed mitigations, follow-up measures, commitments and accommodations for the Project.
- This assessment of potential impacts to Indigenous and/or Treaty rights is completed through a Rights Impact Assessment (RIA).
- CNSC staff sought to conduct RIAs with the MS-WTFNs about the potential for OPG's licence application to impact their Indigenous and/or Treaty rights.

Analysis and Conclusions Regarding Potential Impacts on Rights

Considering all information available to date, CNSC staff's view is that:

- The potential impacts to Indigenous and/or Treaty rights have been appropriately considered, assessed, mitigated and accommodated, should the Commission grant OPG's proposed licencing requests.
- CNSC staff recommend implementation of the proposed commitments and accommodation measures outlined in the Consultation Reports and CMDs.
- CNSC staff will continue working with Indigenous Nations and communities to advance commitments and address outstanding concerns, where possible.



Proposed Key Commitments and Accommodations

OPG:

- Indigenous Harvester Receptor in risk assessments
- Indigenous participation in aquatic monitoring
- Advance sharing of monitoring schedules
- Collaborative aquatic habitat offsetting
- Environmental and wildlife notifications
- Enhanced cultural heritage assessments
- Additional Lake Sturgeon monitoring
- Enhanced fish entrainment monitoring
- Continued collaboration on the Cumulative Rights, Responsibilities and Relations Assessment (C3RA)

CNSC staff:

- Proposing licence condition G.7 on Indigenous engagement, including addressing concerns with regard to engagement on waste management
- Continuing to engage and collaborate with Nations and communities through Terms of Reference for long-term engagement
- Collaboration on oversight and reporting on all relevant licence conditions and commitments
- Engagement and collaboration on CNSC's Independent Environmental Monitoring Program
- Development of RIA and collaborative recommendations to the Commission
- Recommendation for change in hearing date to allow for more time for consultation and engagement
- Establishment of a forum with the MS-WTFNs to address procedural, process and policy concerns
- Ongoing support for capacity building, monitoring and studies



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CNSC STAFF CONCLUSIONS AND RECOMMENDATIONS



**CNSC staff's
conclusions
presented at
Part 1 remain
unchanged**

CNSC staff found that:

- OPG's application meets the relevant regulatory requirements

CNSC staff recommend that the Commission conclude that:

- OPG is qualified to carry on the activities authorized in the proposed consolidated operating licence
- OPG has made adequate provisions for:
 - the protection of the environment
 - the health and safety of persons; and
 - the maintenance of national security measures



CNSC staff recommend that the Commission:

- **Renew** the Pickering PROL, for a period of 10 years from January 1, 2027, until December 31, 2036, to authorize OPG to:
 - Refurbish and continue to operate Pickering NGS units 5-8
 - Continue to operate the Pickering WMF
 - Carry out the licensed activities listed in part IV of the proposed PROL
- **Consolidate** into the renewed PROL the licensed activities of the WFOL and concurrently revoke the WFOL
- **Delegate** authority as set out in section 8.5 of CMD 26-H7
- **Accept** OPG's proposal for the reinstatement of certified staff to active status during the proposed restart of Unit 5 with respect to licence condition 2.4
- **Authorize** OPG to store up to 1,410 DSCs in storage building #5 at the Pickering WMF
- **Determine** that the Duty to Consult and, where appropriate, Accommodate has been met



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