



CMD 26-H7.1

Date: 2026-05-15

**Written Submission from
Ontario Power Generation**

**Mémoire
d'Ontario Power Generation**

In the matter of

À l'égard de

Ontario Power Generation

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

Ontario Power Generation

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 1**

**Audience publique de la Commission
Partie 1**

June 23, 2026

Le 23 juin 2026

1675 Montgomery Park Road, Pickering, Ontario L1V 2R5

May 15, 2026

CD# P-CORR-00531-24304

Ms. C. Salmon

Commission Registrar,
Canadian Nuclear Safety Commission
280 Slater Street
Ottawa, Ontario, K1P 5S9

Dear Ms. Salmon:

**Submission of Commission Member Document in support of Pickering
Licence Application for Pickering NGS and Waste Management Facility**

The purpose of this letter is to submit to the Canadian Nuclear Safety Commission (CNSC), Ontario Power Generation Inc.'s (OPG) Commission Member Document (CMD) to supplement the application for renewal and consolidation of the Pickering Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL), PROL 48.04/2028 and the Pickering Waste Management Facility (PWMF) Waste Facility Operating Licence (WFOL), WFOL-W4-350.02/2028 (Reference (R-1)).

Attachment 1 of this submission is the OPG CMD, which provides supplemental information consisting of updates on items discussed in OPG's renewal application (R-1). The information provided in this CMD demonstrates that OPG is qualified to carry on the licensed activities to operate a Class I and Class IB nuclear facility, progress decommissioning of Pickering NGS Units 1 to 4, and refurbish Pickering NGS Units 5 to 8, while meeting the requirements in the Act and Regulations.

OPG has also provided supplementary information to the CNSC on the ongoing Indigenous Engagement activities (R-2) in support of the licence renewal. Further updates to OPG's engagement efforts are provided in the Indigenous Engagement Report in Appendix F of the CMD. OPG continues to prioritize and makes regular efforts to engage and collaborate with Indigenous Rightsholders on ongoing operations, as well as proposed initiatives at the Pickering NGS and PWMF.

OPG remains committed to the safe and reliable operation of the Pickering NGS and PWMF, safeguarding the health, safety, and security of individuals and the environment and will continue to meet the requirements of the Nuclear Safety and Control Act and the associated Regulations.

Should there be any questions, please contact Ms. Aditi Bhardwaj, Senior Manager, Regulatory Affairs, aditi.bhardwaj@opg.com.

Sincerely,



Dave Rogers
Senior Vice President
Pickering Nuclear
Ontario Power Generation
Inc.



Kapil Aggarwal
Vice President
Nuclear Sustainability
Strategies and Services
Ontario Power Generation
Inc.



Luca Ceccato
Senior Vice President
Pickering Projects
Ontario Power
Generation Inc.

Attach.

cc: A. Viktorov
R. Richardson
K. Campbell
CNSC Site Supervisor - Pickering
forms-formulaires@cnscccsn.gc.ca

- Reference:
1. OPG Letter, P. Seguin, K. Aggarwal, and L. Ceccato to C. Salmon, "Renewal Application for Pickering Nuclear Generating Station Power Reactor Operating Licence and Pickering Waste Facility Operating Licence", June 27, 2025, CD# P-CORR-00531-23980.
 2. OPG Letter, S. Irvine to C. Salmon, "Pickering Nuclear Generating Station Power and Pickering Waste Facility Licence Renewal – Update on Indigenous Engagement Activities", March 4, 2026, CD# P-CORR-00531-24269.

ATTACHMENT 1

OPG Letter, D. Rogers, K. Aggarwal and L. Ceccato to C. Salmon, "Submission of Commission Member Document in support of Pickering Licence Application for Pickering NGS and Waste Management Facility", CD# P-CORR-00531-24304

Pickering Site Licence Renewal Commission Member Document

Pickering Site

*Licence Renewal Commission
Member Document*

May 2026

ONTARIO
POWER
GENERATION

Land Acknowledgment

The lands and waters on which the Pickering Nuclear Generating Station (NGS) and Pickering Waste Management Facility (PWMF) are situated are the treaty and traditional territory of the Michi Saagiig and Chippewa Nations, collectively known as the Williams Treaties First Nations.

Pickering NGS 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.

Ontario Power Generation (OPG) respectfully acknowledges that the Williams Treaties First Nations are Rightsholders, stewards and caretakers of these lands and the waters that touch them, and that they continue to maintain responsibility to ensure their health and integrity for generations to come.

As a company, OPG remains committed to developing positive and mutually beneficial relationships with the Williams Treaties First Nations.

Executive Summary

OPG requests authorization from the Canadian Nuclear Safety Commission (CNSC) for a renewal of the Pickering NGS Power Reactor Operating Licence (PROL), PROL48.04/2028, which expires on August 31, 2028. OPG is requesting renewal of the PROL for a 10-year licence term from January 1, 2027 to December 31, 2036. During the requested licence term, OPG plans to refurbish Pickering NGS Units 5 to 8 for continued operation and to progress decommissioning of Pickering NGS Units 1 to 4. OPG is requesting an early renewal of the PROL to align with the planned refurbishment schedule.

OPG also requests the renewal of the licensed activities authorized under the Pickering Waste Management Facility (PWMF) Waste Facility Operating Licence (WFOL), WFOL-W4-350.02/2028, which expires on August 31, 2028, and consolidation of these licensed activities with the Pickering NGS PROL. This combined request is administrative in nature and OPG will uphold the safety standards and regulatory requirements of both facilities.

OPG's application, submitted in June 2025, demonstrates that OPG will continue to safely operate Pickering NGS Units 5 to 8 and the PWMF, as well as progress decommissioning of Units 1 to 4, while meeting the requirements of the *Nuclear Safety and Control Act* (NSCA) and associated *Regulations*. OPG is qualified to carry out the requested licensed activities and will continue to protect the health, safety, and security of persons and the environment while maintaining national security and satisfying international obligations.

This Commission Member Document (CMD) highlights strengths and achievements in each SCA and includes updated information since OPG's licence application was submitted in June 2025, including improvements made or planned, to support operation through the end of the requested licence term. OPG is proud of the strong performance, long-standing safety record and the many significant achievements at the Pickering NGS and PWMF during the current licence term. Our track record is a testament to the diligence and passion for excellence that all personnel are committed to on a daily basis in support of the safe and reliable operation of the station and waste management facility (WMF). Our people do more than just work here; they live here and across the Durham Region and the surrounding areas. Public and environmental safety is more than a top priority; it is part of who we are.

Year over year, Pickering NGS and the PWMF continue to meet or exceed the regulatory requirements of the CNSC as demonstrated through CNSC Compliance Verification activities. These robust evaluations of all the Safety and Control Areas (SCAs) demonstrate the Pickering NGS 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.

Pickering NGS Units 5 to 8 Refurbishment

OPG was asked by the Province of Ontario to continue producing safe, reliable energy at the Pickering NGS by delivering a world-class refurbishment project for the benefit of generations to come. As part of the refurbishment, enhancements and upgrades will be made to key reactor systems and components to improve plant safety, reliability, and performance, including the replacement of fuel channels, feeders and steam generators. Pickering NGS Units 5 to 8 are authorized under the current PROL to operate until the end of 2026 after which the units will be placed in a safe shut down state with activities planned to defuel and dewater the units. Pending

the renewal of the PROL, all four refurbished reactors are planned to be returned to service by the mid-2030s.

To support refurbishment, extending the Pickering NGS Units 5 to 8 operating life for an additional 30-plus years, OPG is conducting a comprehensive Periodic Safety Review (PSR3). The PSR3 will be completed before any of the units are returned to service post refurbishment. An Integrated Implementation Plan (IIP) is an output of the PSR3 which provides the plan for the implementation of safety enhancements. OPG is committed to implementing the pending IIP for Pickering NGS.

The Pickering Refurbishment Project will be a multi-year, multi-phase project which will include replacements, upgrades, and other improvements to each reactor, as well as to supporting systems, structures and components (SSCs). Since Q1 2024, OPG has engaged in procurement and pre-requisite activities to ensure readiness to proceed when planning is complete and regulatory approvals are secured. OPG has a well-established record of delivering successful refurbishment work at the Darlington NGS. Darlington NGS's 10-year refurbishment program is now complete, having consistently achieved strong safety, quality, and schedule performance. Units 2, 3, 1 and 4, returned to service in June 2020, July 2023, November 2024 and March 2026 respectively, are all operating at full capacity following their successful refurbishment.

The refurbishment of Pickering NGS will allow Units 5 to 8 to continue providing a significant portion (10%) of the provincial energy supply, thereby maintaining the grid system's stability, moderating the overall cost of electricity, sustaining the province's economic competitiveness, and maintaining Canada's energy sovereignty. The investment in refurbishment supports OPG's goal to help achieve a net-zero greenhouse gas economy in Ontario by 2050. This improvement reduces reliance on fossil fuels and contributes to a significant decrease in overall carbon emissions. The refurbishment of Pickering NGS Units 5 to 8 will provide many benefits for customers, the economy, and the environment including:

- Securing more than 2,100 MW of safe, clean, reliable nuclear power for Ontario for an additional 30-plus years.
- Powering two million homes and businesses across Ontario, safely and reliably.
- Maintaining and securing thousands of highly skilled jobs for OPG, contract partners and the broader Canadian supply chain.
- Generating a significant increase in Ontario's GDP by \$38.2 billion (in 2024 dollars) over the refurbishment project's lifespan, including \$17 billion during the refurbishment phase.

Pickering NGS Units 1 to 4 Decommissioning

In parallel with the refurbishment and continued operation of Pickering NGS Units 5 to 8, OPG will progress the decommissioning of Pickering NGS Units 1 to 4 during the proposed licence period. Units 1 and 4 will complete stabilization activities and will progress to Storage with Surveillance (SWS) and dismantling. Units 2 and 3, which have been in SWS since 2010, will progress with dismantling activities. On June 26, 2025, CNSC staff accepted the SWS plan and the Detailed Decommissioning Plan (DDP) which allows the removal of non-nuclear structures, systems, and components. OPG will proceed with select dismantling and demolition activities as described in these plans. The DDPs will be revised, at a minimum every five years, in accordance with the associated regulatory requirements.

Pickering Waste Management Facility

OPG will continue to safely process and store used fuel generated from the Pickering NGS in Dry Storage Containers (DSCs) into the next licence period. To support onsite interim storage of DSCs, a fifth used fuel dry storage building will be constructed and be operated. To support the onsite interim storage of low and intermediate level waste generated from Pickering NGS refurbishment and decommissioning activities, the Pickering Component Storage Structure (PCSS), which received Commission approval on July 24, 2025 is being constructed.

Safety and Reliability

During the current licence term, the Pickering NGS and PWMF continued to demonstrate strong safety performance. In the area of radiological safety, the annual dose to the public from the operation of the Pickering NGS and PWMF consistently remained below 1% of the regulatory limit. In the area of conventional safety, OPG has received once again, the Electricity Canada President's Award of Excellence for Employee Safety – Generation. OPG has now received this award, nine (9) times in the last ten (10) years. In addition, Pickering NGS was recognized by an international nuclear organization in January 2026, highlighting the station's ability to operate at the highest levels of operational safety and equipment reliability.

OPG is currently undertaking PSR3 in support of the refurbishment of Pickering NGS Units 5 to 8. This process was used for Darlington NGS refurbishment as well as other Nuclear Power Plant refurbishments worldwide. The 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. 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.

The results of the review will be documented in a Global Assessment Report (GAR), which will form the basis for OPG's Integrated Implementation Plan (IIP). The IIP will define the improvements to be implemented and the associated implementation timelines. This IIP will be submitted to CNSC staff in August 2027 as per the protocol agreed to by CNSC and OPG for the conduct of PSR3.

The PSR3 will serve as the foundation for CNSC acceptance of the safety enhancements supporting the continued operation of Pickering NGS Units 5 to 8. Per the protocol agreed to by CNSC and OPG for the conduct of PSR3, the IIP is expected to be accepted prior to the return to service of any refurbished unit. In keeping with OPG's commitment to transparency and open communication, OPG will publicly post summaries of the GAR and IIP on opg.com.

OPG has a strong track record of successfully implementing IIPs for Pickering NGS (PSR2 and PSR2-B) and for the Darlington NGS refurbishment and is fully committed to implementing the next IIP for Pickering NGS. CNSC staff will be kept informed throughout the process to support timely and effective regulatory review in accordance with the protocol.

OPG is committed to the safe handling and management of waste and radioactive materials. During the current licence term, OPG continued to safely and reliably transfer, process, and store used fuel in DSCs from the Pickering NGS at the PWMF. The PWMF has operated safely without a Lost Time Accident for all 30+ years of operation (since 1996). There have been more than 1,400 on-site transfers of loaded DSCs without incident, with 497 DSCs processed and

stored between 2018 and 2025. Additionally during the current licence period, there have been no reportable spills and no environmental non-compliances at the PWWF.

Commitment to Reconciliation and Indigenous Engagement

OPG is committed to taking concrete and measurable actions to advance reconciliation with Indigenous peoples and to regularly report on the company's activities and progress in achieving established goals. In July 2024, OPG released an updated version of its Reconciliation Action Plan (RAP), which was originally launched in the fall of 2021. Some key highlights and achievements include:

- Since 2022, OPG has reached \$198 million in Indigenous contract awards and \$39.4 million in equity distributions to our Indigenous partners.
- Developing and initiating roll out of an Indigenous Relations training program to build Indigenous relations awareness and cultural competence across the organization.
- Overall, in 2024, OPG invested a total of over \$700,000 in Indigenous initiatives including a sponsorship of the Little Native Hockey League's 51st Annual Tournament, and two bursaries for youth pursuing energy related education.
- In September 2024, OPG was recertified with the Gold Designation from the Canadian Council for Indigenous Business through its Partnership Accreditation in Indigenous Relations Program.
- The Indigenous Opportunities Network (ION) program was launched in 2018 through a partnership with Kagita Mikam Aboriginal Employment and Training Agency, with the goal of placing Indigenous candidates into trades and non-trades roles within OPG, vendors, and unions in the energy sector. To date, ION has placed 264 Indigenous candidates. In 2025, 74 candidates have been hired surpassing a goal of 70 for 2025 .

OPG values the relationships it has built with Indigenous Nations and communities and is committed to continued collaboration and engagement regarding ongoing operations to meet the electricity needs of the province of Ontario while also reducing the impacts of climate change. To support ongoing engagement with respect to nuclear and renewable generation operations, OPG currently maintains Framework Agreements with five communities (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nations and Six Nations of the Grand River). These bilateral forums provide ongoing capacity in support of engagement and relationship building and have been put in place over the last 3 to 5 years.

In the context of this specific application, OPG acknowledges and respects the Aboriginal and/or treaty rights of Indigenous Nations and communities as recognized in the *Constitution Act, 1982*. OPG has and will continue to provide opportunities for engagement with Indigenous Nations and communities with respect to established Aboriginal and/or treaty rights proximate to the site, including the provision of site specific capacity funding for proposed activities at Pickering. OPG also engages with Indigenous Nations and communities with respect to asserted Aboriginal and/or treaty rights as well as Indigenous Nations and communities that express interest in OPG's sites and operations.

OPG recognizes that meaningful relationships thrive on consistent engagement where trust is maintained through respectful, open, and transparent dialogue. OPG has deepened engagement on nuclear operations over the current licence period and will continue to support meaningful engagement into the future. Based on feedback received from the Michi Saagiig

Nations, OPG has built a site-wide engagement plan with Indigenous Nations and communities to increase collaboration on ongoing and proposed initiatives at Pickering NGS and PWF.

Public Engagement and Communications

OPG values the relationships it has with local communities, the public and all its stakeholders. OPG fosters open and ongoing communications through a comprehensive public outreach program (Public Information and Disclosure Program).

The program ensures public communications are informative, timely and accurate, and information is disclosed in accordance with applicable legal and regulatory requirements.

Information is communicated in several ways based on audience identification, their interests, perception of risk, and their preferred means of communication. This ensures clear understanding of nuclear operations, activities and projects to allow the public to make informed, objective decisions through readily accessible information, open dialogue and opportunities to have concerns addressed.

OPG's relationship with the local community remains strong because of the ongoing engagement and partnerships with community stakeholders and organizations. Community stakeholders include government, media, business leaders, educational institutions, interest groups and community organizations.

Conclusion

In summary, the information provided in OPG's application as well as this CMD, demonstrates that OPG:

- Is qualified to carry out the activities to be licensed; and,
- Will, in carrying out those activities, continue to ensure the health and safety of persons, protection of the environment and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

OPG has demonstrated strong safety and operational performance at the Pickering NGS and PWF during the current licence term resulting in many operational achievements. OPG has also demonstrated, through its refurbishment of Darlington NGS, it can safely execute the refurbishment of a nuclear power plant. With the improvements and future activities planned as described in this CMD, OPG is confident in its ability to safely and reliably execute the requested licensed activities through 2036.

OPG therefore requests the Commission to authorize the renewal of the Pickering NGS PROL consolidated with the PWF WFOL into a single operating licence, for a 10-year term from January 1, 2027 to December 31, 2036, authorizing the licensed activities requested in the submitted application.

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The background image shows two female engineers in a factory or industrial setting. They are both wearing orange hard hats and safety glasses. The engineer on the left is wearing a blue and white striped shirt, while the one on the right is wearing a white shirt. They are both looking down at a large set of blueprints spread out on a wooden table. The background is slightly blurred, showing industrial equipment and structures. There are blue and yellow geometric shapes overlaid on the image, particularly on the left and right sides.

1.0

Pickering NGS Licence Renewal - Introduction

Pickering Licence Renewal – Introduction

Ontario Power Generation (OPG) generates approximately half of Ontario's electricity and operates two nuclear generating stations in the province. The Pickering Nuclear Generating Station (NGS) Units 5 to 8 currently generate a total of 2,100 megawatts (MW) of electricity, equivalent to powering two million homes and producing 10% of Ontario's electricity. Nuclear power's major benefits include low operating costs and extremely low greenhouse gas emissions.

Since its start of commercial operation, the Pickering NGS has proven to be a safe, reliable, and important source of energy for the province of Ontario while meeting growing energy needs. The dedicated team of professionals who operate, maintain and support the station have consistently demonstrated their commitment to safety and excellent performance.

The Pickering NGS refurbishment and continued operation are essential to meeting the growing energy needs in the province while securing safe, reliable low carbon power, contributing significantly to our climate change goals. The Independent Electricity System Operator forecasts that electricity demand will rise by 65 per cent by 2050. Moreover, with other nuclear stations in Ontario undergoing their own refurbishments, there will be a need for additional electricity beyond 2026. Refurbishing Pickering NGS supports Ontario's energy sovereignty, helping the province manage its energy future with reliable, baseload electricity while protecting the environment.

Electricity generated by nuclear power comes with the by-product of radioactive waste. OPG is committed to the responsible and comprehensive management of all its radioactive waste and has decades of experience in safely providing interim storage of waste generated from the Pickering NGS at our waste management facilities including at the Pickering Waste Management Facility (PWMF). OPG is also committed to the safe management and permanent disposal of nuclear waste.

In June 2025, OPG submitted an application (Reference 1) which provided information to demonstrate that Pickering NGS and PWMF will continue to meet or exceed all the legal requirements of the *Nuclear Safety and Control Act* and the associated *Regulations*, and that Pickering NGS and PWMF will continue to operate safely and within the required margins for an operating nuclear plant and waste management facility. OPG also requests the Canadian Nuclear Safety Commission (CNSC) to authorize:

1. The renewal of the Pickering NGS PROL and PWMF WFOL, authorizing OPG to carry out the activities listed in Appendix C of Reference 1 for a 10-year term from January 1, 2027 to December 31, 2036;
2. The consolidation of the PROL and WFOL into a single operating licence;
3. The operation of Units 5 to 8 following refurbishment;
4. The inclusion of licensed activities pertaining to Units 1 to 4 decommissioning (in accordance with the CNSC staff accepted Detailed Decommissioning Plans), up to and not beyond the removal of outbuildings and non-nuclear components;
5. The removal of WFOL Licence Condition 9.2;
6. The authorization to expand the capacity of PWMF Storage Building 5 to 1,410 Dry Storage Containers from 1,200 Dry Storage Containers; and

7. The authorization for deviation from REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*, Subsection 20.5.4, *Work under supervision* during the licence period before return to service of the first unit.

OPG's CANDU reactors do more than just generate electricity. Pickering NGS reactors are utilized to support the radioisotope industry in both the medical and food safety fields through the production of Cobalt-60 (Co-60). Approximately every two years, the cobalt adjuster rods are harvested (i.e., removed from reactor core) from the Pickering NGS Units 6, 7 and 8 and shipped to Nordion Inc.'s facility in Kanata, Ontario, where it is processed and sold to market. The refurbishment of these units would provide the opportunity for another 30 more years of Cobalt-60 production, accounting for 20% of the world's supply, making it one of the world's leading sources of this important life-saving product. The predictable and reliable nature of our reactors enables dependable supply chains for isotope markets.

OPG is committed to working with Indigenous Nations and communities, proximate to its present and future operations, to foster positive and mutually beneficial relationships that will create social and economic benefits through partnership and collaboration. Our relationships are developed on a foundation of respect for the rights of Indigenous Nations and communities and our goal is to build and foster openness, transparency, and trust in our engagement efforts. OPG's relationship with Indigenous Nations and communities has evolved over the last 10 years. As a continuous learning and growing organization, OPG has been adaptive and flexible to be responsive to the Truth and Reconciliation Commissions Calls to Action and ongoing feedback from the Indigenous Nations and communities OPG works with. OPG remains committed to strengthening relationships with Indigenous Nations and communities and facilitating continued engagement at the Pickering NGS and PWF through the licence renewal application process and going forward into the future.

OPG also believes in open and transparent communication in a timely manner to maintain positive and supportive relationships, and the confidence of Indigenous peoples, key stakeholders and the local community who have an interest in the operation and management of the Pickering NGS site.

1.1 Site Description and Ownership

The Pickering NGS site includes the Pickering NGS and PWF. The site is located in the traditional territory of the Michi Saagiig and Chippewa Williams Treaties First Nations, on the north shore of Lake Ontario in the City of Pickering in the Regional Municipality of Durham, within the Province of Ontario. The site is approximately 32 km east-northeast of downtown Toronto and 21 km southwest of the City of Oshawa at latitude 43° 49'N and longitude 79° 04'W. The total frontage of the site along the Lake Ontario shoreline is approximately 2260 m. The transmission egress right-of-way which leads north from the site boundary is 155 m in width. There are a number of watercourses in the vicinity of Pickering NGS site. The two major ones closest to the site are Duffins Creek, 2.2 km to the east, and the Rouge River, 4 km to the west.

Pickering NGS

Pickering NGS has eight reactor units numbered 1 to 4, from east to west, and 5 to 8, from west to east from the centre of the station. Units 1 to 4 are also referred to as Pickering NGS-A while Units 5 to 8 are also referred to as Pickering NGS-B, as shown in Figure 1.

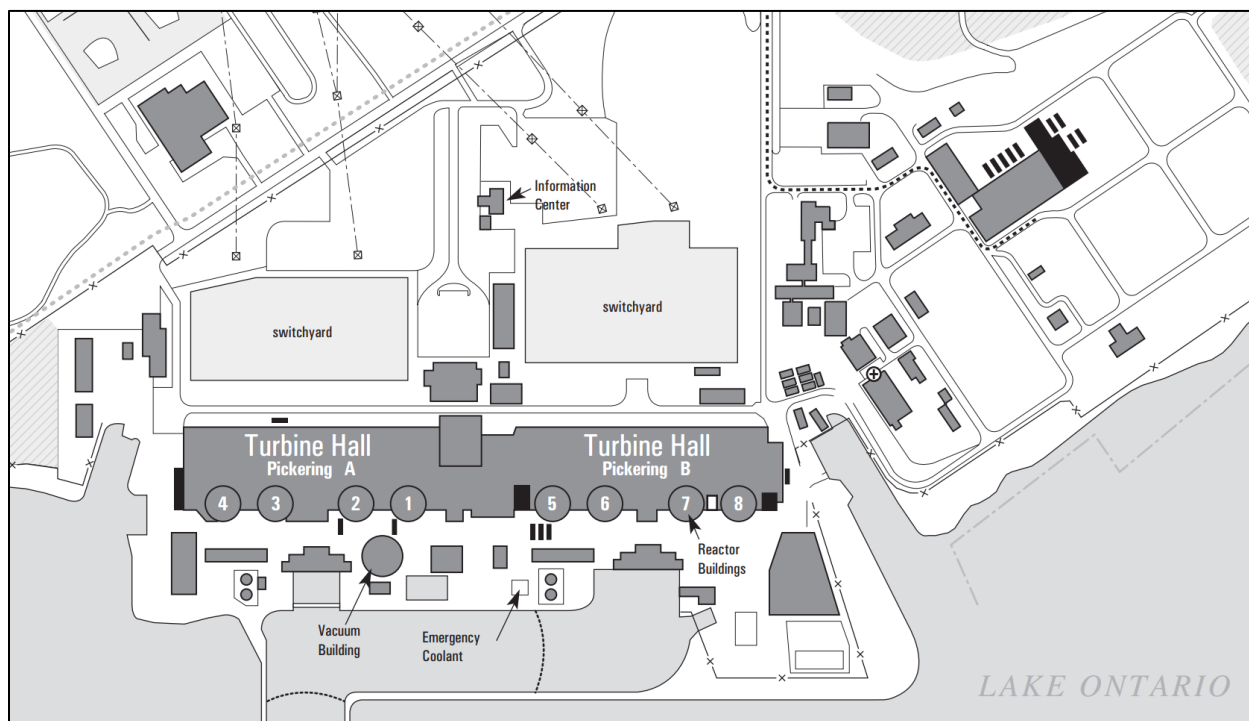


Figure 1. Pickering Site Map (as of December 2025)

Pickering NGS Units 5 to 8 are licensed to operate until December 31, 2026, up to a maximum of 305,000 equivalent full power hours on the lead unit (Unit 6). Unit 1 was removed from service in October 2024 and Unit 4 was removed from service in December 2024. Units 2 and 3 have been in Storage with Surveillance (SWS) since 2010.

The Pickering NGS-A and Pickering NGS B safety reports provide detailed and extensive information on the facility and the Systems, Structures, and Component (SSC) design. Further information is provided below in Table 1 and Table 2.

Table 1. Summary Data for Pickering NGS

Summary Data - Pickering NGS	
Number of Units	8
Operational Units	4 (Units 5-8)
Units removed from service	4 (Units 1-4) Units 2 and 3 in SWS Units 1 and 4 undergoing stabilization
Net Power Output (Electrical)	4 x 516 MWe (Units 5-8)
Nuclear Steam Supply System	CANDU Pressurized Heavy Water Reactor

Table 2. Pickering In-service Dates

Unit	In-Service Dates (Operational Units)
Unit 5	May 10, 1983
Unit 6	February 1, 1984
Unit 7	January 1, 1985
Unit 8	February 26, 1986

Pickering Waste Management Facility

The PWMF is currently licensed under a separate operating licence, WFOL-W4-350.02/2028 which expires August 31, 2028. At the PWMF, OPG processes and stores used fuel Dry Storage Containers (DSCs) containing used nuclear fuel (high level radioactive waste) generated at the Pickering NGS that has been cooled typically for 10 years in the irradiated fuel bays. The PWMF is also authorized to store a maximum of 100 DSCs at a time, containing used fuel that has been cooled for a minimum of 6 years from Pickering NGS Units 5 to 8.

The dry storage of used fuel at the PWMF spans over two physically separate areas - Phase I and Phase II - within the overall boundary of the Pickering NGS site, as shown in Figure 2. Phase I is located within the protected area of the Pickering NGS and consists of the DSC Processing Building and two DSC storage buildings (SB1 and SB2). Phase II of the PWMF is located northeast of Phase I and is contained within its own protected area within the boundary of the Pickering site. Phase II contains two DSC storage buildings (SB3 and SB4). The transfer route of the loaded DSCs from the PWMF Phase I to the PWMF Phase II is solely on OPG property. WFOL-W4-350.02/2028 also authorizes OPG to construct two additional DSC storage buildings in Phase II and one DSC processing building to replace the current DSC Processing Building. Currently, a fifth storage building (SB5) is planned with an in-service date in 2027; SB5 is required for the storage of used fuel arising from the current operation of Pickering NGS and the extended operation of Pickering NGS following refurbishment. Consistent with industry best practice, OPG will construct new facilities on an as-needed basis.

The PWMF also provides interim storage for intermediate level waste components previously removed during retubing of Pickering NGS Units 1 to 4 reactors. The retube waste was stored in Dry Storage Modules (DSM) within Phase I; these DSMs were recently relocated to the PWMF Phase II area, to allow for the minimum required space for the tunnel boring machine launch shaft pad construction and operation in support of the proposed Deep-Water Intake (DWI) project.

In July 2025, the Commission authorized the construction and operation of a low and intermediate level waste storage building (Reference 2). The Pickering Component Storage Structure (PCSS) will provide onsite interim storage of low and intermediate level waste generated from Pickering NGS Units 5 to 8 refurbishment and potential decommissioning activities. The PCSS is scheduled to be available for service in Q2 2027.

Table 3 provides a summary of the developments at PWMF.



Figure 2. PWRMF Layout (as of December 2025)

Table 3. Chronology of Development for used fuel at PWRMF

Building	Number	Capacity	In-Service Dates
DSC Processing Building			1996
DSC Storage Building	1	185 DSCs	1996
	2	469 DSCs	2001
	3	480 DSCs	2009
	4	624 DSCs	2021
	5	1200 DSCs (<i>current operational limit</i>) requested increase to 1410 DSCs as part of this renewal application	Planned for 2027

1.2 Future Operation of Pickering NGS

In January 2024, the province of Ontario formally requested OPG to proceed towards refurbishing Pickering NGS Units 5 to 8. Pending CNSC approval, OPG intends to refurbish Pickering NGS Units 5 to 8 after ceasing operation in the fall of 2026.

The refurbishment of Pickering NGS will allow Units 5 to 8 to continue to provide a significant portion (10%) of the Provincial energy supply, thereby helping maintain grid stability, moderate the overall cost of electricity, and sustain the province's economic competitiveness.

The refurbishment of Pickering NGS Units 5 to 8 will provide many benefits for customers, the economy, and the environment by ensuring over 2,100 MW of clean, reliable power for Ontario for at least another 30 years. This will provide safe and consistent electricity to power two million homes and businesses across the province, while preserving skilled jobs and generating a significant increase in Ontario's GDP by \$38.2 billion (in 2024 dollars) over the refurbishment project's lifespan, including \$17 billion during the refurbishment phase.

In parallel with the refurbishment and continued operation of Pickering NGS Units 5 to 8, OPG will progress decommissioning of Pickering NGS Units 1 to 4. During the requested licence period (2027-2036), OPG plans to complete selected dismantling and demolition activities of the Pickering NGS units 1 to 4 outbuildings and non-nuclear systems and components in accordance with the SWS Plan and the Detailed Decommissioning Plans (DDP) which have been accepted by CNSC staff.

OPG is committed to engaging with Indigenous Nations and communities regarding nuclear operations, including proposed future initiatives at the Pickering NGS.

Separation of Pickering NGS Units 1 to 4 and Pickering NGS Units 5 to 8

With the planned decommissioning of the Pickering NGS Units 1 to 4 and the planned refurbishment and continued operation of Pickering NGS Units 5 to 8, a boundary between Units 1 to 4 and Units 5 to 8 will be defined, with the intent of removing common systems and infrastructure, e.g., electrical, service water, etc. and creating independence.

The separation of Units 1 to 4 (Pickering NGS A) from Units 5 to 8 (Pickering NGS B) is denoted by the concept of an "AB Gate" which is illustrated in Figure 3 and has been defined for planning purposes. Planned and physical engineering changes to separate the units will take place throughout the licence period and will follow OPG's Engineering Change Control (ECC) process with any required change notifications being submitted to CNSC staff (see Section 2.12.6 for additional information). This separation will be achieved by sealing existing bulkheads on Unit 1 (similar to that of Units 2 and 3) and either sealing the existing bulkheads on Unit 4 or by erecting a barrier within the Pressure Relief Duct between the Vacuum Building and Unit 2 that will remove Unit 4 from containment. As station conditions permit, remaining containment SSCs not already supplied by Pickering B will be switched over to Pickering B supply. Some reliance on Pickering NGS Units 1 to 4 systems will exist post refurbishment but this dependence will be removed as project priorities dictate. Until such time, Pickering NGS Units 1 to 4 systems needed to support Pickering NGS Units 5 to 8, will be maintained to ensure their continued high availability.

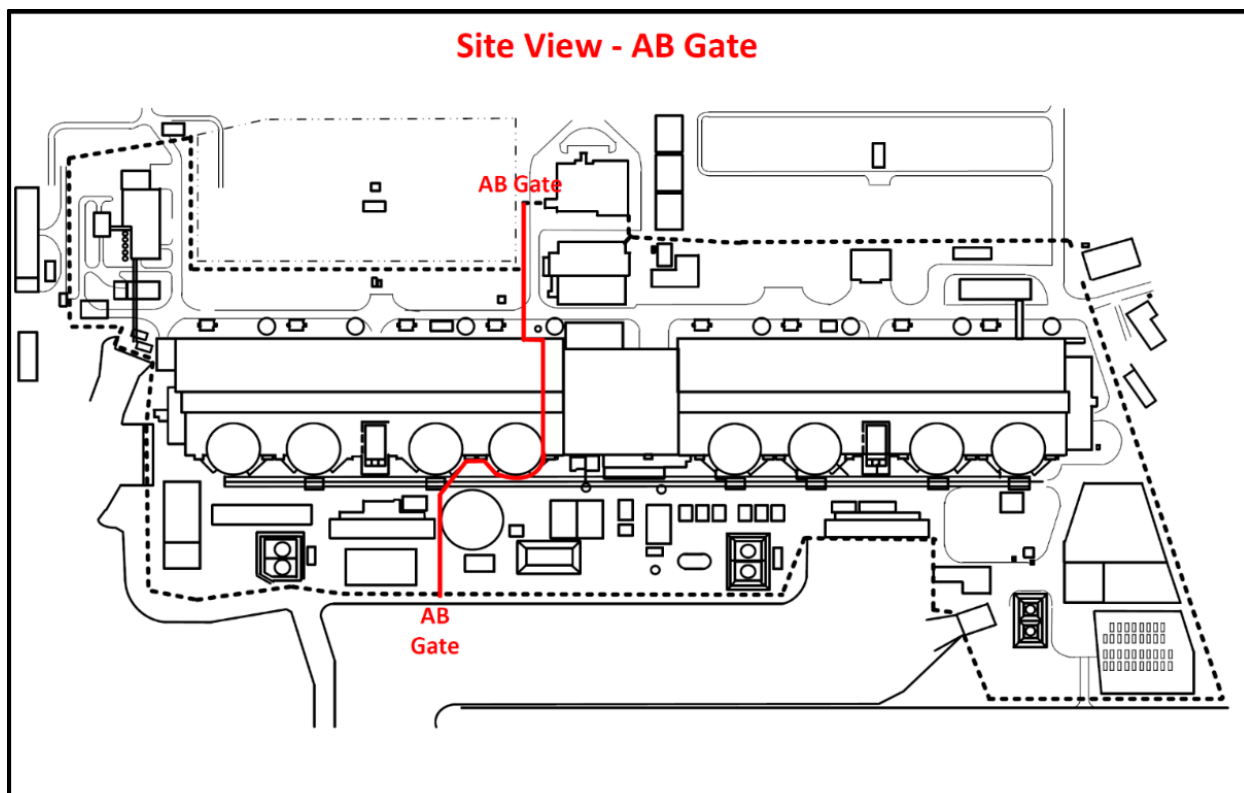


Figure 3. Conceptual AB Gate

1.2.1 Pickering NGS Units 5 to 8 Refurbishment

Refurbishment is a multi-year, multi-phase project for Pickering NGS to enable the removal and replacement of key components of each reactor and associated equipment. OPG has engaged in procurement and pre-requisite activities to ensure readiness to proceed when planning is complete and regulatory approvals are secured. OPG has a proven track record of successfully conducting refurbishment activities at the Darlington NGS.

Following shutdown planned in the fall of 2026, Units 5 to 8 will be defueled and dewatered. Refurbishment activities will be conducted following this period. OPG currently plans for all four refurbished reactors to be back in service in the mid-2030s.

1.2.1.1 Refurbishment Planning and Assessments

The refurbishment program addresses the planning, preparation, and execution of activities required to complete the refurbishment of Pickering NGS Units 5 to 8 and bring the units back to service. The refurbishment program will leverage OPG's mature and effective Nuclear Management System. In addition, scope management processes and oversight forums are in place to ensure that the individual projects included in the refurbishment program scope support safe and reliable operation post-refurbishment.

OPG is currently undergoing the project definition phase which includes scope definition, design, procurement and execution planning. The planned major scope of work and select methodologies that will be undertaken during the licensing period are outlined in Appendix D of this submission. Major components to be replaced during Pickering NGS refurbishment will include selected reactor components such as the fuel channels, feeder pipes, steam generators

and turbine and generator systems. Additionally, a new DWI structure, similar to Darlington NGS, is proposed at Pickering NGS. The PSR3 process will identify enhancements to safety by comparing the station against modern codes and standards. This assessment is discussed further below.

To effectively manage scope throughout this period, OPG will utilize established processes for scope changes and oversight. This includes but is not limited to forums such as the Engineering Review Board (ERB), AMOC (Asset Management Oversight Committee), and Refurbishment Change Control Board (RCCB). During this project phase, OPG staff will continue to have regular communication with CNSC staff regarding engineering change activities.

To support continued operation, OPG is conducting a comprehensive Periodic Safety Review (PSR3) of Pickering NGS Units 5 to 8, in accordance with Licence Condition 15.4 of PROL 48.04/2028, to extend its operating life for an additional 30-plus years. The PSR3 is being conducted in accordance with CNSC REGDOC-2.3.3 *Periodic Safety Reviews*, with guidance from International Atomic Energy Agency (IAEA) SSG-25 *Periodic Safety Review for Nuclear Power Plants* and Canadian Standards Association (CSA) N290.18-17 *Periodic safety review for nuclear power plants*.

OPG has also completed a Climate Change Resilience Assessment and a Predictive Environmental Risk Assessment (PERA). The results of these assessments are discussed further below.

Periodic Safety Review and Integrated Implementation Plan

The Periodic Safety Review (PSR) process is well established. OPG has conducted Integrated Safety Reviews (ISR) and PSRs at both the Pickering and Darlington stations and builds upon this experience in each successive safety review. Through these previous ISR and PSR assessments, OPG has also demonstrated its commitment to the implementation of the resulting Integrated Implementation Plan (IIP). CNSC staff review and approve the IIP and regular updates are provided to the Commission and public on the status of OPG's IIP activities through the CNSC staff annual Regulatory Oversight Report for Canadian Nuclear Power Generating Sites. A detailed description of the PSR process is provided in Appendix C.

The PSR and IIP will be completed before any of the units begin return to service post refurbishment. Summaries of the Global Assessment Report (GAR) and the IIP will be posted for public information on the OPG website, www.opg.com. OPG has been successful in undertaking previous Pickering NGS IIPs, as well as, the IIP for the Darlington NGS refurbishment, and will be applying this experience to support implementation of the IIP for Pickering NGS.

Nuclear Safety Improvements

OPG is committed to safety improvements to the plant to ensure all safety goals continue to be met or exceeded. OPG conducted a number of studies to identify areas in nuclear safety where enhancements to safety could be achieved with the unique opportunities the refurbishment project presents. A multi-year, multi-unit outage when safety related system requirements will be greatly reduced or eliminated entirely, allows for more intrusive engineering changes (while systems are defueled, dewatered and safe stated).

OPG will continue to ensure safe, reliable operation of Pickering NGS as it undergoes refurbishment activities. Processes and practices will also remain in place in Pickering NGS's post-refurbishment life to ensure it continues to be operated and maintained with nuclear safety

and Defence-in-Depth front of mind. Defence-in-Depth principles ensure redundant, diverse, independent measures (which include equipment, procedures, people) are in place to prevent and mitigate events. Building upon the concepts of Defence-in-Depth, significant safety improvements are being undertaken as physical plant engineering changes to improve long-term plant reliability. Replacement of major components such as boilers, feeders, and fuel channels will improve safety margins by restoring these components to their un-aged conditions. As described in Appendix D, scope during the next licence period includes, but is not limited to:

- *Replacement of all Fuel Channels and Feeders:* All fuel channels and feeders will be replaced, including affected instrumentation and control equipment, to enhance nuclear safety and improve system reliability. Informed by OPEX, lessons learned and fabrication improvements, the new components will reset age-related effects and increase operating margin to fitness for service limits.
- *Replacement of all 48 Boilers:* With the unit defueled, dewatered, and vacuum dried, 12 boilers per unit will be replaced by hoisting them through the reactor building dome at the East and West end banks. The replacement boilers incorporate updated design features—particularly improved tube materials—based on operating experience (OPEX) and lessons learned from both our station and the broader industry. This work will reset age-related and chemistry/operations-driven degradation, improve safety and reliability by reducing susceptibility to known degradation mechanisms, and increase operating margin by minimizing the risk of tube leaks over the next operating life.
- *Replacement of Standby Generators:* Replacing all six standby generators will improve the reliability and availability of backup Class III electrical power, a system important to nuclear safety. This upgrade strengthens overall station resilience during abnormal and emergency conditions and increases operating margin by reducing the likelihood of generator-related unavailability.
- *Replacement of Digital Control Computers:* Replacing the digital control computers with modern, qualified technology will improve the reliability and performance of safety related control functions. The new equipment reduces the risk of obsolescence- and failure related unavailability, strengthening nuclear safety and increasing operating margin through more stable, dependable system operation.
- *Fuel Handling Equipment Improvements:* Targeted upgrades and refurbishments will be implemented to enhance the safety and reliability of systems used to manage new and used fuel, reduce the likelihood of fueling interruptions, and support operating margin through more dependable equipment performance. Scope items include (but are not limited to): closure plug replacements to reduce the risk of sticking during fueling activities; refurbishment of the fueling machine head and carriage (including internal shaft supports and magazine bearings); bridge ball screw replacement; and inspection and repair of the elevator and conveyor systems.
- *Fire Protection Equipment Improvements:* Upgrades are planned for key fire protection components—including sprinkler systems and new diesel fire pumps—to improve reliability and performance. This work supports compliance with CSA N293, associated codes and standards and the station Fire Hazard Assessment, strengthens overall fire safety, and increases operating margin by reducing the likelihood of fire protection equipment impairments and unavailability.

- *Emergency Power Generators:* EPG1 and EPG2 will continue routine maintenance throughout the refurbishment period. EPG3 will undergo a complete overhaul and will be relocated to avoid conflicts with the boiler replacement work. These activities will ensure that the machines continue to operate safely, reliably, and remain available to perform their required nuclear safety functions.

In addition, OPG is leveraging its Risk and Reliability program and industry operating experience to identify and incorporate Safety Improvement Opportunities (SIOs) which represent planned engineering changes selected for their potential to enhance nuclear safety, based on deterministic safety analysis, probabilistic safety analysis, and/or hazard analyses. The SIOs listed below are currently progressing through various design engineering phases to ensure that practical solutions can be implemented to achieve the expected benefits.

1. Core Cooling

- *Diesel Firewater Make-up Enhancements:* An alternate water supply will be established for the Pickering NGS units 5 to 8 Heat Transport System (HTS) and/or Moderator by utilizing the diesel firewater pump system through the existing service water infrastructure.
- *Emergency Water Supply System - Enhanced Emergency Water Supply (EWS) Supply to Boilers, HTS, and Moderator:* EWS to the boilers, heat transport system and moderator will be enhanced for both design basis accidents and beyond design basis accidents. Engineering changes will allow the moderator to be directly fed by the EWS to provide a long-term heat sink. System reliability will be enhanced through elimination of single points of failure.
- *Heat Sink Diversity - Alternate Water Supply to the Moderator:* The Emergency Storage Water Tank (ESWT) is currently supplied by the Pickering NGS units 1 to 4 Service Water system and serves as an interim heat sink for the Pickering NGS units 5 to 8 moderator during beyond design basis accidents. To maintain a diverse and independent supply post-refurbishment, an alternate water source to the moderator will be provided.

2. Containment Enhancement

- *Containment Filtered Venting System:* A new engineering change will be implemented to mitigate containment overpressure and reduce airborne contaminant releases during beyond design basis accidents. This will use a controlled pressure venting and filtration system.
- *Shield Tank Overpressure Protection (STOP):* The STOP project will install a large relief capacity on the End Shield/Calandria Vault to improve the margin to shield tank overpressure resulting from rapidly progressing accidents.

3. External Hazard Protection

- Reinforcement of the metal-clad portion of the Unit 7 Control Equipment Room exterior wall with a masonry block wall will be completed to improve windborne missile resistance and reduce core damage risk.

These SIOs and major component replacements will be key inputs to the development of the IIP scope.

Deep Water Intake

As outlined in Appendix D, a new Deep Water Intake (DWI) structure, similar in concept to Darlington NGS, is proposed at Pickering NGS during the requested licence period. Drawing colder, cleaner water from deep within Lake Ontario, this project addresses operational and environmental challenges from silt, debris, algae, fish impingement, ice/cold weather, and improves temperature operating margin during summer months when lake temperature rises.

Detailed engineering design, construction planning and Indigenous engagement are ongoing and the project continues to advance the work while addressing emerging technical and cost considerations. OPG's preference is to complete the DWI project during the next licence period so OPG will continue to pursue DWI and manage these challenges through its established project governance and risk-management processes. If these challenges cannot be resolved within acceptable technical and financial parameters, OPG's alternative approach is to continue using the existing surface water intake, with targeted performance improvements to ensure a reliable source of cooling water for Pickering NGS. The existing surface water intake remains a safe and viable option for supplying cooling water to support continued operations at Pickering NGS. OPG underscores the importance of ongoing engagement and will continue to work with the Nations to understand and address interests and/or concerns as the project continues.

The Predictive Environmental Risk Assessment included proposed DWI activities and is discussed further below.

Potential environmental benefits resulting from the proposed DWI are discussed in section 2.9.9.

Climate Change Resilience Assessment

Pickering NGS completed the Climate Change Resilience Assessment to demonstrate continued safe operation of the station under changing climate conditions. This forward-looking assessment evaluated the resilience of the plant to projected climate impacts over the proposed extended operating period. The assessment concluded that there are no immediate impacts to nuclear safety; the plant remains capable of maintaining its fundamental safety functions—control, cool, and contain—even under projected future climate conditions. The conditions used in the nuclear safety analyses are conservative and, in many cases, remain more conservative than the projected climate conditions identified in the assessment.

Existing probabilistic safety assessments already consider a wide range of extreme weather scenarios, many of which are more severe than climate model predictions. These assessments are reviewed on a five-year cycle to ensure they continue to reflect evolving climate science and demonstrate ongoing safe operation. OPG is well prepared for extreme weather events, supported by established Severe Weather Emergency Preparedness procedures.

Long-term climate projections indicate that any potential exceedances of operating limits over the next decade would be gradual, decreasing component efficiency or increasing degradation rather than causing sudden failure. OPG's robust aging management, preventative maintenance, and surveillance programs are designed to accommodate such gradual changes.

OPG has shared the Climate Resilience Assessment Summary report with the Williams Treaties First Nations Rightsholders and welcomes input and further engagement with the Nations. Details of this assessment are provided in Section 2.4.2.1.

A PWMF Climate Change Resilience Assessment was also conducted and was recently submitted to CNSC staff in April 2026. The assessment concludes that the nuclear safety related SSCs, including the DSCs, the DSC transfer clamp, the DSMs and the retube waste containers will continue to perform their safety functions under projected future climate conditions. The evaluation also confirms that parameters used in the PWMF nuclear safety analysis remain conservative even considering the projected climate conditions identified in the assessment. The PWMF Climate Change Resilience Assessment Summary report will be shared with the Williams Treaties First Nations Rightsholders.

Predictive Environmental Risk Assessment (PERA)

A PERA identifies and assesses the potential environmental interactions of proposed activities that could alter the nature of a site's interaction with the environment from those captured in previous Environmental Risk Assessments (ERAs), and/or that are part of a transition to a new phase in the lifecycle where the application for the new licensing phase includes interactions with the environment that were not previously captured in the ERA(s).

The objectives of the PERA are to:

- Identify whether any proposed activities are likely to result in environmental emissions or other stressors beyond those assessed for current operations or other recent assessments;
- Predict and assess the risk to representative human and ecological receptors resulting from exposure to radiological and non-radiological substances and physical stressors expected to be released during refurbishment, decommissioning, and continued operations of Pickering NGS; and
- Inform prioritization of monitoring and mitigation measures.

The PERA for Pickering NGS Refurbishment, Decommissioning, and Continued Operations concluded that most of the project activities are not predicted to result in adverse effects to human and/or ecological receptor groups evaluated. While some aquatic habitat will be disturbed or removed due to DWI construction, and there may be infrequent and localized instances when air quality and noise guidelines are temporarily exceeded, mitigation measures will be implemented and monitoring will confirm there are no adverse effects. OPG has been proactively engaging with the Williams Treaties First Nations since 2023 to understand their concerns and to develop offsetting and other accommodation plans related to DWI.

The PERA Rev 0 for the Pickering NGS site (Reference 3), submitted to CNSC staff in June 2025, was conducted in accordance with CSA N288.6-22 Environmental risk assessments at nuclear facilities and uranium mines and mills, and CNSC REGDOC-2.9.1 *Environmental Protection: Environmental Principles, Assessments and Protection Measures, Version 1.2*, for the refurbishment and continued operation of Pickering NGS Units 5 to 8 and the decommissioning of Pickering NGS Units 1 to 4. Project activities associated with the PWMF and its continued operation are also included in the PERA.

To support this PERA, field data were collected in 2024 and 2025 to characterize existing conditions. This data supplements existing data collected through the routine Environmental Monitoring Program (EMP), effluent and emissions monitoring programs, biodiversity monitoring programs, and previous supplemental environmental studies. In spring 2024, OPG engaged early with the Michi Saagiig Rightsholders to seek feedback and gauge interest in attending field work activities in support of the PERA.

In April 2025, the PERA Rev 0 was shared with the Williams Treaties First Nations Rightsholders. Comments were received in June 2025, with responses provided by OPG in August 2025.

Additional field data was collected in 2025, including data from air quality monitoring and aquatic studies. Throughout 2025, OPG continued to share and facilitate field work activities with the Michi Saagiig Rightsholders. These results, in addition to the comments on the PERA Rev 0 from the Williams Treaties First Nations Rightsholders and regulators, will be incorporated into a revised PERA Rev 1 for submission at the end of May 2026. In addition, the revised PERA Rev 1 considers any notable changes in project planning, as applicable. A draft of PERA Rev 1 was shared with the Williams Treaties First Nations Rightsholders in March 2026. OPG received comments from Curve Lake First Nation in May 2026 and remains committed to addressing these comments.

OPG welcomes input and further engagement with the Nations on the PERA.

Additional details on the PERA are provided in Section 2.9.2.1.

1.2.1.2 Refurbishment Program

OPG has established a dedicated refurbishment management organization (Nuclear Refurbishment), separate from the station, to allow each entity to concentrate on its core responsibilities and areas of expertise. The scope of the Pickering NGS refurbishment program encompasses the planning, design, procurement, construction, and commissioning of the structures and components necessary for Units 5 to 8, to continue operating safely for an additional 30-plus years. A comprehensive review of the Systems Condition Assessments encompassing multiple data points from documents such as system and components health reports, Component Condition Assessments, maintenance history etc., determined that replacement of feeders, fuel channels, steam generators, and turbine and generator systems will be the major scope of the Refurbishment project. A proposed re-designed water intake structure, upgrades to support facilities and engineering changes to various plant systems and equipment to further improve plant reliability and safety are also included to ensure continued low-carbon reliable operations for another 30-plus years. OPEX from Darlington NGS and Bruce Power NGS refurbishment programs will be strategically used to support ongoing maintenance activities, ensure alignment with project goals and enhance efficiency.

The Pickering NGS refurbishment program covers the planning, preparation and execution of activities, including waste management, required to complete the refurbishment of Pickering NGS Units 5 to 8 and return the units to service. It is defined in an overarching Program Management Plan, *Pickering Refurbishment Program Management Plan*, which provides the framework and guidance on requirements for the supporting lower-level program management plans (PgMPs).

The Pickering Refurbishment PgMPs describe how the program is managed to meet the requirements of OPG's Nuclear Management Systems while ensuring business objectives, program-specific requirements (planning and controls, licensing, engineering, regulatory, etc.), and commitments are fulfilled. The PgMPs have been established to provide assurance that all aspects of the programs will be conducted in accordance with:

- CSA N286-12, *Management system requirements for nuclear facilities*,
- N-CHAR-AS-0002, *Nuclear Management System*, and
- OPG Corporate and Nuclear governance.

In addition to the PgMPs, Project Management Plans (PMPs) have been developed which further define the scope and execution of the refurbishment program. The PMPs outline the specific objectives that the projects will accomplish, such as project planning, execution, monitoring and control, and project closure. The PMPs reference the relevant sections from the applicable PgMPs and will follow the requirements of the *Project Management* program, *Construction Management* program and *Project Management Standard*, and the associated governance. A recent CNSC compliance assessment concluded that OPG has established robust Pickering Refurbishment governance that aligns with CSA N286-12. This outcome reflects OPG's strong adherence to regulatory requirements and the sustained efforts dedicated to the planning, scheduling, execution, and oversight of refurbishment activities.

To ensure alignment between the Nuclear Refurbishment and Pickering NGS organization, both have set common goals and objectives. A structured process is in place to maintain control and responsibility throughout, which includes:

- An interface agreement to ensure safety of the plant, public and environment is maximized through clearly defined roles and responsibilities. This ensures the refurbishment program's objectives are successfully achieved while maintaining safe and reliable plant operations.
- Departmental organizational transfer plans that outline the specific responsibilities and activities required to transition a unit from the station to the Nuclear Refurbishment organization, and vice versa.
- A Resource Management and Staffing PgMP that defines the staffing strategies to be implemented for Pickering Refurbishment. The staffing plan for Pickering NGS Refurbishment will be less complex than Darlington NGS Refurbishment as all units will be offline.


This structured process will ensure all station and refurbishment staff are aligned and have a clear understanding of the deliverables necessary to support the seamless transition of units between the station and the Nuclear Refurbishment organization.

Pickering NGS Units 5 to 8 site staff in the Operations and Maintenance organization will transition to the Pickering refurbishment program. Support from other OPG business units will be implemented via a "matrix" model (e.g. functional staff working in project teams). This support is identified as part of OPG's annual business planning process. Partnering and interface agreements will document and formalize the working relationships amongst all groups. Prior to Unit 5 return to service, the Operations and Maintenance organization and staffing will be restructured as presented in Section 2.1.2.

1.2.1.3 Refurbishment Timeline

The projected timeline for Pickering NGS Units 5 to 8 refurbishment is provided in Figure 4. The current licence (PROL 48.04/2028) authorizes Pickering NGS to operate Units 5 to 8 until December 31, 2026. All units will be shut down by the end of September 2026 and placed in a layup state (defueled and dewatered) until they undergo refurbishment. The dates in Figure 4 are based on current refurbishment planning assumptions and are subject to change.

Appendix D of this submission outlines the planned major scope of work and selected methodologies to be undertaken during the licensing period, most of which are anticipated to be completed as part of the refurbishment.



Similar to the Darlington NGS refurbishment, station improvements, enhancements, and maintenance will continue beyond the refurbishment window during planned unit maintenance outages and during normal operation.

Completion of refurbishment activities will ensure Pickering NGS continues to operate safely and reliably for an additional 30-plus years.

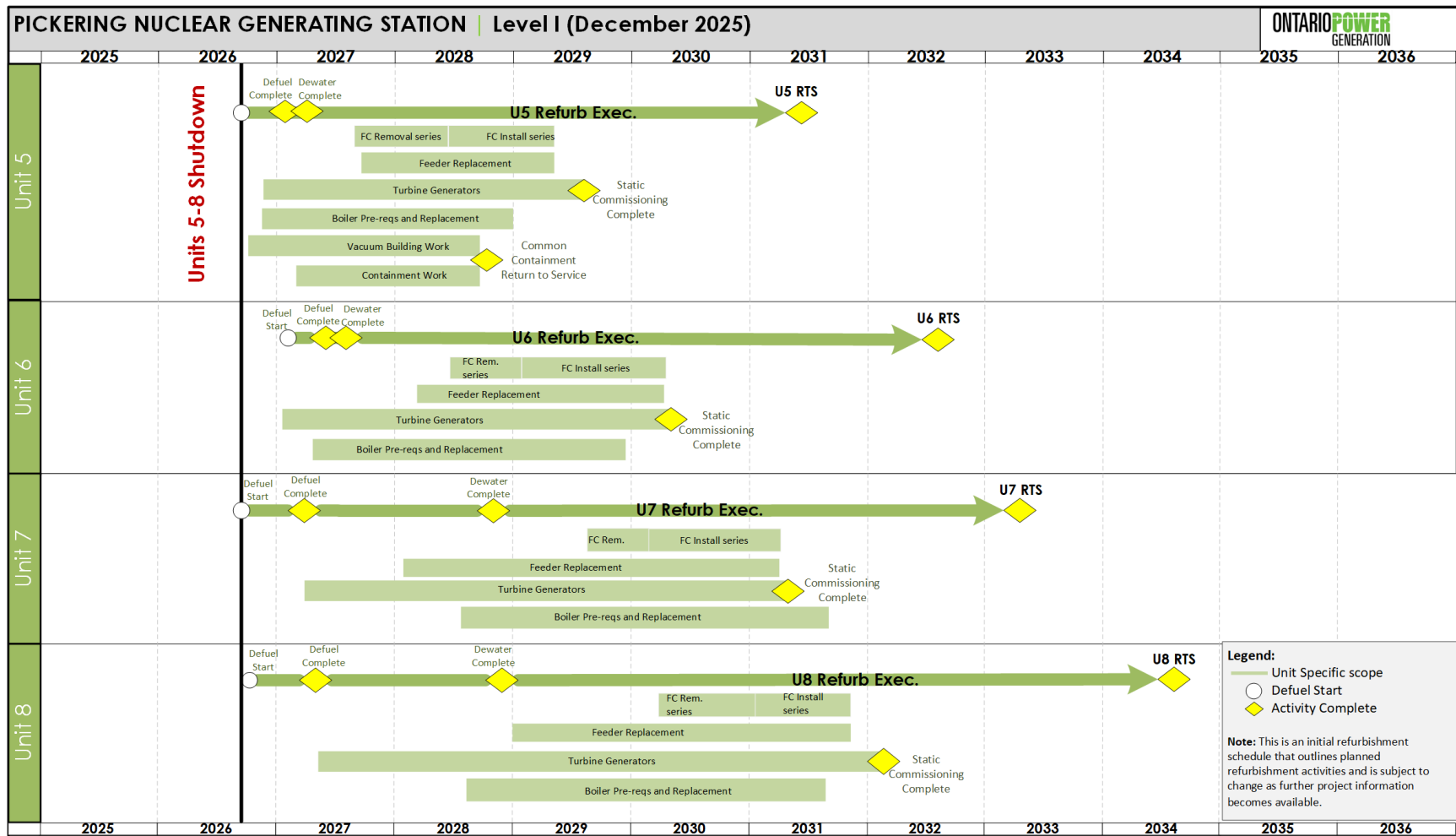


Figure 4. Pickering NGS Units 5 to 8 Planned Refurbishment Timeline

Other Facility Changes and Enhancements

Some common services (e.g., service water, electrical systems, etc.), currently supplied by Pickering NGS Units 1 to 4 are essential to the operation of Pickering NGS Units 5 to 8. Due to the planned decommissioning of Units 1 to 4 and refurbishment of Units 5 to 8, to ensure operational independence between Units 1 to 4 and Units 5 to 8, these shared systems will be reconfigured. Pickering NGS-A Storage with Surveillance Plan (Reference 4) Section 4.1.2 includes a list of the station systems required to remain in service and interconnected at the beginning of SWS to support Pickering NGS-B continued operation.

To ensure independent operation of Pickering NGS-B post refurbishment and to support Pickering NGS-A decommissioning, the common systems required for the operation of Pickering NGS-B will be reconfigured to be supplied from Pickering NGS-B. Engineering changes are therefore planned to air, water, electrical, and vacuum building systems; in particular the following systems will be modified:

1. Instrument Air
2. Service Water
3. Class II and Class IV electrical supplies
4. Vacuum building and support auxiliaries
5. Security systems loads

The scope of these engineering changes are planned to be carried throughout refurbishment and in the subsequent period to accommodate execution windows and critical refurbishment engineering changes.

1.2.1.4 Return to Service

Return-To-Service (RTS) involves returning the reactor and associated nuclear and non-nuclear systems to commercial operation. OPG must demonstrate that all regulatory requirements have been met and the associated work has been completed to the satisfaction of the CNSC. The *Pickering Refurbishment Program Management Plan – Return to Service* describes the processes, procedures and organization that will be used during the Pickering Refurbishment Project to manage the engineering change, commissioning and restart activities of Pickering NGS Units 5 to 8. This RTS plan and the RTS process documents are compliant with the CSA N286-12 *Management system requirements for nuclear facilities* and other applicable codes, standards, and laws.

The RTS activities will occur in 4 phases:

1. Phase A: restart activities prior to fuel load.
2. Phase B: fuel load and activities leading up to but not including Guaranteed Shutdown State (GSS) removal.
3. Phase C: Over-poisoned GSS removal, Approach to Critical and low power testing
4. Phase D: high power testing and power escalation to full power. During these phases, a test program will integrate:
 - a. Normal start-up testing
 - b. Outstanding modification commissioning tests

- c. Non-standard tests unique to a refurbishment outage. These may include the following:
 - i. Fresh Core start-up activities
 - ii. Fresh Core monitoring
 - iii. Fresh Core testing
 - iv. Testing of Reactivity Devices for commissioning and reactivity worth calculation

Further details on the programs, procedures and other considerations for Pickering NGS Units 5 to 8 refurbishment activities are provided within each of the Safety and Control Area (SCA) discussions in Section 2 of this CMD.

1.2.2 Pickering NGS Units 1 to 4 Decommissioning

In December 2024, OPG submitted the DDP and SWS Plan for Pickering NGS Units 1 to 4 (Reference 4). The DDP and SWS Plan were developed in accordance with PROL 48.04/2028 Licence Condition 11.2, CNSC REGDOC-2.11.2 *Decommissioning*, and CSA N294-19 *Decommissioning of Facilities Containing Nuclear Substances*. OPG provided opportunities for engagement on the DDP with the Williams Treaties First Nations Rightsholders. The Michi Saagiig Rightsholders have undertaken a technical review of the DDP. OPG welcomes any additional input and further engagement on the DDP with the Rightsholders. On June 26, 2025, CNSC staff accepted the SWS Plan and DDP for the removal of non-nuclear SSCs and outbuildings. As per the approved DDP, OPG's plan is to focus on the removals of the non-nuclear SSCs and outbuildings during the requested licence period from 2027 to 2036.

As described in the DDP, OPG has selected a deferred decommissioning strategy for Pickering NGS Units 1 to 4 based on an assessment of key factors outlined in CNSC REGDOC-2.11.2. Applying this strategy, Pickering NGS Units 1 to 4 will pass through four distinct phases:

1. Planning for Decommissioning – this phase occurred prior to the planned shutdown of Units 1 and 4 in 2024 and was captured in the Pickering Nuclear Site Preliminary Decommissioning Plan (PDP).
2. Preparation for Decommissioning – this phase includes activities for permanent shutdown and transition to SWS. Unit 1 and Unit 4 were permanently shut down in 2024 and have begun undergoing stabilization activities to transition from shutdown to SWS. This transition is currently planned to be completed in 2028.

The period of stabilization is governed by the *Pickering NGS Stabilization Activity Plan (SAP)* which describes the arrangements and activities that ensure a safe and efficient transition from the end of commercial operation of Pickering NGS Units 1 and 4 to the SWS state. As per PROL 48.04/2028 Licence Condition 15.4, OPG provides SAP updates annually to CNSC staff.

Stabilization activities include defueling the reactors and ensuring they cannot be refueled, draining the moderator and heat transport systems of heavy water, safe-stating and de-registering unit-specific nuclear and conventional SSCs as well as safe-stating and de-registering common station SSCs no longer required for the operation of the nuclear facility. SSCs will be removed from service once no longer required, placed in the end-state configuration and abandoned in place or removed. Inactive end-states are generally characterized as isolated from operational systems, drained and purged (if

necessary) of gasses, fluids, transient combustible and hazardous material, de-energized and de-registered (as required). Systems will be drained and purged to reduce the fire loading as much as practical and to reduce the potential personnel or environmental hazards (present and future) associated with the system. Inactive systems will be isolated from operational systems to reduce the footprint of the system, as well as the need for supporting systems (e.g., heating, electrical).

Other activities during stabilization include updating operational and maintenance procedures to reflect ongoing maintenance and monitoring requirements post-stabilization leading to SWS.

3. Execution of Decommissioning – this phase begins for each unit after it has been permanently shut down, stabilized and all necessary approvals have been obtained. OPG will perform the following activities during this phase:
 - a. Storage With Surveillance – The SWS timeframe will run until the last structures have been removed from the site. During SWS, the SWS Plan for Pickering NGS Units 1 to 4 will be implemented and updated to ensure the facility/site is maintained in a safe configuration and the SSCs needed to maintain stabilization are functioning as required.

The SWS Plan is a subset of the DDP and describes the requirements for the care and maintenance of the facility equipment and substances until decontamination and dismantling actions are completed. The SWS Plan was prepared in accordance with the requirements of CNSC REGDOC-2.11.2 and CSA N294-19 and is based on the safety assessment completed as part of the DDP. Along with the DDP, OPG will review and update the SWS plan within five years of submission as required by REGDOC-2.11.2.

The SWS plan details systems that are expected to remain active or partially active post-stabilization and are necessary for the SWS period, planned continued operation of Pickering NGS Units 5 to 8, or anticipated to be required for decontamination and dismantling activities at Pickering NGS. As hazards are removed and more systems reach their end states, maintenance requirements will decrease and the SWS program scope will gradually reduce.

During SWS, the release of materials to the environment will be controlled, unauthorized access will be prevented, and the infestations of any organisms will be mitigated so that decontamination, dismantling and/or cleanup can be carried out safely. Surveys of hazards will also be performed to support the safe performance of surveillance and maintenance activities during SWS. All facility engineering changes, including the process to place SSCs into inactive/abandoned status and managing active SSCs during SWS will follow OPG's existing Nuclear Management System.

During this phase, OPG will also complete planned risk reduction activities per CNSC REGDOC-2.11.2 such as the removal of outbuildings and some non-nuclear components and systems.

- b. Dismantling and Demolition – decontamination, dismantling and demolition of all Pickering NGS Units 1 to 4 SSCs for Planning Envelopes C, D and E (as shown in Table 4), are planned to commence after 2036 and are outside the scope of the requested licence period. These activities are expected to take place over a nominal 20-year period. Removal of the reactor building structures will be

deferred until Pickering NGS Units 5 to 8 are shut down after planned extended operation.

OPG is applying a “lead-and-learn” approach to both risk reduction and dismantling activities. A “lead-and-learn” approach involves undertaking small-scale or initial tasks first, gathering insights from those experiences and continually refining methods and practices before scaling up. This approach will allow OPG to apply lessons learned and experience from early risk reduction work and dismantling of outbuilding and non-nuclear components planned up to 2040 and then continue to build expertise for the dismantling of nuclear components and more extensive decommissioning beyond 2040.

By approximately 2040, dismantling operations are planned to complete the outbuilding and non-nuclear component removal work packages (Planning Envelopes A and B as shown in Table 4) and pave the way for full-scale decommissioning. This schedule aligns with the anticipated completion of Pickering NGS Units 5 to 8 refurbishment, thereby allowing for shared resources and minimizing overlaps between the two major projects (decommissioning and refurbishment). Reactor removal is planned to start in the early 2050s.

- c. Site Restoration – lands associated with the protected area of the Pickering NGS Units 1 to 4 site will be remediated to meet the end-state criteria. OPG will engage with the Williams Treaties First Nations (WTFN) regarding the end-state goals and criteria. At the completion of this phase, final surveys of residual radioactive and hazardous materials will be performed and documented to demonstrate the final end-state for remaining SSCs and the site has been achieved. By the end of the site restoration phase, the site will be free of industrial and radiological hazards. Currently, OPG is contemplating industrial reuse as the proposed end-state land use.
- 4. Completion of Decommissioning – this phase involves verifying that all decommissioning activities have been completed satisfactorily, the final end-state has been reached, and all documentation has been completed.

Decommissioning ends with the release of the facility from CNSC regulatory control. If unrestricted release cannot be achieved, institutional controls will be required and OPG will submit post decommissioning plans to the CNSC for review. Note that OPG anticipates being able to achieve unrestricted release based on current decommissioning plans.

The full Pickering NGS Units 1 to 4 decommissioning scope is covered in eight DDP volumes to facilitate comprehensive planning and execution:

Table 4. Pickering NGS Units 1 to 4 Decommissioning Scope

Planning Envelope (PE)	Focus Area	Scope	DDP Volume
Program Overview	Pickering NGS Units 1 to 4	Decommissioning program description which covers all aspects of the decommissioning scope.	Volume 0
PE-A	Out Buildings Removal	Includes structures and systems within the protected area that are not part of the main Powerhouse	Volume 1*
PE-B	Non-Nuclear Component Removal	Removal of components and systems not considered a nuclear system.	Volume 2
PE-C	Nuclear Component Removal	Removal of components and systems that are considered part of a nuclear system (including Irradiated Fuel Bay-A and Auxiliary Irradiated Fuel Bay (AIFB))	Volume 3*
PE-D	Reactor Segmentation	Disassembly and removal of the reactor and internals	Volume 4*
PE-E	Powerhouse Structure	Removal of the Turbine Hall, Turbine Auxiliary and Reactor Auxiliary Bays structures, which make up part of the Powerhouse. This envelope also includes the Irradiated Fuel Bay-A and AIFB	Volume 5*
PE-F	Reactor Building Structural Demolition	Removal of the Reactor Building structure that make up part of the Powerhouse	Volume 6*
PE-G	Site Remediation	Remediation of the site within the protected area, including environmental clean-up and restoration.	Volume 7*

*Volumes 3-7 and PE-A3 from Volume 1 will be included in future submissions of the DDP.

The shaded Planning Envelopes (PE-C and subsequent) shown in Table 4 are outside the scope of the requested licence period and are not required to be considered for this licence renewal decision. Future DDP submissions will be updated throughout the decommissioning lifecycle, providing opportunities for input from First Nations Rightsholders to inform and shape the plan over its duration.

Volume 0 provides the overall framework for Units 1 to 4 decommissioning and the SWS plan. It outlines the programmatic planning considerations and offers a broad perspective on the entire decommissioning process to be implemented for Units 1 to 4.

Volumes 1 through 7 cover Planning Envelopes (PE) A through G, respectively. The PEs encompass the entire decommissioning scope for Pickering NGS Units 1 to 4 and have been defined based on logical groupings of work based on physical location within the station and common characteristics. The PEs are further subdivided into PE groups and can be executed in parallel or sequentially as required.

Initial risk reduction and removal activities planned for the 2025-2033 timeframe are encompassed by DDP Volume 1 (PE-A) and Volume 2 (PE-B). PE-A focuses on the dismantling and removal of outbuildings, i.e., SSCs that are within the Pickering NGS Units 1 to 4 protected area but are not part of the main Powerhouse structure. PE-B focuses on the dismantling and removal of non-nuclear SSCs located within the Turbine Hall and Turbine Auxiliary Bay. Overall, OPG's plan per the current DDP is to focus on dismantling and removal of outbuildings and non-nuclear SSCs during the next requested licence period from 2027 to 2036.

Five years after the submission of the DDP, the DDP (Volume 0, Volume 1, Volume 2, and any active volume) will be reviewed and updated as per regulatory requirements. The DDP will be revised, as needed, to incorporate WTFN engagement feedback, newly active volumes, changes to regulatory requirements, internal and external operational experience and lessons learned, and technological advances in decommissioning technology.

Figure 5 provides an overview of the anticipated decommissioning activity timeline for Pickering NGS Units 1 to 4. This timeline may be further optimized as decommissioning activities progress.

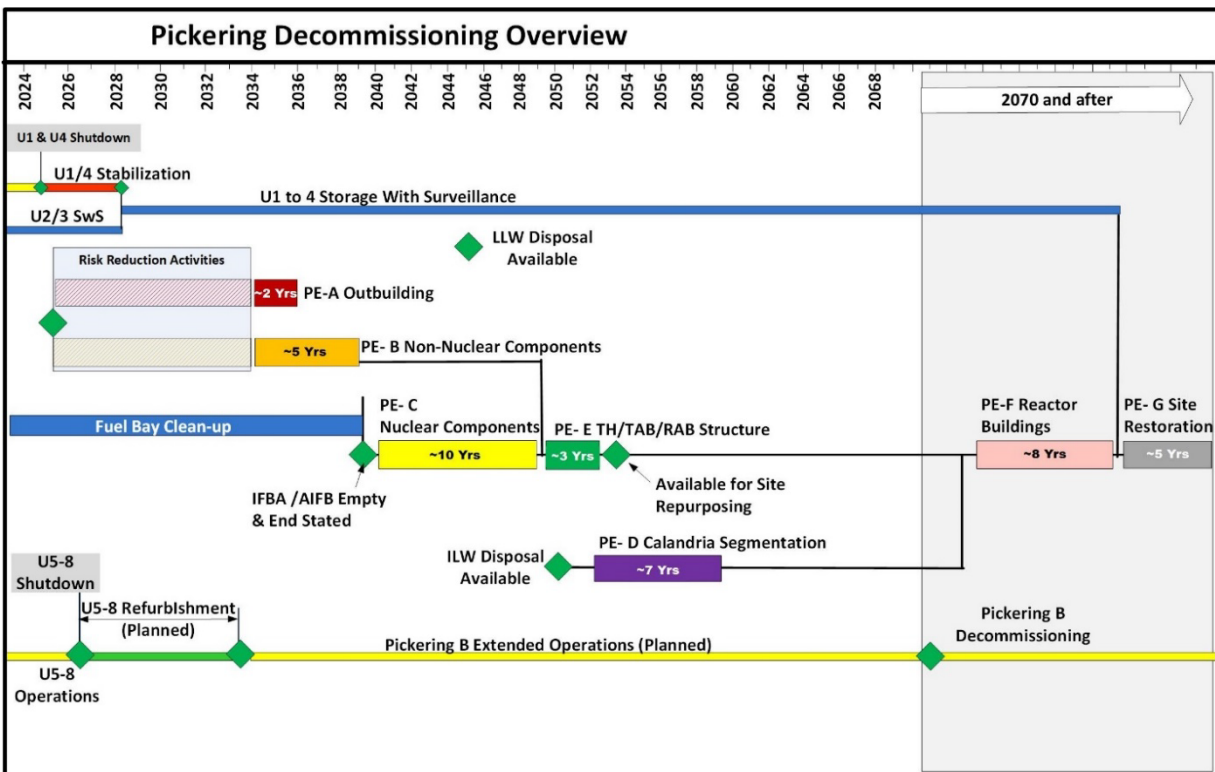


Figure 5. Pickering NGS Units 1 to 4 Decommissioning Timeline

1.2.2.1 Storage with Surveillance Period

In addition to ongoing maintenance and monitoring of operational SSCs within the station, the activities that are planned to continue during SWS include ongoing fuel transfers from the Irradiated Fuel Bays (IFBs) to dry storage.

Used fuel from Units 1 and 4 is stored in IFB 'A' and the Auxiliary IFB (AIFB) for an initial cooling period following defueling. Used fuel that has been stored in the IFBs for the required minimum cooling period will continue to be loaded into DSCs and transported to the PWMF for dry storage using the existing programs and procedures for the management of used fuel. The required fuel bay infrastructure and support systems will continue to be kept active and maintained as described in the SWS Plan. It is anticipated that by 2036 all the used fuel remaining in the IFB-A and the AIFB will be transferred to dry storage.

The IFBs safely store a mix of intact, damaged and defective fuel along with non-fuel waste and used inspection equipment. The IFB-A has an estimated 87,175 bundles in baskets and 1,981 bundles in scrap baskets. The AIFB has an estimated 138,036 bundles in modules and 1,408 in scrap modules. The scrap baskets/module hold the mandated 20 bundles/year/unit of inspected fuel as well as damaged/defective bundles and pencils. The defective volume is estimated as less than 2% of the full bundle inventory currently being safely managed.

A comprehensive clearance operation will be conducted which includes removing all fuel bundles, non-fuel waste and equipment as well as cleaning and draining the bays. Once emptied, the IFBs will transition to the decommissioning and dismantling phase, ensuring a safe and efficient progression in the overall decommissioning process. CNSC and IAEA safeguards requirements for the bays will be maintained until all used fuel has been removed from the IFBs.

As described in the DDP, the decommissioning of the IFBs will follow a phased approach. Phase 1 addresses the ongoing loading of used intact fuel bundles into DSCs. This activity has been ongoing throughout the operating life of the station and will continue through stabilization and into SWS. As fuel is removed, empty baskets and associated frames will be removed from the IFBs and disposed of using existing waste routes. This work will be undertaken to create space for installing equipment necessary for inspecting the fuel.

Phase 2 addresses segregated fuel bundles within the IFBs that are suspected to be damaged or defective and do not meet current acceptance criteria for on-site interim storage within DSCs. Using relevant industry operating experience, custom tooling is being designed to remove these bundles from their current containers. A safety assessment is being completed to support development of an inspection process to determine the extent of damage and whether further conditioning (e.g., canning) is required prior to loading into DSCs. The fuel conditioning project will follow the ECC process and is currently in the preliminary design phase.

OPG is considering operational experience from Hydro Quebec's Gentilly 2 and may leverage the canning process previously used at Gentilly 2. Canning is a specialized containment method for managing damaged or degraded nuclear fuel. In 2021, Hydro Quebec completed canning of damaged/defective fuel in Gentilly 2 by remotely canning the fuel underwater.

OPG anticipates that individually conditioned fuel bundles will have larger overall dimensions than intact fuel bundles; therefore, storage modules will require engineering changes to accommodate conditioned fuel. Due to the increased envelope of conditioned bundles, DSCs containing conditioned damaged/defective fuel are expected to store fewer bundles than DSCs loaded with intact fuel. It is expected (to be verified by analysis as design progresses) that these

DSCs will exhibit lower dose rates and generate less heat compared to DSCs loaded with 384 intact fuel bundles. OPG plans to begin conditioning of damaged/defective fuel by approximately 2030, with transfer to dry storage by approximately 2034.

Phase 3 of the IFB decommissioning approach addresses the removal of remaining low and intermediate level waste from the IFBs. For the removal of operational non-fuel components and materials stored in the fuel bay, tooling and underwater containers are being developed to process and remove the waste from the bays between 2027 to 2039. OPG will follow its existing Nuclear Management System to implement any changes required for these activities.

Phase 4 focuses on the cleaning and draining of the IFBs. As documented in the current DDP, IFB-A is planned to be drained by 2034, followed by the AIFB by 2041. Further details on this activity will be addressed in future submissions of the DDP.

1.2.2.2 Decommissioning Waste Management

As outlined in the DDP (Volume 0), Waste Management Plans (WMPs) will be developed for all waste generated during decommissioning activities. Depending on the complexity of the activity, a WMP could be developed for a planning envelope (PE) or a specific work package and the associated waste volume estimates will be provided in the respective PE DDP volume. The WMP will use the conventional and radiological characteristics determined during scoping/characterization activities to document the approach for handling waste throughout the decommissioning process.

WMPs for PE-A and PE-B activities are provided in DDP Volumes 1 and 2, respectively. Waste generated from these decommissioning activities is expected to be comprised largely of conventional solid waste. A small volume of Low-Level Waste (LLW) may be generated. All decommissioning waste will be managed in accordance with Pickering NGS's existing Waste Management programs (see Section 2.11 (SCA 11)).

All decommissioning work undertaken at Pickering NGS during the proposed licensing period will comply with the processes and procedures of the existing Nuclear Management System. Further details on the programs, procedures and considerations for Pickering NGS Units 1 to 4 decommissioning activities are provided within each of the SCA discussions in Section 2 of this CMD.

1.3 Station Performance

Throughout the current licence period, Pickering NGS continues to demonstrate strong safety performance. OPG has received the Electricity Canada President's Award of Excellence for Employee Safety – Generation for seven consecutive years (2018-2024). The award recognizes OPG's top quartile performance for both total recordable injury frequency and lost time injury severity rates, underscoring our long-standing dedication to health and safety in the workplace.

Station reliability continues to improve due to strategic investments and enhancements made during the current licence period. These efforts have resulted in significant improvements in Fuel Handling reliability, Work Protection, Outage Management and Equipment Reliability. In January 2026, Pickering NGS was recognized by an international nuclear organization highlighting the station's ability to operate at the highest levels of operational safety and reliability.

In 2024, following a planned multi-decade contribution to Ontario's power grid, Pickering NGS Units 1 and 4 were safely removed from service and stabilization activities are underway to place the units in SWS. On its final day, Pickering NGS Unit 1 was one of the best performing operating plants in North America for equipment reliability based on unplanned shutdowns, forced outages, and availability of key safety systems as measured by industry accepted indicators.

Through ongoing investments, innovations and the efforts of our employees, Pickering NGS exhibits a strong safety and operational performance. This track record reflects the diligence and passion for excellence that all personnel are committed to on a daily basis in support of the safe and reliable operation of the station.

In 2019 and 2024, Pickering NGS was awarded a Business Excellence Award by the Ajax Pickering Board of Trade, recognizing the station's continued commitment to innovation in governance and overall business excellence.

Integrating the use of new technology remains a key focus area. In 2024, Pickering Radiation Protection (RP) and X-Labs team members received the Canadian Nuclear Society (CNS) Innovation Achievement Award for developing and implementing a groundbreaking shielding process using Additive Manufacturing (AM) to custom print tungsten material. This approach not only addressed the challenges of shielding system components with difficult configurations or demanding environment scenarios, but it also minimizes radiological exposure to workers, setting new standards in RP and operational efficiency at the stations. AM or 3D printing solutions continue to be increasingly leveraged, including as a manufacturing solution for custom robotic tooling needed for emergent station requests such as repositioning a circuit breaker shutter.

OPG was also recognized by Electricity Canada with the Centre of Excellence Award in 2024 for its 3D laser scanning program. The use of remote tooling such as drones and robots continues to enhance safety, with a LiDAR mapping drone deployed to complete detailed laser scans in preparation for Pickering NGS Refurbishment, and a radiation mapping drone using LiDAR navigation to safely inspect the Unit 8 vault during operation.

OPG's in-house developed sensor platform also continues to be expanded to support station temperature, vibration, and battery monitoring requests, to assist Operations and Engineering staff with online sensor data for their equipment. OPG has started on-site fabrication of subcomponents such as boiler blow down actuator rods, washers for valves, and tools, and continues to be expanded to support material availability for safe and reliable operation. In 2025, OPG received a Thomas F. Farrell II Safety Leadership and Innovation Award from US Based Edison Electric Institute for the creation of remote Wet Bulb Globe Temperature (WBGT) sensors that continuously monitor environmental conditions in real time, enhancing worker safety and supporting better work planning.

OPG is also committed to the safe handling and management of waste and radioactive materials. Throughout the current licence period, OPG continued to safely and reliably transfer, process, and store used fuel in DSCs from the Pickering NGS to the PWMF. The PWMF has operated safely without a Lost Time Accident for all 30+ years the facility has been in operation (since 1996). There have been more than 1,400 on-site transfers of loaded DSCs without incident, with 497 DSCs processed and stored between 2018 and 2025 and with dose to the public from the operation less than 1% of the regulatory limit. Additionally, during the current licence period, there have been no reportable spills and no environmental non-compliances at the PWMF.

OPG's continual investment in innovative technologies continues to improve planning, increase safety, minimize radiological exposure, and reduced carbon emissions. The strong performance of the Pickering NGS and PWMF is also evident in the numerous community and industry recognitions and awards received over the years, reflecting the exceptional high standards upheld by OPG and our dedicated staff.

1.4 Our People

At OPG, our workplaces are becoming stronger as a result of the diverse skills and experiences of our team.

OPG is committed to equity, diversity, and inclusion (ED&I) in its workplace, ensuring fair and respectful treatment for all employees, contractors, and business partners. OPG's 10-year ED&I Strategy, launched in 2021, outlined nearly 100 initiatives and 15 strategic priorities, with substantial completion of all actions by December 31, 2024. As a result, OPG was recognized as one of Canada's Best Diversity Employers in 2023.

To maintain momentum, OPG has identified new ED&I actions for 2025–2027, with a renewed focus on building a diverse workforce that represents our communities and creating a culture of inclusion. In 2024, OPG also refreshed its Reconciliation Action Plan, adding new actions, and continues to hold a Gold Designation from the Canadian Council for Indigenous Business for best practices in Indigenous Relations.

Employees help drive the ED&I Strategy through active Employee Resource Groups and initiatives such as Bridging the Gap, which supports women in the control room through information and mentorship. In 2022, OPG made history with an all-women led crew of CNSC-licensed Control Room Shift Supervisors and Shift Managers at Pickering NGS.

OPG's mandatory diversity fundamentals training for all employees and inclusive leadership and hiring-manager training mitigates bias and its impacts on interviews and hiring decisions. As OPG grows, it will continue updating its ED&I Strategy, focusing on diversity education, expanding community partnerships, and advancing employment equity.

1.5 Innovation at OPG

Pickering NGS's advancements in innovation are driven by initiatives supported through OPG's Monitoring & Diagnostics (M&D) Centre, X-LAB, and innovations in training.

OPG's Monitoring and Diagnostics Centre

Established in 2017, the M&D Centre leverages data analytics and continuous remote monitoring to closely observe key components, utilizing over 2,400 Advanced Pattern Recognition models and analyzing approximately 20,000 data points across the OPG fleet. The M&D Centre plays a crucial role in early detection, supporting the condition-based maintenance strategy, ensuring maintenance is performed when needed. Additionally, the M&D Centre supports thermal performance monitoring of our fleet.

In 2022, the M&D Centre received the Canadian Nuclear Society Innovative Achievement Award in recognition of significant innovative achievements and the implementation of new concepts displaying clear qualities of creativity, ingenuity and elegance in the nuclear field in Canada. Additionally, the M&D Centre has also benchmarked against various utilities through

organizations such as Electric Power Research Institute (EPRI) and has been recognized as one of the industry leaders, leveraging data analytics to enhance plant reliability and to minimize generation loss.

OPG's Innovation Department (X-Lab)

Established in 2017, OPG's X-Lab drives the adoption and implementation of new technologies to enhance operations and project delivery. Its mission is to improve safety, improve equipment reliability, and foster a culture of innovation across the organization.

In 2025, X-Lab merged with the Advanced Inspection Maintenance (AIM) team within OPG, creating a unified group with expanded expertise and resources. This integration enables greater collaboration, leverages a larger talent pool, and strengthens our ability to drive innovative initiatives that deliver value across the organization

The team is actively leading innovation initiatives across the following areas:

- *Additive Manufacturing:* OPG is developing in-house capability for producing custom parts, tools, and models to address part obsolescence, reduce long lead times, and accelerate new tooling development. This capability enhances equipment reliability, minimizes downtime, and ensures faster service delivery.
- *Non-Destructive Examination:* OPG is continuously implementing advanced NDE techniques e.g. Phased array ultrasonic to improve flaw detection and characterization. NDE techniques are being integrated using robotic systems for remote inspections in challenging environments to improve safety. Additionally, NDE is integrated with in-house 3D printing to accelerate tooling development.
- *OPG's Strategic Asset Monitoring (SAM) program* uses advanced sensors and in-house gateway technology for real-time monitoring of critical assets. By enabling continuous online monitoring and predictive analytics, SAM improves reliability, reduces maintenance costs, enhances safety, and supports data-driven decision-making.
- *Robotics and Drone Development:* OPG has adopted the Spot Robotics Platform by Boston Dynamics, enabling online inspections in complex and potentially hazardous environments, significantly improving safety and operational reliability. In parallel, OPG is also leveraging drone-based inspection system to collect more accurate data, reduce inspection time and improve operational efficiency.

Innovative Strategies for Training

OPG's Training strategies have innovation embedded in its program through use of various simulators:

- The updated Fuel Handling Simulators provide Operators with the opportunity to enhance their proficiency in fuel handling activities within a low-risk environment. The Fuel Handling team has leveraged the simulator to expose Operators to improved procedures.
- Operations Training instructors improve Fuel Handling Major Panel Operator and Field Operator defueling performance by delivering Just-in-Time Training (JITT) utilizing full scope and glass top simulators. The updated glass top simulators allow Operators to become more proficient in fuel handling activities all while working in a zero-risk environment. A glass top simulator has also been placed in the Administration Building, allowing staff to train and practice scenarios without leaving the protected area to come

to the training facility. As well, the Fuel Handling team has utilized the simulator to not only expose the Operators to enhanced procedures but to fine tune the flow of what are now first-of-a-kind procedures.

- Pickering Refurbishment Training Change Control is using the latest internal Artificial Intelligence program, ChatOPG to extract succinct summaries out of various extensive Engineering Change Documents. This ability saves thousands of hours for Training reviewers by allowing them to focus their attention on assessing for training impact.
- Pickering Refurbishment Training created a simple application that has the potential to replace thousands of communication emails with Training Subject Matter Experts for each training group. It documents responses in a single internal SharePoint List for use now and in the future. The application has the ability to increase functionality as the project evolves.
- Maintenance Training instructors improve crane operator performance by incorporating a virtual reality (VR) simulator into crane operator training. Training material improvements include the incorporation of simulated scenarios such as precision lifts, crane failures, and risk management decision points. The VR crane simulator offers a learning opportunity that is personalized, on-demand and realistic. By integrating virtual reality technology into crane operator training, the simulators offer a safe environment where operators can encounter conditions typically experienced only after many years in the field.
- The Boeing 737-800NG Human Performance Flight Simulator immerses individuals in an unfamiliar environment where the probability of error increases, enabling them to fully appreciate how human performance tools and techniques reduce the probability of error. This approach allows individuals to practice safely, learn from mistakes, and enhance their proficiency in utilizing human performance tools.
- The course introduces the trainees to the psychology, science, and history behind the Human Performance tools and establishes a resilient Human Performance Culture. Following completion of the theoretical classroom portion, the trainees are provided an opportunity to practice the Human Performance tools/techniques using various interactive simulations in a flight simulator and air traffic control station. This places the trainee in an unfamiliar environment, different from the station, where they are able to observe the full benefits of the Human Performance tools/techniques while being challenged with distractions and competing priorities.
- RP training has improved RP technician performance by incorporating a Simulated Radiological Source Generator into their continuing training. A radio frequency simulated source eliminates actual live radiological sources. Technicians are demonstrating greater radiological risk mitigation proficiency while eliminating any exposure to radiological sources. The simulation equipment includes portable wireless dosimeters, survey meters, gamma sources and scenarios that mimic conditions that were unachievable in previous training conditions.

1.6 Indigenous Engagement

1.6.1 Indigenous Engagement

OPG respects Aboriginal and treaty rights and is committed to developing positive relationships with Indigenous Nations and communities. OPG's Indigenous Relations Policy provides a framework for engagement with Indigenous Nations and communities and provides support of community programs and initiatives. As part of its Indigenous Relations Policy, OPG maintains an Indigenous Relations program for its nuclear operations with the goals of:

- Informing Indigenous Nations and communities with established and/or asserted treaty and/or Aboriginal rights, and those that have expressed interest, of nuclear station operations, emerging projects and station environmental performance;
- Seeking the input and worldviews of Indigenous Nations and community representatives about OPG's ongoing nuclear operations and projects, and;
- Addressing any identified concerns, as appropriate.

OPG is committed to engaging with Indigenous Nations and communities regarding nuclear operations as well as proposed future initiatives at Pickering NGS.

As recommended in CNSC REGDOC-3.2.2, *Indigenous Engagement*, this section contains:

- An initial review to consider whether the activities described in this licence application could result in potential impacts to the environment and/or an Indigenous groups' potential or established Aboriginal and/or treaty rights;
- An overview of OPG's efforts to identify and create an initial list of Indigenous groups whose potential or established Aboriginal and/or treaty rights may be adversely affected by the proposed activities in the licence application;
- A summary of Indigenous engagement activities conducted to date;
- A description of proposed and planned Indigenous engagement activities through the licensing process; and
- A proposed schedule for interim reporting to the CNSC on Indigenous Engagement through the licensing process.

Information about Nations' perspectives contained in the CMD and IER has been drafted to summarize comments received and reflect OPG's understanding of what was communicated. OPG continues to welcome additions and clarifications from Indigenous Nations and communities to ensure OPG fully understands interests and/or concerns.

In keeping with previous requests from the Michi Saagiig Nations, OPG provided a draft of this Commission Member Document (CMD) to the Michi Saagiig Nations for a review period prior to finalization. The draft Indigenous Engagement Report (IER) was also shared with Indigenous Rightsholders (Michi Saagiig and Chippewa Nations of the Williams Treaties) for review prior to submission. For those Nations that provided comments on this document, OPG has reflected their perspectives in this submission (including as thematic issues in the IER).

As some comments and questions were received recently, OPG is working to provide responses and will continue engagement discussions to understand and address these matters as the licensing process proceeds. Additional Indigenous Nations and communities that

are identified in OPG's Indigenous Engagement Plan will receive this final CMD and IER for review and comment.

1.6.1.1 Commitment to Reconciliation

OPG has a long history of developing respectful and collaborative relationships and is committed to taking concrete and measurable actions to advance reconciliation with Indigenous peoples and to report regularly on the company's activities and progress in achieving established goals.

OPG launched its RAP in the fall of 2021, which outlines OPG's commitment to advancing reconciliation with Indigenous peoples under the focus areas of leadership, relationships, people, economic empowerment, and environmental stewardship. The RAP is a public document that serves as a roadmap to reconciliation and the 2021 edition included 38 specific actions and commitments with clear deliverables and timelines spanning between 2022 and 2031. Some key highlights and achievements since the 2021 Reconciliation Action Plan was developed include:

- Since 2022, OPG has awarded \$198 million in Indigenous contract awards and \$39.4 million in equity distributions to Indigenous partners.
- Programs are offered to Indigenous employees to promote their career path development.
- An Indigenous Relations training program was developed and initiated to build Indigenous relations awareness and cultural competence across the organization.
- Overall, in 2024, OPG invested a total of over \$700,000 in Indigenous initiatives, including a sponsorship for the annual Indspire Awards, which recognize Indigenous excellence.
- In September 2024, OPG was recertified with the Gold Designation from the Canadian Council for Indigenous Business through its Partnership Accreditation in Indigenous Relations program.
- The ION program began in 2018 with the goal of placing Indigenous candidates into trades and non-trades roles within OPG and vendors and unions in the energy sector. To date, ION has placed 264 Indigenous candidates. In 2025, 74 candidates were hired, surpassing the goal of 70 for 2025.

OPG acknowledges the progress it has made as a company and takes pride in that journey, while remaining deeply aware that there is still much more work ahead to advance reconciliation. In the spirit of driving change across the industry and holding firm on our commitment to advancing reconciliation, OPG refreshed the RAP in July 2024. The refreshed RAP includes a recap of OPG's progress on its goals through 2021-2023 and the addition of 20 new commitments developed through internal discussions and input from Indigenous Nations, communities and businesses.

1.6.1.2 Preliminary Assessment of Impacts

OPG has undertaken an initial assessment to determine whether the continued operations, refurbishment and decommissioning activities for which OPG is seeking authorization in this licence application may give rise to novel impacts on established or asserted Aboriginal and/or

treaty rights. In undertaking this initial assessment, OPG considered potential impacts to Aboriginal and/or treaty rights that may result from:

- Radiation from ongoing stabilization activities, restart and operations of Units 5 to 8 post-refurbishment (refurbishment and continued operations) and certain dismantling and demolition activities for Units 1 to 4 (decommissioning).
- Dust, noise and particulate emissions from site preparation and construction activities (continued operations, refurbishment and decommissioning).
- Impacts to aquatic habitat from construction and operation of a deep-water intake structure (refurbishment).
- Impacts to water quality from dismantling and demolition activities (decommissioning).

OPG also assessed the significance and likelihood of the potential impacts by considering the spatial extent of the proposed activities as well as assessing the nature, degree and duration of the potential impacts.

From OPG's perspective, there are specific activities, like the construction of the deep-water intake structure, that may result in certain novel impacts on established or asserted Aboriginal and/or treaty rights. Since submitting the application, OPG has not received additional knowledge and/or comments from established and/or asserted Rightsholders regarding how additional activities contained in the application may result in novel impacts.

For the construction of the proposed deep-water intake structure in support of refurbishment, OPG's assessment that there may be novel impacts on established or asserted Aboriginal and/or treaty rights is based on:

- The location of the proposed deep-water intake structure and associated field investigations/construction activities being outside of the Pickering NGS site, in an area of the lakebed that has not been disturbed previously and in an area accessible to Indigenous Rightsholders by boat.
- The potential for shoreline changes in support of construction (e.g. dock dredging, infill, and material disposal), which could adversely impact quality and availability of fish habitat.
- The potential presence of marine archaeological and/or cultural heritage resources.
- There are air and noise emissions associated with deep-water intake construction (launch shaft and tunnel, infill, equipment).
- During tunneling activities, a large volume of spoils will be excavated from under the lakebed. Spoils management options are being explored and a spoils management plan will be developed.

OPG anticipates that future benefits associated with the proposed deep-water intake structure would reduce aquatic impacts from present practices. OPG will ensure that Indigenous Nations and communities are provided information on any potential additional impacts of the deep-water intake structure.

With respect to continued operations, decommissioning and other refurbishment activities included in the application, OPG's preliminary assessment contained in the initial application was that these activities are anticipated to give rise only to minimal novel impacts to established or asserted Aboriginal and/or treaty rights based on:

- The location of operations, decommissioning and refurbishment activities are within a previously developed area of the Pickering NGS site, a site that is already heavily disturbed and inaccessible.
- The predicted radiation dose to the Harvester receptor is 1.24 $\mu\text{Sv/a}$, which is well below the regulatory public dose limit of 1,000 $\mu\text{Sv/a}$ (i.e., 0.12% of the limit).
- Although there may be an increase in noise associated with decommissioning and refurbishment activities, wildlife in the area are accustomed to noise levels associated with an urban environment.
- No radiological atmospheric emissions are expected during the proposed dismantling and demolition activities as most of the dismantled equipment will not be from radiological systems nor from systems likely to be radiologically contaminated.
- Vehicle traffic associated with transporting dismantled material off-site will be similar to or slightly higher than traffic associated with current operations.
- Ambient air quality exceedances are expected to remain largely localized to the Pickering site where dust suppression measures will be implemented to minimize dust and particulate emissions.
- Potential impacts to surface water quality from dismantling activities will be minimized through OPG's spill management protocols and construction best practices.
- Potential impacts to fish and fish habitat due to the potential release of contaminants into surface water will be effectively mitigated through OPG's spill management protocols, by ensuring all dismantling activities occur in controlled areas with proper containment systems.
- Potential impacts to soil and groundwater from potential spills will be minimized through OPG's spill management protocols and by having spill recovery equipment and procedures in place prior to commencement of and during decommissioning activities.
- Following refurbishment, Units 5 to 8 will operate in a manner consistent with existing operations.

OPG emphasizes that this assessment is preliminary in nature and may evolve as OPG's site planning efforts advance, the engagement process unfolds, and/or based on the Crown's assessment of consultation obligations. Through engagement activities, OPG recently received comments on the initial assessment from one First Nation. OPG has documented the Nation's inputs in Appendix F as received to preserve the Nation's perspective.

OPG is committed to continue its efforts to proactively engage with Indigenous Nations and communities to inform OPG's understanding of how the activities described in OPG's application and this CMD may impact established or asserted Aboriginal and/or treaty rights, and address those impacts through avoidance, mitigation and accommodation measures, as appropriate.

1.6.1.3 Identified Nations and Communities

Engagement on the Pickering Site PROL and WFOL renewal is focused on the WTFN Rightsholders in whose treaty and traditional territory Pickering NGS is located. In consideration of CNSC REGDOC-3.2.2, *Indigenous Engagement*, 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 our operations at Pickering. In addition, in October 2025, OPG was delegated by the Government of Ontario the procedural aspects of consultation in respect of the refurbishment of Pickering Units 5 to 8 as it relates to any relevant provincial decisions, approvals and permits that may be issued as necessary by the provincial Crown which trigger Crown consultation obligations. OPG has been engaging with all Indigenous Nations and communities identified in the delegation letter prior to receiving it and will continue to implement a robust engagement and consultation framework, respectively.

In the tables below, OPG has identified Indigenous Nations and communities that have established Aboriginal and/or treaty rights, have asserted Aboriginal and/or treaty rights, or have expressed an interest in Pickering Site. The below lists were developed based on consulting the Government of Canada's Aboriginal and treaty Rights Information System, previous engagement and relationship building efforts with Indigenous Nations and communities, information shared by the CNSC on previous licence and renewal applications at Pickering NGS and engagement lists previously provided by provincial and/or federal agencies.

Aboriginal and treaty rights refer to those rights that are recognized and affirmed in section 35 of the *Constitution Act, 1982*. For the purposes of the Duty to Consult, both established and potential rights are considered. Indigenous Nations and communities identified in Table 5 have established treaty rights in the Pickering area that have been acknowledged by the Crown.

Table 5. Identified Indigenous Nations/Communities with Established Aboriginal and/or Treaty Rights

Indigenous Nation/ Community	Reason for Engagement
Mississaugas of Scugog Island First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.
Curve Lake First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.
Hiawatha First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.
Alderville First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.
Chippewas of Rama First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.
Chippewas of Beausoleil First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.
Chippewas of Georgina Island First Nation	Rightsholder, and Pickering NGS is within their traditional and treaty territory.

Aboriginal and treaty Rights refer to those rights that are legally recognized and affirmed in section 35 of the *Constitution Act, 1982*. For the purposes of the Duty to Consult, both established and potential rights are considered. Indigenous Nations and communities identified in Table 6 have claimed Aboriginal and/or treaty rights in the Pickering NGS area but have not had these potential rights established in court or acknowledged by the Crown.

Table 6. Identified Indigenous Nations/Communities with Asserted Aboriginal and/or Treaty Rights

Indigenous Nation/ Community	Reason for Engagement
Kawartha Nishnawbe	Asserted Aboriginal and/or treaty rights where Pickering NGS is located.

Indigenous Communities identified in Table 7 do not claim Aboriginal or treaty rights, but have expressed an interest in the project, will be provided with information as the project progresses.

Table 7. Identified Indigenous Nations and Communities Expressing an Interest

Indigenous Nation/ Community	Reason for Engagement
Six Nations of the Grand River	Has expressed interest in OPG nuclear operations and projects at Pickering NGS.
Métis Nation of Ontario Regions 8	Has expressed interest in OPG nuclear operations and projects at Pickering NGS.
Mohawks of the Bay of Quinte	Has expressed interest in OPG nuclear operations and projects at Pickering NGS
Wendat Nation, Quebec	Has expressed historical significance of traditional territory in Pickering area.
Saugeen Ojibway Nation comprised of Saugeen First Nation and Chippewas of Nawash Unceded First Nation (Nawash)	Has expressed interest in transportation and storage of waste from Pickering NGS within their traditional and treaty territory.
Mississaugas of the Credit First Nation	Has expressed interest in OPG nuclear operations and projects at Pickering NGS.

To date, Pickering Site has provided PROL and WFOL information and invited the Indigenous Nations and communities identified in Table 5, Table 6, and Table 7 to engage on OPG's licence renewal application and any other engagement opportunities of interest. A summary of OPG's engagement efforts is provided in the Indigenous Engagement Report (IER) in Appendix F. The IER contains OPG's engagement log for engagement activities between July 2023 to January 2026, a thematic summary of issues and concerns raised through the course of engagement, a list of commitments, actions and measures to address concerns and/or potential impacts to rights as well as an outline of proposed engagement activities between February 2026 and the Part 2 Hearing in October 2026.

1.7 Community Support

1.7.1 Public Information and Disclosure Program

OPG believes in open and transparent communication in a timely manner to maintain positive and supportive relationships and the confidence of key stakeholders and the public. OPG's *Nuclear Public Information Disclosure and Transparency Protocol*, posted on OPG's website, describes our communication principles and information requirements and reporting. This protocol adheres to the regulatory requirements outlined in CNSC REGDOC-3.2.1 *Public Information and Disclosure*.

OPG's Corporate Relations organization adheres to OPG standard *Nuclear Public Information and Disclosure*, as it describes consistent standards and procedures for all public disclosure of both material and non-material information. Public information and disclosure involves the provision to inform, in a timely and transparent manner, accurate information to stakeholders and the public in the vicinity of OPG's nuclear and waste facilities regarding events, activities and operations.

OPG's public information program has been recognized as a strength by national and international utility peers. To ensure continuous improvement, OPG annually evaluates the effectiveness of the *Nuclear Public Information and Disclosure* standard and implements findings.

The public information program proactively provides information to the public and stakeholders on the Pickering NGS and PWMF operations.

The primary focus area for engagement activities, in addition to the public at large, includes local businesses and residents, municipalities proximate to the Pickering NGS site including the host community and adjacent communities within 10 km. The 10 km radius is consistent with the Pickering NGS Detailed Planning Zone for nuclear emergency planning purposes and meets the requirements of CNSC REGDOC-2.10.1 and the Provincial Nuclear Emergency Response Plan (PNERP). This area is where residents are most familiar with nuclear plant operations and regularly receive information on OPG's operations including station and project updates.

OPG ensures the public and stakeholders with a potential interest in Pickering NGS and PWMF operations and performance, are provided with relevant information and have the opportunity to share their views and perspectives. Information is communicated in a number of ways based on their interests and preferred means of communication.

Stakeholders and audiences may include but are not limited to:

- Indigenous Nations and communities
- Residents in the vicinity of the Pickering NGS site and the public
- Established community committees such as the Pickering Community Advisory Council and the Durham Nuclear Health Committee
- Local businesses and business organizations, such as boards of trade and chambers of commerce
- Private/public community organizations and special interest groups
- Non-Governmental Organizations

- Nuclear industry associations/organizations and regulatory bodies
- Media
- Federal, provincial, regional, and municipal agencies and officials with a regulatory role or project interest
- OPG employees and retirees

1.7.1.1 Communication Methods

Communication methods are the approaches and activities used to distribute information, and to solicit feedback and input. The methods employed are specific to the issues and matters that arise and include:

- *Advertisements and Letters:* Public notifications are prepared and distributed to announce upcoming hearings and other licensing activities in a number of ways and may include: stakeholder letter(s), web communications, community newsletter (OPG's Neighbours Newsletter), press release, and advertisements in local print or social media (as required).
- *Website:* OPG's website, www.opg.com is updated on a regular basis as new information becomes available. The website serves as a vehicle to provide access to information, as well as a mechanism to receive input from interested persons as an enhancement of the public outreach program; questions and inputs are tracked and responded to in a timely manner.
- *Social Media:* OPG maintains a presence on social media (Facebook, Twitter/X, LinkedIn and Instagram) and shares information through these media.
- *Public Information Centre:* OPG maintains a Public Information Centre at the Pickering NGS, with information available on station operations including OPG's Nuclear Sustainability Services Division, which includes the PWMF, as a leader in safe waste management practices. Information Centre staff manage the public phone line and messages are checked and responded to in a timely manner.
- *Community Events:* The OPG Corporate Relations team participates at a variety of community events and festivals each year, ensuring the public can ask questions about OPG's operations, including waste management and projects.
- *Media Relations:* Ongoing liaison with respect to operations and licensing activities is initiated and maintained by OPG with reporters and news editors for both electronic and print media.
- *Key Stakeholder Briefings:* Briefings are conducted to present information and provide an opportunity to have questions and comments addressed. Regular updates are presented to municipal representatives, established community committees including the Pickering and Darlington Community Advisory Committees, Durham Nuclear Health Committee, and other key stakeholders on a frequency commensurate with various activities and milestones. Feedback from these meetings is recorded for response and issues management.
- *Workshops:* Key stakeholders with a high level of interest in operations or other station activities may be invited to participate in workshops that involve meaningful discussions with the opportunity to provide input and have questions answered.

- *Public Information Sessions:* Information sessions (in person or virtual) advertised broadly and open to the public provide an opportunity to learn more about OPG's operations, projects and the Nuclear Sustainability Services division with the opportunity to provide comments and/or have questions answered by members of the OPG team.
- *Community Outreach:* Outreach activities to interested groups and communities may include:
 - Presentations and tours of the Pickering site to community groups, key stakeholders, industry partners and the general public.
 - Neighbours Newsletter which is distributed to about 250,000 residents and businesses within ten kilometers of the Pickering and Darlington NGS and posted online.
 - OPG's annual Community Power Expo, which is widely advertised with a focus on the nearby community, provides information on OPG's operations. Staff from OPG and various industry partners are present to answer questions and provide information on operations and projects at the Pickering NGS.

1.7.1.2 Facility Reporting

OPG regularly and proactively provides information to the public on its operations through OPG's nuclear standard *Nuclear Public Information and Disclosure*.

For operational status changes or unscheduled operations that may be of interest to the public or media, OPG follows the *Stakeholder Public Interest Notification Process* to notify key stakeholders in a timely manner as outlined in Appendix B of OPG's nuclear standard *Nuclear Public Information and Disclosure*. The purpose of the process is to ensure those key stakeholders in emergency agencies (fire, police, and emergency management) and local government organizations are kept aware and are able to respond accurately if they receive questions from constituents. OPG maintains a duty on-call organization 24 hours a day, seven days a week.

On a quarterly basis, OPG publicly posts performance reports on station operations on OPG's website and shares these documents electronically. Additionally, since 2014, OPG issues a quarterly Environment Report in an easy to read and understandable format.

1.7.1.3 Welcoming Visitors

Pickering NGS maintains an Information Centre to host public, community groups and students. Visitors can find information on operations, technology, future plans including refurbishment and decommissioning, and staff are available to have conversations and answer questions. Students are offered curriculum-based educational presentations, introductions to CANadian Deuterium Uranium (CANDU) technology and Science, Technology, Engineering, and Mathematics-based (STEM) activities.

OPG encourages community groups to use the Information Centre for events unrelated to the industry. OPG's meeting room and event space provide another means to engage with the local community. By creating a meeting space, organizations otherwise unrelated to the industry gain a comfort and familiarity with OPG and our operations.

1.7.1.4 Community Outreach

During the current licence period, through OPG's robust public outreach program, activities in support of Pickering NGS and PWMF operations have included:

- Pickering NGS's Corporate Relations team continues to provide quality programs within our host communities. Our annual March Break and Tuesdays on the Trail programs reached thousands of community members throughout the winter and summer months.
- Through our website, www.opg.com, OPG provides up-to-date information that is easily accessible by the public and offers opportunities for further contact. Newsletters, reports, media releases, stories and links to other agencies and regulatory proceedings are updated frequently to ensure information is easily accessible. OPG maintains public communications that simply explain how we safely manage nuclear waste and by-products.
- OPG maintains an active social media presence and shares information on OPG's operations (X - 18,581 followers, Facebook - 13,000 followers, LinkedIn - 170,000 followers, and Instagram - 9,200 followers).

1.7.1.5 Community Committees

OPG works with established local community committees on matters of interest and concerns related to our operations and projects. Updates on the status of licensing activities are provided to the committees.

- The Pickering Nuclear Community Advisory Council meets regularly to exchange information with community leaders and local residents, who in turn provide advice to OPG.
- OPG has representatives on the Durham Nuclear Health Committee and OPG staff make regular presentations on a variety of environmental, community outreach and operational topics including emergency preparedness. This committee is chaired by the Durham Region Medical Officer of Health.
- OPG representatives sit on government relations committees for the Ajax Pickering Board of Trade and the Whitby Chamber of Commerce. These committees are chaired by local business leaders and provide the opportunity for OPG to make regular updates and engage with the broader business community.

OPG meets often with stakeholder groups, elected officials, municipal representatives, not-for-profit organizations and associations that have an interest in nuclear, energy, climate change, and/or environmental issues. OPG also participates in a number of speaking engagements in our host communities on a variety of topics.

1.7.1.6 Environmental Partnerships and Programs

OPG is dedicated to supporting and advancing biodiversity across all of its operations and within the communities where we operate. As a corporation, OPG leads and participates in a wide range of biodiversity initiatives that protect and enhance habitats, promote species conservation, and foster environmental stewardship.

At our Pickering site, OPG's biodiversity program includes several key initiatives. The Nest Box program provides vital nesting habitat for local cavity-nesting birds, while our partnership with Birds Canada supports population research through the MOTUS wildlife tracking tower,

contributing valuable data on migratory birds, bats and insects that are electronically tagged. In collaboration with Wildlife Preservation Canada, the Pickering site is also actively involved in native bumble bee conservation, helping to protect these essential pollinators.

Across Ontario, OPG's commitment to biodiversity is demonstrated through a Corporate-wide program that has planted more than 10 million native trees and shrubs over the past 25 years. We are a long-standing partner of Environmental Stewardship Pickering (ESP), working alongside the City of Pickering and the Toronto and Region Conservation Authority to deliver educational workshops, local tree plantings, and nature programs for the community.

OPG is also a partner in the Bring Back the Salmon program, working with the Ontario Ministry of Natural Resources and the Ontario Federation of Anglers and Hunters to restore Atlantic Salmon populations. At Pickering, the Information Centre houses a salmon hatchery and partners with local schools, providing educational presentations and hands-on experiences for students.

Our commitment to environmental excellence is recognized globally—OPG's Nuclear Operations hold a Gold Level Conservation Certification from Tandem Global (a combination of Wildlife Habitat Council and World Environment Center). This international certification acknowledges the effectiveness and impact of our Pickering site biodiversity program and our dedication to protecting species and habitats on site.

Through these initiatives and partnerships, OPG continues to demonstrate leadership in biodiversity and environmental stewardship, ensuring a healthier, more sustainable future for Ontario's ecosystems and communities.

1.7.1.7 Community Recognition

OPG and our employees work every day to make clean, safe, and reliable power that positively impacts communities across the province. With our commitment to sustainable energy systems, equity, diversity and inclusion, and Reconciliation, OPG is increasingly recognized for the positive role we play in the lives of employees and communities throughout Ontario. At Pickering NGS, we have received the following community recognition and awards:

- Greater Oshawa Chamber of Commerce, Business Excellence Award – 2021
- City of Pickering Environment Award - 2021
- Whitby Chamber of Commerce, Business Achievement Award - Excellence in Governance Strategy Award – 2025
- Progressive Aboriginal Relations Gold Designation from the Canadian Council for Aboriginal Business – 2021
- Essential Service Employer at the Pandemic Heroes – 2021
- Canadian Electricity Association - 2021
- Women's Executive Network Ally of Excellence Award – 2022
- Greater Toronto Top Employer – 2022
- Canada's Best 50 Corporate Citizens by Corporate Knights – 2022
- Greater Oshawa Chamber of Commerce, Sustainability Award – 2022
- City of Oshawa, Business Excellence Sustainability Award – 2023

- Canada's Best Diversity Employers – 2023
- Canadian Occupational Safety's (COS) 5-Star Safety Culture List – 2023
- Ajax Pickering Board of Trade Business Excellence Award – 2024
- Government of Canada Employment Equity Achievement Award (Innovation category) – 2024
- Electricity Canada's Centre of Excellence Award – 2024
- Whitby Chamber of Commerce, Business Achievement Award (50 + People) – 2025
- Info-Tech Innovator of the Year Award – 2025
- Gartner Eye on Innovation Award for Power & Utilities – 2025
- Gold Certification by Wildlife Habitat Council – 2020 - 2028

A close-up photograph of a welder wearing a silver helmet with a dark visor and yellow protective gloves. The welder is using an orange handheld grinding tool on a metal pipe. A large volume of bright orange sparks is being ejected from the point of contact between the tool and the pipe. The background is dark and out of focus. The image is overlaid with a blue geometric pattern consisting of overlapping circles and a grid of lines.

2.0

Safety and Control Areas (SCAs)

2.0 Safety and Control Areas (SCAs)

The 14 Safety and Control Areas (SCAs) are a set of technical areas used by CNSC to assess, evaluate, review, verify and report on regulatory requirements and performance. The SCAs are further divided into specific areas that define the key components of each SCA.

The licence application (Reference 1) details the policies, programs, standards, procedures and processes implemented at Pickering NGS and PWMF to meet the requirements of the Nuclear Safety and Control Act (NSCA), the regulations made under the NSCA and the operating licence. A summary of those descriptions, along with highlights of Pickering NGS's and PWMF's strengths, achievements and planned improvements are provided in the subsections below.

Three additional subsections are added to the end of each SCA to provide additional information relevant and specific to Units 1 to 4 decommissioning, Units 5 to 8 refurbishment and the PWMF.

OPG is continuing to transition to newer codes and standards and Appendix E contains a list of Compliance Verification Criteria Documents, that Pickering NGS is now in compliance with or will be in compliance with by the listed implementation date.

2.1 Management System

OPG maintains a nuclear management system in accordance with the operating licence and associated Licence Conditions Handbook. OPG's nuclear management system is applicable to all OPG nuclear facilities and is compliant with CSA N286-12, *Management system requirements for nuclear facilities*.

The fundamental objective of OPG's nuclear management system is to ensure OPG nuclear facilities are operated and maintained using sound nuclear safety and defense-in-depth practices to ensure radiological risks to workers, the public, and the environment are As Low As Reasonably Achievable (ALARA), and in keeping with the OPG *Nuclear Safety and Security Policy* and the best practices of the international nuclear community.

OPG's nuclear management system sets out the principles, required supporting actions and documentation to support safe and reliable nuclear facilities, and brings together in a planned and integrated manner, the processes necessary to satisfy requirements and to carry out licensed activities safely.

Management system requirements provide direction to develop and implement management practices and controls. Programs and processes are created such that all applicable regulatory requirements and codes and standards are embedded and integrated within the nuclear management system, including aspects of health, safety, environment, security, economics and quality.

2.1.1 Management System

OPG's mature and effective *Nuclear Management System* provides the framework for programs, standards and processes which collectively ensure that Pickering NGS operates safely, and that safety is the foremost consideration in management decisions and actions.

The *Nuclear Management System* takes its authority from the Nuclear Safety and Security Policy established by OPG's Board of Directors. In accordance with the policy, the Chief Nuclear Officer (CNO) is accountable to the Chief Executive Officer and Board of Directors to establish a management system that fosters nuclear safety and security as the overriding priority. Every employee in the organization is responsible for and held accountable for complying with the expectations of the Charter and referenced programs, and for ensuring their actions are deliberate and consistent with protecting worker health and safety, the health and safety of the public, and the environment.

The nuclear management system has evolved over the licence term, to support the OPG corporate-led business model. Some programs have transitioned from being Nuclear-only to being owned by interfacing corporate business units (e.g., Items and Services Management, Information Management, and Environment and Health and Safety). For these programs, ownership and accountability for the program resides with the corporate program owner but the CNO remains accountable for the effectiveness of the implementation of these programs in Nuclear, and in meeting the requirements of CSA N286-12. Oversight and review of the health and effectiveness of these corporate programs continue to be part of the nuclear management system.

2.1.2 Organization

The *Nuclear Management Systems Organizations* standard describes the organization and responsibilities of OPG in support of the Charter and CSA N286-12. The objectives are to maintain a sufficient number of qualified staff to safely operate, maintain, and support the nuclear generating stations, and to maximize the efficiency and effectiveness of the OPG workforce.

Changes to the organization structure are controlled through managed processes that assign accountabilities and requirements for preparing, reviewing, approving and implementing organizational changes. The Pickering NGS organizational chart information is updated each year and submitted to the CNSC.

Figure 6 provides an overview of how the different OPG organizations are currently integrated, in relation to the Pickering NGS organization.

Figure 7 provides the planned Pickering NGS organizational structure, starting in October 2026, illustrating the Pickering Refurbishment organizational structure pending Commission approval of the new licence. The Senior Vice President (SVP) of Pickering Projects continues to be responsible for the management and control of Pickering NGS refurbishment and stabilization project activities. The Vice President (VP) of Plant Operations (Director of Operations and Maintenance (DOM)) will have site authority and is responsible for operations associated with Pickering NGS licence and plant activities; this operationally focused authority is involved in decisions during the refurbishment to ensure safe and reliable operation post refurbishment. The SVP of Integrated Fleet Management or Deputy Chief Nuclear Officer (Chief Nuclear Officer Delegate) will also be an authorized person having management and oversight of licence and plant activities. The Integrated Fleet Management team as well as Nuclear Oversight, will provide oversight during the refurbishment period independent of the project team.

Figure 8 provides the Pickering NGS organizational structure as of the first refurbished unit's regulatory hold point removal. The SVP of Pickering Projects continues to be responsible for the management and control of the Pickering NGS Refurbishment Project. The SVP of Pickering

will have site authority and is responsible for the management and control of the operating unit(s).

Before the first refurbished unit is returned to service, it is expected that the Pickering NGS organizational structure will begin to return to the operational organization structure similar to that prior to 2027 (Figure 6). The refurbishment organization will be in place until the last unit is returned to service, at which point this organization will be disbanded. The SVP of Pickering is responsible for the management and control of the Pickering NGS and has site authority.

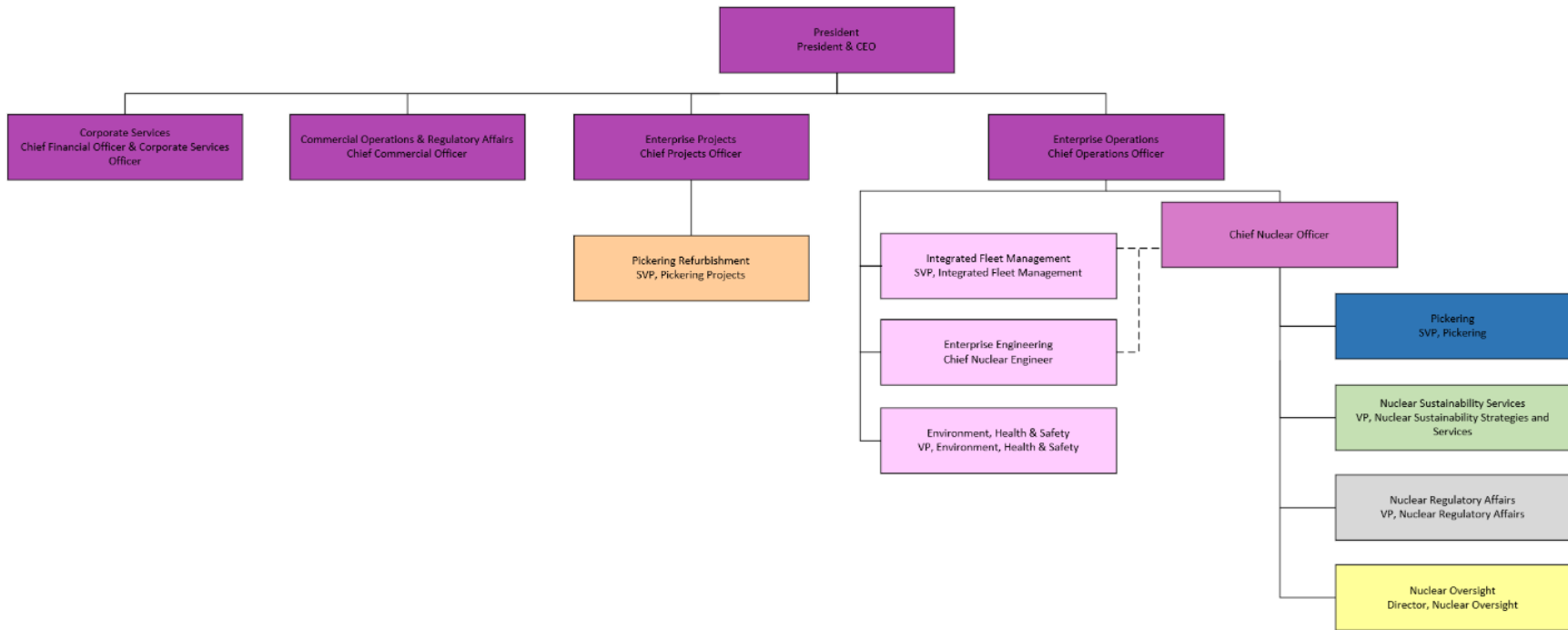


Figure 6. Current OPG Organizational Structure

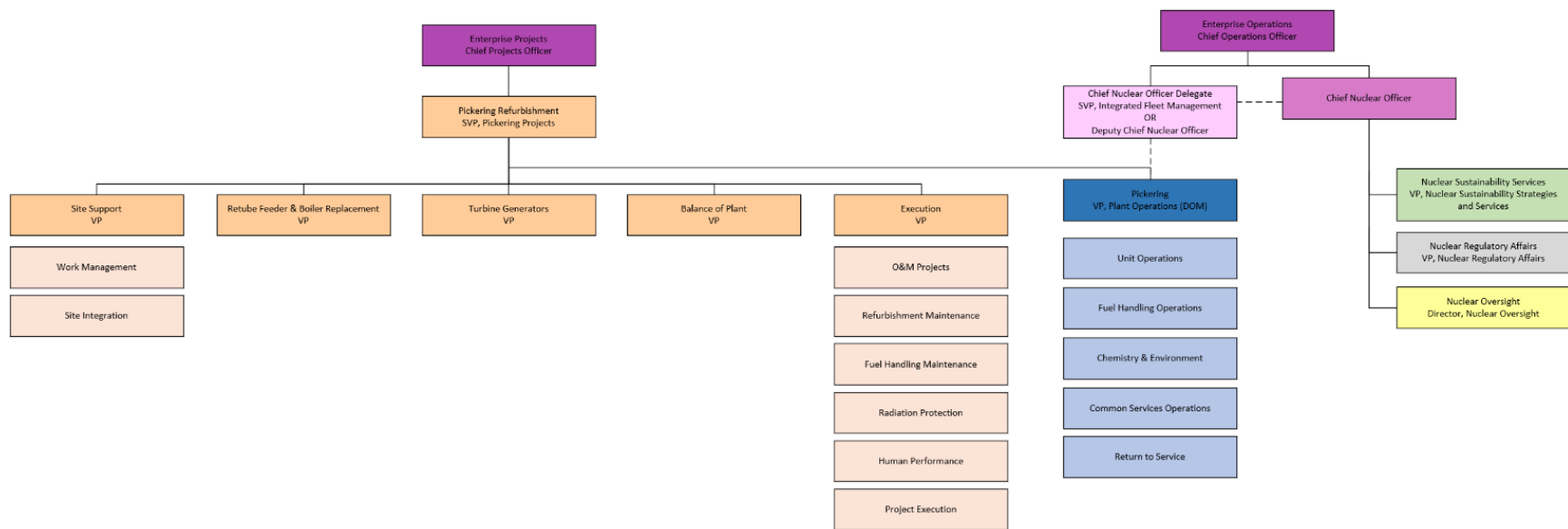


Figure 7. Planned Pickering NGS and Refurbishment Organization in October 2026

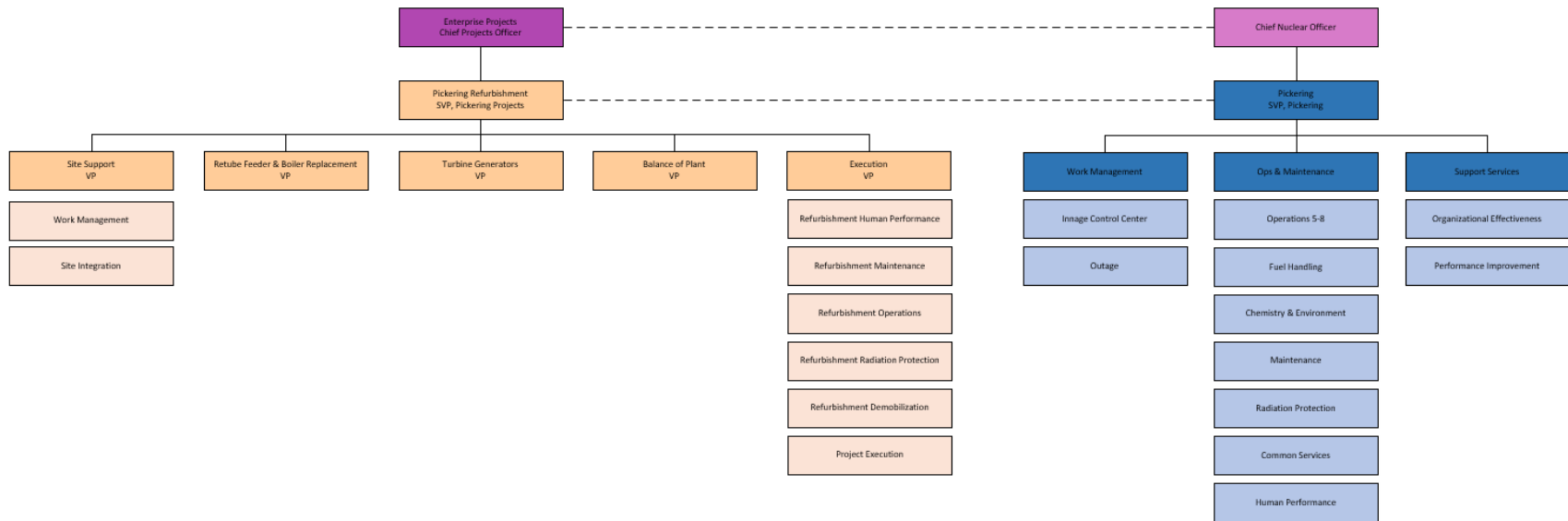


Figure 8. Planned Pickering NGS and Refurbishment Organization post First Hold Point Removal

Figure 9 outlines the Nuclear Sustainability Services organization supporting the operations of the PWMF and Pickering NGS decommissioning. This organization will continue to provide integrated support as they currently do in Figure 6 throughout the next licence period. The VP of Nuclear Sustainability Strategies and Services is responsible for the management and control of operation of the PWMF, including radioactive materials transportation, as well as Pickering NGS decommissioning strategies, but not including Pickering stabilization activities.

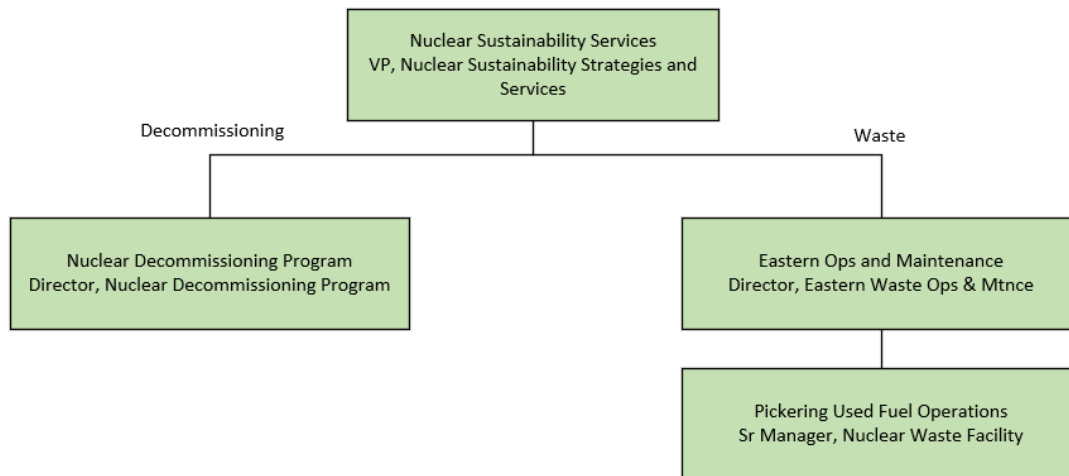


Figure 9. Nuclear Sustainability Services

The above figures illustrate how the Pickering NGS interfaces with PWMF, Decommissioning project and Refurbishment project to ensure safe and reliable operations remain the priority and at the forefront of decisions.

To ensure staffing levels are optimized with the required qualified and engaged people throughout the licence period, OPG will be developing an Organizational Change Management Plan which will support a systematic and holistic approach to ensure organizational changes achieve their intended results, maximize outcomes and minimize risks. As required by the *General Nuclear Safety and Control Regulations*, OPG will provide CNSC staff with updates to the list of persons that are authorized to represent OPG in dealings with the CNSC as the organization changes during the licence period.

To support interdivisional integration across the site, integration meetings are set up with the participation of teams and representatives from key site projects and programs, in areas such as refurbishment, stabilization, decommissioning, Nuclear Sustainability Services, and operations, who meet regularly to review progress, address issues, and ensure strategic alignment. This structured forum enables effective coordination of dependencies between areas like regulatory licensing, environmental studies, health and safety, and Indigenous engagement, helping all groups work together efficiently and in compliance with OPG's project management governance.

2.1.2.1 Staffing Management

OPG workforce planning is an integrated and continuous process that identifies and addresses critical gaps between the current workforce and future needs in the context of Pickering NGS's operating strategy. OPG is attracting, developing, and retaining our talent through existing programs and processes.

Staffing plans at OPG use workforce planning data (i.e. approved business plan demand, supply and attrition assumptions) to proactively identify potential resourcing gaps and risk areas requiring mitigation. The plans are prepared annually and are periodically reviewed throughout the year to ensure any changes to workforce profiles are regularly assessed for risks, mitigation plans are incorporated and required qualified staffing levels are maintained for safe reliable operation of Pickering NGS.

Recruitment and Onboarding

OPG has a comprehensive recruitment strategy to source and attract a qualified, diverse, and high-performing workforce. This approach combines internal and external recruiting programs, including partnerships with educational institutions, hiring halls for trades, job postings on internal and external career sites, direct sourcing, and collaboration with retained and contingent recruitment agencies. Succession planning discussions further strengthen our ability to meet future workforce needs.

OPG is actively working with industry partners and educational institutions to support early career hiring throughout the province to help maintain healthy levels of new entrants into critical roles, such as engineering, operations and maintenance. OPG partners with more than 15 post-secondary institutions to support recruitment initiatives. In addition, OPG offers 26 scholarships and has formal Scholarship agreements with many universities and colleges across the province. OPG also provides many student co-op and intern placements each year to support integrated learning, on-the-job training, and entry into the workforce. OPG's recruitment programs support a diverse and innovative workforce, our Indigenous Opportunities Network (ION) is dedicated to the recruitment of Indigenous Peoples through a network of employers in the energy industry and recruitment agencies. OPG is committed to advancing representation of qualified equity-deserving groups (Women, Indigenous Peoples, Racialized People, Persons with Disabilities) through our hiring and recruitment efforts.

OPG's onboarding program integrates qualified employees and contractors into the organization. It promotes exceptional performance combined with employee experience to create a welcoming and inclusive environment for new hires aligned with company goals and values.

Knowledge Management

OPG has many well-established methods to ensure people have the qualifications, knowledge, and skills required to perform competently. The knowledge management program complements these foundational programs by providing tools and techniques to consider and share tacit knowledge.

OPG has invested in knowledge management for ongoing operations as well as the delivery of projects and initiatives to ensure that the critical knowledge and expertise of employees is sustained.

Talent and Succession Planning

The OPG talent review and succession planning program ensures that necessary talent and skills will be available when needed, and that essential knowledge and abilities will be maintained. Succession planning is one component of this strategy, with the objective to identify and develop future leadership and to integrate this with the staffing needs to ensure continuity in critical roles.

The Nuclear organization has an integrated succession planning process that includes identifying critical positions and determining the priority of each role. The level of management oversight of the succession planning of these critical positions is determined by the priority given to the role.

The OPG talent review and succession planning program is fully integrated into the broader human resources management programs within OPG that include performance measurement, individual development planning, skills and capability development, diversity and inclusion, and culture.

2.1.3 Performance Assessment, Improvement, and Management Review

OPG's *Independent Assessment* program provides processes to perform a comprehensive and critical evaluation of all activities affecting OPG nuclear facilities. This program ensures the nuclear management system is reviewed with sufficient frequency to confirm its continuing effectiveness. The program includes internal assessments performed by Nuclear Oversight and external assessments performed by the Nuclear Safety Review Board (NSRB).

The NSRB performs an independent (external) assessment of OPG activities that may impact on nuclear safety and performance. The NSRB reports to the CNO who reports to the President and Chief Executive Officer on nuclear related matters. The NSRB also reports annually to the Generation Oversight Committee of the Board of Directors whose responsibilities include overseeing the safe, secure and efficient operations of OPG's generating facilities and compliance with nuclear, health and safety, and environmental laws and regulations. The Pickering NSRB will transition to an RRB (Refurbishment Review Board) that reports directly to the Board of Directors during the Pickering Nuclear Refurbishment Project and will report out at the Major Projects Committee of the OPG Board of Directors.

As a learning organization, Pickering NGS strives for continuous improvement. The *Performance Improvement (PI)* program establishes the processes that support the conduct of performance improvement and, by extension, employ the principles of problem preventing, detection and correction at OPG. This program covers the key areas of performance improvement, namely: corrective action, self-assessment, benchmarking, operating experience, and nuclear safety culture.

Self-assessment and benchmarking activities for functional and line organizations are utilized to evaluate actual performance against management expectations, industry standards of excellence and regulatory requirements. *Self-assessment and Benchmarking* governance provide methods for identifying shortfalls in the performance of processes, programs, practices, behaviours, roles, responsibilities and organizational expectations.

Issues identified during the performance of audits or self-assessments are documented via Station Condition Records and corrective actions are assigned as required.

In addition, OPG performs regular program health and performance reviews for all applicable programs within the nuclear management system. *Fleetview Program Health and Performance* is a fleet-wide functional review and reporting process to monitor and routinely report on overall program effectiveness. The reporting process involves three key areas: program oversight and leadership, program execution performance indicators, and program action plans.

A Fleetview Program Health and Performance Report for every program is completed at least once per year. Programs that directly impact or support nuclear plant safety, reliability and generation complete a report tri-annually and the reports are provided for CNO and Nuclear Executive Committee review. The oversight provided by the Nuclear Executive Committee ensures that gaps are self-identified and self-corrected through sustainable actions in order to achieve industry top-quartile performance. For programs that may require additional oversight, the Nuclear Executive Committee will conduct focused meetings to further drive improvement of program performance.

The effectiveness of the PI program is routinely assessed through a set of Key Performance Indicators (KPI) in the monthly PI Health Report. The monthly PI Health Report is distributed to the PI departments fleetwide and is shared and discussed at the PI peer team meetings. The KPIs are also included in the Fleetview reports for Nuclear Executive Committee review where any decline in performance or failure to meet targets will be challenged. It is expected that an action plan is provided for any KPI failing to meet the target.

This programmatic approach offers defense in depth, with multiple layers of oversight across the station to ensure that adverse conditions are quickly identified, understood, and corrected. Strong line ownership taking action when trends are identified proactively ensures that issues and problems are resolved with appropriate response to eliminating or reducing the frequency of events. The result of this is high quality work and safe, reliable operations through the Pickering NGS refurbishment project. This ensures safety for the public, station personnel, environment, and plant.

2.1.4 Operating Experience (OPEX), Problem Identification and Resolution

OPG's PI program establishes processes to ensure deficiencies, non-conformances, weaknesses with a process, document, service, or conditions that adversely impact, or may adversely impact plant operations, personnel, nuclear safety, the environment or equipment and component reliability, are promptly identified and corrected.

For those issues considered significant or repetitive in nature, these processes ensure appropriate levels of management are notified, causes identified, actions taken to minimize or prevent recurrence and then verified to be complete and effective.

The PI program also establishes processes to ensure internal and external Operating Experience (OPEX) is evaluated, distributed to appropriate personnel, and applied to implement actions that improve plant safety and reliability.

External OPEX information is received weekly through Conexus Nuclear Inc. and reviewed to identify any vulnerabilities and weaknesses that could result in similar events or problems at OPG stations. Sources of external OPEX include, but are not limited to, WANO, Institute of Nuclear Power Operations (INPO), International Atomic Energy Agency, US Nuclear Regulatory Commission and other CANDU stations. Relevant non-nuclear OPEX is also considered in areas such as Industrial safety and balance of plant operations. Actions are identified when required to address these vulnerabilities or weaknesses and to implement lessons. External OPEX is also used to keep OPG staff informed of relevant industry information.

In 2021, OPG developed a new OPEX database to facilitate the distribution of external OPEX from Conexus Nuclear Inc. to departmental OPEX Single Points of Contact, the management of OPEX reviews, and the documentation of initial assessments or dispositions from site

departments. The OPEX database also provides a readily available repository of all previous external OPEX and site reviews/responses to new OPEX with searching capabilities.

As part of ongoing improvements for the OPEX process and use of OPEX at Pickering NGS, a number of initiatives have been completed or are in progress:

- Implemented a web-based OPEX search engine that is able to extract information from various sources such as the Station Condition Record (SCR) database, OPEX Database, Work Reports etc. providing quick access to key OPEX events relevant to line organization tasks.
- OPEX Health Metrics were updated to challenge the status quo for indicators with consistent green scores over a long period and raising the target score for green, yellow, white and red ranges to further improve performance and challenge the fleet for maintaining excellence. A second part of this initiative is OPEX Health Metrics automation of KPIs to provide efficiency in completing monthly metrics and provide visibility to line organizations of where the data is specifically feeding from. This feature will help identify trends (declines or improvements) in specific KPIs and which line organizations are contributing to it.
- Improving use of internal and external OPEX during Pre-Job Brief and electronic Safe Work Plan (eSWP) as part of the current review of Institute of Nuclear Power Operators (INPO) IER L2-24-2, Leadership in Preventing Fatalities and Severe Injuries.
- Establishing a Plant Information Centre Impact Identifier program to support line organizations in understanding of how internal events that are Industry Reporting and Information System (IRIS) reports are impacting station performance. OPG's governance, oversight and internal reporting structure have been aligned with Plant Information Centre and IRIS to drive sustainable performance improvements in all business areas through comparison against top performances in the North American nuclear industry.

2.1.5 Configuration Management and Change Control

Configuration Management, ensures the station physical configuration for all essential SSC matches the configuration documents for all plant states. The implementing standard for configuration management ensures configuration information is maintained accurate, consistent and is readily accessible along with defining clear scope, responsibilities, authorities and interfaces among organizations.

Changes which may affect configuration are controlled by:

- Requiring regulatory and licensing reviews, approvals and safety evaluations to ensure physical configuration or configuration information changes conform to the design and licensing basis.
- Reviewing impacts so that related configuration information is maintained consistent with the change.
- Ensuring changes to the design and licensing basis receive appropriate verification and approvals before the change is made.

- Ensuring change processes work in accordance and consistently with each other for design, procurement, construction, installation, commissioning, operation and maintenance, including surveillance, training, and testing.

Change Control programs support configuration management by ensuring design changes, document changes and physical configuration changes that impact design and the licensing basis are tracked to completion and are traceable throughout the life of the facility. Adverse configuration management issues are documented using SCRs.

The ECC program ensures design changes to each OPG facility (including SSC, software and engineered tooling) are controlled such that the facility configuration is managed in accordance with the design and licensing bases and remains within the SOE.

Configuration management is an important aspect of maintaining and keeping Pickering NGS in an assessed state within the SOE and is reviewed both by internal and external organizations regularly. Actions are taken as appropriate to correct any identified deviations from standard conditions.

OPG's Nuclear Oversight audits of the ECC program during the current licence term found that the managed system controls are effective and that overall, the program achieves its goal of executing and controlling engineering changes to support the safe and reliable operation of OPG facilities.

OPG continues to make use of vendor companies to Engineer, Procure, and Construct (EPC) engineering changes that will improve the reliability of Pickering NGS and OPG facilities. To ensure the use of EPC is successful, OPG is continually working to better define the requirements and level of oversight required for contracted work. EPC is managed through a quality assurance program to ensure that OPG's expectations for vendor design and installation quality are met.

2.1.6 Nuclear Safety and Security Culture

The *Nuclear Safety and Security Culture* policy establishes the fundamental principles for OPG employees. It emphasizes the vital importance of nuclear safety and security as the top priority in all activities performed in support of OPG facilities and underscores the value that OPG places on ensuring the highest level of protection for individuals, the environment, and surrounding communities. The policy highlights the organization's firm commitment to prioritizing nuclear safety over any other consideration, including cost, schedule, or production. By adhering to this policy, OPG employees can be confident that they are contributing to a culture of safety and responsibility that is paramount to the success of the organization.

OPG's Traits of a Healthy Nuclear Safety and Security Culture are detailed in Figure 10. These 11 traits are incorporated into OPG's organization and administrative procedures starting at the policy level and cascading throughout the nuclear management system, programs and procedures.



Figure 10. Nuclear Safety and Security Culture

OPG conducts comprehensive, systematic and rigorous safety culture assessments at least every 5 years in accordance with CNSC regulatory document REGDOC-2.1.2, *Safety Culture*.

In March 2022, Pickering NGS successfully conducted a station-wide Nuclear Safety and Security Culture Assessment. The assessment included a staff survey of all Pickering NGS employees and contract partners on the site, as well as an on-site evaluation that included document reviews, staff interviews and observations. The assessment focused on perceptions, attitudes and behaviours of the organization, and concluded that Pickering NGS has a healthy nuclear safety culture, healthy respect for nuclear safety, and nuclear safety is not compromised by production priorities. In particular, station personnel feel they can challenge any decision if needed, without fear of reprisal.

This marked Pickering NGS's first evaluation since the implementation of CNSC REGDOC-2.1.2, of the Vigilance trait in Nuclear Security. The evaluation determined that Pickering NGS has a healthy nuclear security culture. However, OPG recognizes, with the rapid changes occurring in the technology sector, the need for heightened awareness and comprehension of nuclear security, including cyber security.

All results were documented in a self-assessment report and communicated to staff. Action plans were developed and areas for improvement were documented and the actions taken to address the findings were tracked.

In 2022, Conexus Nuclear Inc. (formerly CANDU Owners Group (COG)), in collaboration with Canadian Nuclear Utilities, developed a tool to assist in the assessment of Nuclear Safety and Security Culture. This tool was able to efficiently process and compare all the survey and interview data, significantly accelerate the report generation process, and provide a more precise depiction of the culture within OPG facilities.

OPG will continue to conduct station-wide assessments every 5-years as per CNSC REGDOC-2.1.2.

In addition to the comprehensive station-wide assessment, OPG has a Pickering Nuclear Safety and Security Culture Monitoring Panel (NSSCMP) tasked with overseeing the key process indicators that reflect the state of the organization's nuclear safety and security culture. This panel, comprised of the senior plant leadership team, convenes twice a year to deliberate on the 11 nuclear safety and security culture traits. In doing so, strengths and potential concerns that merit additional attention by the organization are identified and acted upon.

One component contributing to these discussions is facilitated by the NSSCMP Power App. This online tool, developed in 2020, enables frontline station personnel to evaluate the 44 attributes constituting a robust Nuclear Safety and Security Culture and provide input directly to the NSSCMP. This approach allows OPG to capture insights from staff regularly working in and around the plant, helping to discern faint signals within the organization.

During the current licence term, OPG also implemented the Nuclear Safety and Security Culture Trait of the Week and accompanying App to remind staff about each of the attributes under the Traits on a rotating basis and is used to ensure site alignment with which trait is the focus of any particular week. The App provides the graphic of the week's specific trait as well as the Trait of the Week schedule.

OPG continues to have a comprehensive leadership development program that integrates the Nuclear Safety and Security Culture Traits at all levels. This includes the incorporation of Nuclear Safety Culture into employee orientation, leadership fundamentals training, and continuing leadership training.

2.1.6.1 Nuclear Safety and Security Culture and Organizational Effectiveness

OPG monitors organizational effectiveness through the use of INPO Staying on Top (SOT) values. INPO's SOT values is a tool used by Industry for assessing organizational effectiveness and is based on the analysis of specific, common characteristics that exist in organizations that have achieved uninterrupted high performance for decades. SOT values include Setting Long-Term Direction, Leadership and Talent Development, Excellence Standards, Continuous Learning, and Self-Awareness and Self-Correction.

Enterprise listening surveys are another tool used to gain organizational insight on several key areas including employee engagement, commitment, leadership impact, communication effectiveness, and alignment. An OPG-wide employee engagement survey was completed in 2022 and again in 2023. In 2025, OPG introduced a shorter, targeted pulse survey that measured employees' sense of belonging, connection, contribution, psychological safety and feelings of being valued. This initiative also aligns with OPG's refreshed ED&I strategy, which emphasizes building a workforce that represents our communities while continuing to create a culture of inclusion. The survey was conducted twice, once in May and again in December, with strong participation rates of 74% and 71%, respectively. To ensure confidentiality, leaders with

10 or more responses were provided with a dashboard of their team's combined results to help facilitate discussions and develop tailored actions to strengthen belonging on their teams. Additional resources, such as an employee engagement and belonging website were developed to support leaders in interpreting results and fostering a culture of inclusion.

Information gathered from SOT meetings and the annual assessment as well as the Employee Engagement survey are included among the inputs managers use in the NSSCMP for each Nuclear Safety and Security Culture Trait assessment.

The interactive Organizational Roadmap metrics are reviewed by the NSSCMP as part of the package put together for the NSSCMP meetings. This roadmap, developed by INPO, shows the relationship between Leadership and Team Effectiveness, SOT, Nuclear Safety Culture and Organizational Effectiveness as well as key INPO documents such as Integrated Risk Management, Technical Conscience and Operations and Maintenance Fundamentals. OPG has tied its performance objective and criteria codes that are applied to SCRs to this roadmap to see if there are any trends arising that align with Nuclear Safety and Security Culture and ultimately, Organizational Effectiveness. The outcomes from the SOT annual assessments are also used as indicators to the overall health of Nuclear Safety and Security culture.

2.1.7 Records Management

The *Information Management* program, sets out standards and procedures for managing OPG's information throughout its entire life-cycle, across all media, to ensure consistent and appropriate usage. This Information Management program applies to all OPG employees, temporary staff, and contractors.

A key objective of the program is to advance electronic, digital, and mobile solutions that provide tools for the efficient and effective capture, modification, distribution, and electronic availability of content at the highest quality. Several improvements have been made to the Information Management tools used by OPG staff, including:

- *Asset Suite Upgrade:* OPG's enterprise software, Asset Suite, was upgraded to add new features and maintain full vendor support. An upgrade of our Documentum software, which stores electronic images, is also underway. Rapid advancements in cyber security are addressed in Section 2.12.5.
- *Electronic Submission:* A new application now allows workers to electronically submit and file records and documents in Asset Suite/Documentum, significantly reducing turnaround times for availability.
- *Electronic Work Packages:* Maintenance teams now use Electronic Work Packages, enabling tablets to download work order tasks and related documents for field use. This solution replaces the paper-based process from Work Order binders to final records.
- *Service Hub:* The new Service Hub application automates OPG's client service processes. It incorporates key information management processes to automate Document and Governance support, Records, and Legal Hold activities.
- *Automated Access Approvals:* The process for security-protected document access is being upgraded to automate approvals and Asset Suite access.
- *Records Project Completion:* A major records project has been completed, reducing the volume of legacy paper records in physical vaults and scanning quality assurance records for secure and rapid retrieval.

2.1.8 Supply and Contractor Management

The *Items and Service Management* program establishes a governing document framework that meets regulatory requirements and ensures effective and efficient planning for and procurement of items and services. The program interfaces with the Contract Management program for managing contracts related to contractor services.

The supply chain organization is responsible for providing the necessary services and materials in a timely manner and of the appropriate quality to the Pickering NGS site. Supply Chain confirms all the quality aspects for receipted materials based on designated quality requirements. The contract owner confirms quality aspects for services. Vendor quality is maintained through audits, receiving inspections, and vendor oversight and surveillance.

OPG has extensive experience in the use of contractors to engineer, procure and construct new facilities or to implement design improvement to OPG's existing facilities. OPG will leverage OPEX from previous similar projects such as the Darlington NGS Refurbishment project to optimize how supply chain integrates with the contractors. This can include but is not limited to: improved terms and conditions that is more favourable to OPG, leveraging inventory tracking software to increase visibility on contractor inventory, and controlling costs through consolidating payment structures and applying new incentives and disincentive models. Contractors and suppliers are qualified by OPG Supply Chain Quality Services under a process that ensures each contractor has developed and implemented a management system that meets the applicable requirements outlined in CSA N286-12. OPG assesses a contractor's capability to work at OPG nuclear facilities through an audit of the contractor's processes, to ensure they can perform the necessary work, with OPG oversight as the licensee at each stage. Once OPG is assured of a contractor's capabilities, they are placed on OPG's approved suppliers list, as approved contractors.

The contractors that OPG uses have experience with the nuclear industry and with OPG. OPG requires that all sub-contractors work under the contractor's quality program, to ensure there is an assurance that the agreed upon quality standards and expectations will be met, regardless of who is performing the work in the field. Field surveillance and verification activities are performed by OPG personnel (Contract Monitoring Officers) to ensure that the quality program requirements are being achieved.

Where possible, OPG will temporarily turn the contractor work area over to the contractor, as a Construction Island (defined project area controlled by contractor/vendor) where the contractor assumes the role of "Constructor" as defined in the *Ontario Occupation Health and Safety Act*. As Constructor, the contractor assumes responsibility and liability for conventional safety and environmental safety associated with the contractor work. The contractor produces a site-specific Health and Safety Plan and Environmental Safety Plan, which is accepted by OPG prior to the contractor work start. RP remains the responsibility of OPG.

Where a construction island is not feasible, OPG maintains the role of Constructor and provides oversight to the contractor. In this case, all contractor work will be carried out in accordance with OPG processes and procedures. OPG maintains responsibility and liability for conventional safety, environmental safety, and RP of the contractor work.

OPG retains the responsibility that the facility remains compliant with the operating licence. As such, OPG is accountable to the CNSC to provide the required assurances that the health, safety, and security of the public, workers, and environment are protected. This accountability cannot be delegated through contractual arrangements.

OPG's *Construction Management* program applies to the management of individual projects as well as to the integrated management of a group or program of related construction projects, or the total project portfolio at a plant/plant group, or business unit. This program, for nuclear projects, includes compliance to construction specific requirements of CSA N286-12.

Counterfeit, Fraudulent and Suspect Items

OPG's Counterfeit, Fraudulent and Suspect Items (CFSI) program requires all suppliers to have an implemented CFSI program. These are verified by supplier audits carried out by OPG. Enhanced purchasing clauses and receiving inspections have been in place for several years to prevent CFSI material from being supplied to or received by OPG. Standardized training on CFSI was developed and implemented to support this program. External reviews and benchmarking indicate that OPG's CFSI program is an industry-leading, well established and effectively implemented.

2.1.9 Business Continuity

The *Business Continuity* program establishes a managed system for business continuity and provides direction related to business and operational continuity and recovery planning. The program is aligned with OPG's business goals and objectives and ensures that if a disruption occurs, or if there is a threat of disruption, critical business and operational processes will continue to be available or resume to an appropriate level within required time limits. The program is structured to be adaptable to a range of hazards or a combination of multiple hazards including a Human Health Emergency (e.g., COVID-19 pandemic).

Business Continuity Plans are reviewed and revised every three years, with the most recent revision occurring in 2024. Notable recent improvements focus on response strategies to address enterprise ransomware events, which continues as an initiative through the Business Continuity program.

OPG has an enterprise-wide Infectious Disease Response procedure which replaces previous pandemic plans. This procedure and the associated Infectious Disease Incident Response Team were utilized effectively as a part of OPG's Emergency Response Organization in response to the COVID-19 pandemic to support safe operations during this period. Following the COVID-19 pandemic, OPG conducted a review of the response to *capture lessons learned*, such as the inclusion of a formalized contingency staffing plan and specific plan activation and deactivation criteria for identified risks.

To support continuous improvement of the Business Continuity program, OPG is incorporating Resiliency principles outlined in industry guidance, including training delivered to site staff. This will further strengthen resiliency against external threats that challenge continuity of operations.

2.1.10 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Management System SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

Management System

The execution of work during decommissioning will follow OPG's *Project Management* program which is a referenced program in OPG's Nuclear Management System. This program ensures requirements set out in CSA N286-12 are implemented.

OPG will follow this established program for the planning and execution of the non-nuclear decommissioning activities approved through the DDP and included in the licensing period, and does not expect any engineering changes at this time.

Organization

The organization required to oversee the decommissioning program will be assembled from available OPG station staff and outside resources as needed. While the following information represents the current planning basis, detailed organizational structures and contractor arrangements will be further developed and included in the next DDP update.

Decommissioning contractor(s) will be retained to perform the dismantling, demolition, and site restoration work. OPG will provide the necessary oversight during planning and execution of the work. The decommissioning contractor(s) will be a company or consortium selected based on factors such as decommissioning experience, safety record, overall approach, and cost. OPG will remain the owner and licensee of the Pickering NGS throughout the course of Pickering NGS Units 1 to 4 decommissioning, but the decommissioning contractor(s) may be given charge and control of the decommissioning areas during risk reduction, dismantling, demolition and site restoration. Other contractors may also be given charge and control of designated portions of the site during certain phases of the decommissioning. During these periods, the contractor will become the 'Constructor' for the decommissioning work as defined by the construction safety regulations made pursuant to the *Occupational Health and Safety Act*. The decommissioning contractor(s) and sub-contractors will be required to comply with OPG procedures related to Nuclear Energy Workers and all federal and provincial regulations.

Configuration Management and Change Control

Configuration management for active systems during Decommissioning will follow existing governance currently used to maintain plant status control. Once systems have been end-stated, the configuration management of that system will fall under end-stating governance which requires the appropriate documentation and approvals to operate devices tagged as end-stated and work protection for any maintenance activities on the system.

2.1.11 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Management System SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Management System

The Nuclear Refurbishment organization will be subject to the OPG *Nuclear Management System* and all governance under that system.

In addition, the Nuclear Refurbishment organization has developed Pickering NGS Units 5 to 8 refurbishment program management plans to describe how refurbishment meets the Nuclear Management System and to identify any supplemental guidance/direction specific to undertaking the refurbishment of the units.

The refurbishment program complies with OPG's *Project Management* program. This program describes the key project management principles to support the safe, consistent, and effective execution of nuclear projects at OPG.

Contractor Quality Management

EPC contractors will perform the majority of the refurbishment work.

Contractors and suppliers are qualified by OPG Supply Chain Quality Services under a process that ensures each contractor has developed and implemented a management system that meets the applicable requirements outlined in CSA N286-12. OPG assesses a contractor's capability to work at OPG nuclear facilities through an audit of the contractor's processes, to ensure they can perform the necessary work, with OPG oversight as the licensee at each stage. Once OPG is assured of a contractor's capabilities, they are placed on OPG's approved suppliers list, as approved contractors. Combining this with the fact that many of the EPC contractors have a long history of working in the nuclear industry and with OPG in particular, provides confidence that the results of their work activities will satisfy all applicable standards.

Nuclear Refurbishment Program Oversight

OPG's *Project Management* program will be followed during refurbishment. Nuclear Oversight is accountable to ensure consistent oversight across the entire program and to coordinate all external reviews and evaluations.

The OPG Project Managers are accountable for planning and conducting oversight of their contractors and communicating and documenting the results. Project oversight of contractors is an assessment of the contractor's products and services to determine if they are delivering the contracted products and services safely, to the specified quality, on time and on budget.

Organization

The organizational structure is designed to ensure Operations remain in oversight of the plant operations and safe monitoring of irradiated fuel while Pickering NGS undergoes refurbishment. The reporting relationship of the Plant Operations Vice President (or Licence Holder) to the Chief Nuclear Officer (CNO) delegate ensures accountability of Operations performance and oversight of Refurbishment activities. This ensures an operational lens is applied to planning, decision making and execution of the project.

Following shutdown of the units, staff will be reassigned and redeployed in the organization to support Pickering Refurbishment projects and be available to support minimum complement and certification requirements prior to unit RTS. These staffing plans are extensive and will follow OPG's robust change management process. Changes to minimum complement and supporting technical basis will be formally submitted to CNSC for approval. In addition, the certification and training strategy plan is currently being developed.

The Maintenance Organization will form composite crews (control and mechanical trades) which will be responsible for executing specific scope in the Pickering Refurbishment Project. The Maintenance Transition Plan identifies the project scope that each composite crew will be executing and outlines the training plan that each crew will undergo in order to execute the work with safety and quality.

OPEX from the Darlington Refurbishment Project was considered to inform staffing strategies for each organization supporting Pickering Refurbishment. For example, Darlington used the concept of "swing staff" where organizations were created in the refurbishment organization structure under Operations and Maintenance and designated station staff would be reassigned to report into the appropriate department in refurbishment to support pre-requisite and execution work. This strategy was outlined in departmental transition plans to support Darlington Refurbishment for Unit 2.

The Pickering Refurbishment team in Operations and Maintenance have created transition plans that focus on staffing, building on the OPEX from the Darlington Refurbishment Project.

Integration of transition planning has been incorporated into the Pickering Nuclear Station Excellence Meeting. Darlington Nuclear and Darlington Refurbishment took a similar “OneTEAM” approach to people and organizational readiness. Furthermore, Darlington Refurbishment OPEX points to the value of utilizing secondments to vendor partners of OPG staff as needed to help facilitate organizational integration. Pickering Refurbishment is taking a similar approach and secondments will be a strategy OPG will consider where necessary.

Performance Assessment, Improvement and Management Review

The Enterprise Projects and Conventional Health and Safety organizations will develop and conduct annual self-assessments, as per OPG processes, to confirm that the objectives of safety, scope, cost, and schedule are being maintained. The Pickering refurbishment program annual self-assessment plan are presented to and approved by Enterprise Projects Organization CARB (Corrective Action Review Board).

OPEX

The Pickering NGS refurbishment planning efforts included reviews of operating experience and lessons learned from Darlington NGS Refurbishment and OPG Hydro projects, as well as past CANDU and other nuclear refurbishments. To facilitate the sharing of information, skills, expertise, and insights across projects and teams, staff placements from the Darlington Refurbishment Project and Knowledge Transfer sessions have been introduced. These sessions are primarily designed to ensure that essential knowledge is effectively communicated and preserved within the organization.

Throughout the Darlington NGS refurbishment, comprehensive Lessons Learned Workshops were conducted at the end of each project window, which captured critical OPEX. The Lessons Learned team has been working with Project Teams, identifying scope areas related to the Darlington and Nuclear projects. Knowledge transfer sessions are near completion, where OPEX has been pulled from relevant projects and shared with the project teams to implement into planning. The Project Teams embraced a continuous learning mindset, actively participating in knowledge sharing. This approach enabled us to capture and transfer thousands of lessons, ensuring each unit benefited from previous experiences.

Additionally, the Bruce Power Collaboration Agreement has been amended to include the Pickering NGS refurbishment. This agreement allows for the exchange of lessons learned, engineering designs, resources, planning, reporting, tooling and equipment, resulting in more efficient and successful projects for both Bruce Power's Major Component Replacement and OPG's refurbishment projects. The exchange is limited to the approved vendors within the agreement and excludes any cost or budget information.

Nuclear Safety and Security Culture

The Nuclear Refurbishment organization is comprised of project teams and functional organizations supported by embedded staff from central OPG and OPG nuclear organizations.

Ensuring a healthy safety culture exists within the construction environment during refurbishment will be achieved through active leadership from the responsible management teams from OPG and contractors starting with alignment around, "Safety is our core value".

Working under the Enterprise Projects Organization, the Construction Centre of Excellence (CCoE) will provide or oversee contract management, quality management and construction management in compliance with OPG's *Construction Management and Oversight* program.

Nuclear Refurbishment and contractor's management teams will:

- Set and maintain high standards and common expectations, through a focused management program that will be in place prior to commencement of refurbishment activities.
- Be aligned on common priorities and goals for quality, safety and efficiencies.
- Utilize OPG's established programs and procedures, conduct strong and agreed-upon oversight and assessment activities for quality, safety and efficiencies.

Established approaches to maintaining a healthy nuclear safety and security culture will be used based on industry experience and actual refurbishment performance. A key element is communication and reinforcement of the Safety and Security Culture message by the leadership of Nuclear Refurbishment and the contractors along with extensive field supervisory and worker training and reinforcement to engrain and uphold safety and security culture.

Similar to what was done for the Darlington NGS Refurbishment project, the Pickering NGS Refurbishment organization will carry out Nuclear Safety and Security Culture Assessments at least every five years. In addition, monitoring panel discussions will be held with station operations and vendor partners and later conducted independently of station operations as the project progresses. Furthermore, there are plans for the Pickering Refurbishment organization and vendor partners to participate in SOT forums and employee engagement surveys. These activities are intended to monitor and sustain a strong nuclear safety and security culture at the Pickering NGS.

2.1.12 Pickering Waste Management Facility

As discussed in the sections above, OPG's nuclear management system defines the organizational structure, roles and responsibilities, applicable programs and the interfaces amongst them. It applies to all OPG nuclear facilities, including the PWMF, and is compliant with CSA N286-12, *Management system requirements for nuclear facilities*. OPG's nuclear management system establishes the required programs and processes to ensure that all OPG nuclear facilities define the necessary safety objectives, continuously monitor performance against these objectives and foster a healthy Nuclear Safety Culture.

Descriptions of the applicable implementation programs and processes under the Management System SCA are provided in subsections 2.1.1 to 2.1.8 above.

2.2 Human Performance Management

Pickering NGS has an effective Human Performance Management Program that meets or exceeds all applicable regulatory requirements and related objectives to enable effective Human Performance through implementation of processes that ensure a sufficient number of licensed personnel are in relevant job areas, have the necessary knowledge, skills, procedures and tools in place to safely carry out their duties.

2.2.1 Human Performance Program

The goal of OPG's Human Performance program is to continually reduce the frequency and severity of events through the systematic reduction of human errors and management of defences in pursuit of zero events of consequence.

Pickering NGS leaders recognize that an understanding of the role of human performance in safety, supported by leadership and employee behaviours, helps prevent human error-related events. Human performance standards and expected behaviours are defined, established, and incorporated in processes, procedures and training to monitor and correct any organizational deficiencies to minimize human error.

The Human Performance program creates continuous improvement within the organization and reduces the potential for human error through the use of appropriate analysis methods or techniques. The advantages of this are improved safety, quality, and efficiency.

OPG recognizes the importance of human performance and organizational effectiveness, and how they are interconnected. Performance is an important indicator of organizational effectiveness. Error precursors, flawed defences, and latent organizational weaknesses are proactively identified and addressed through self-assessments, internal and external reviews, job site condition reviews, pre-job briefs, observations, safe work plans, trend analysis, program reviews, and performance monitoring. When an event does occur, analysis is performed to identify and correct the contributing and root cause. Organizational factors that influence performance are demonstrated through oversight, observations, and paired Observations & Coaching to ensure alignment on standards.

The primary methods used to monitor performance and identify and mitigate risks include:

1. *The Observation & Coaching (O&C) Program:* Supervisors and managers are required to perform observations and document their findings in an O&C database where the data is rolled up into dashboard. The observations include worker behaviours (including the use of human performance tools), number of and effectiveness of defences, worker proficiency and knowledge, and the execution of work. Observations are documented under specific categories and focus areas to enable trending and filtering by area of interest. Department managers review their observations regularly to monitor for decline in performance or significant gaps and take corrective actions as needed. Individual departments have Staying on Top meetings and forums to review trends and identify potential focus areas. They create action plans as needed to address the trends and gaps. The findings are also monitored by the Human Performance Department to identify station trends which may require action. The station aims for 30% of observations being opportunities for improvement to drive continuous improvement and prevent complacency and stagnation. The dashboard is designed to improve station insights and broaden the lens of observations to work environment and process rather than solely focus on people behaviours.

Over the past two years, there has been a higher focus on paired O&Cs to support supervisors' development and improvement in supervisors providing coaching and feedback to their crews and is used as one of the leading key performance indicators.

2. The process following human performance events includes the applicable department performing an accountability analysis to determine whether the error was the result of an intentional violation (very rare), a gap in process, or organizational and systemic weaknesses. The insights and actions taken are documented in a crew learning or

learning brief and shared with the organization. Event communication and analysis is used to improve identification of systemic issues. This tool facilitates lessons learned from events to prevent event recurrence and foster an open reporting culture. The Human Performance department trends the information for indication of any adverse trends. If an adverse trend is identified, it is investigated further to identify its drivers and develop corrective actions. Crew Learnings are used as an event communication tool to share key learnings.

3. More significant human performance events (such as Department Event Free Day Resets or Site Event Free Day Resets follow the same process and will also have an evaluation and corrective action plan. Due to the higher significance of these events, the event evaluation and action plans go to the site Corrective Action Review Board for cross-functional challenge and quality review.
4. *Facility Focus Plan*: The Facility Focus is selected weekly to align the team on potential and real vulnerabilities identified from trending, historic data, and look ahead. These focuses are rolled out to the crews for the purpose of conducting focused observations by supervisors and line managers, as well as guiding discussions during start of shift briefs, and targeted station communications. This places focus on known elevated risks, such as plant status control events at the start of a unit outage and is flexible to address weaknesses identified through observations.
5. Stop When Unsure and Positive Stop Work initiatives are implemented to ensure that front line workers feel empowered to stop in the face of uncertainty and, as a last line of defense, see themselves as guardians of the standards. In addition to stopping when unsure, a matrix to restart work safely and promptly following a stop has been implemented. Leadership behaviours are aligned to positively recognize the stops using the Values in Acknowledgement (ViA) application, leverage these stops as a leading indicator for event prevention, and provide a structured process to support workers to restart actions. To ensure sustainability and reinforce positive behaviours, Positive Stops are recognized in the weekly Director of Operations and Maintenance (DOM) employee communication.

The measures used to evaluate overall health, reliability and robustness of the Human Performance program are Site Event Free Day Resets (SEFDRs) and SEFDR rate. The SEFDR value is the number of human performance errors that result in events with significant consequences within a given period; it is an industry-wide measure of the effectiveness of organizational safety and other Human Performance programs.

Pickering NGS was challenged with 2 SEFDRs in 2022 which was above the target of 1. In 2023, Pickering NGS maintained zero events until December 28, 2023, when one SEFDR occurred. In 2024, Pickering NGS had 2 SEFDRs against a target of zero. In 2025, Pickering NGS had 1 SEFDR against a target of zero. In response to the events, Pickering NGS implemented a comprehensive human performance recovery strategy that focused on building a culture of high standards. The strategy aimed to cultivate a culture of behaviours where early drifts in standards are identified and corrected in a timely fashion to prevent significant incidents. The goal of the plan was to achieve sustained human performance improvement. The plan resulted in improved performance in areas of observation and coaching, and reinforcement of positive behaviours. This includes stopping when unsure and proactive human performance plans for outages and high-risk periods. In the last three quarters, Pickering NGS has showed improvement achieving zero SEFDRs. Following the July 2025 SEFDR, Pickering NGS improved, with zero SEFDRs over the next three quarters.

Furthermore, in 2024, Site performance and Excellence Plans were aligned around five pillars of the Human Performance improvement to be Guardians of the Standard. To build awareness, understanding, and adoption to exceeding Guardian of the Standard expectations a comprehensive Guardians of the Standards tactical communication plan was developed and executed with following key messages:

- Pickering NGS is committed to fostering a culture of behaviours where early drifts in standard are identified and corrected before consequential events occur.
- To do this we must have a workforce committed to being Guardians of the Standards to support the future of Pickering and our ability to perform with excellence every day.
- “A key aspect of the Staying on Top value of Excellence Standards is for leaders and employees to individually and collectively act as guardians of the standards. Organizational breakthrough occurs when each individual internalizes and follows the standards because they recognize their inherent value.” - Phil Russell, INPO Senior Vice President of Industry Self-Awareness and Continuous Improvement.

To reinforce positive behaviour change, team members continue to be observed and recognized for demonstration of Positive Stop and Guardians of the Standards behaviours, resulting in sustained improvement across all Human Performance metrics.

Pickering NGS has demonstrated significant improvement in performance in Human Performance (Hu) Events (18-month cycle) and an INPO reporting metric, meeting Industry Top Quartile (ITQ) in January 2025.

Prior to December 2024, Figure 11 below shows data for reporting six operating units (Units 1,4 and 5 to 8). Reporting now reflects the current operating units of Units 5 to 8.

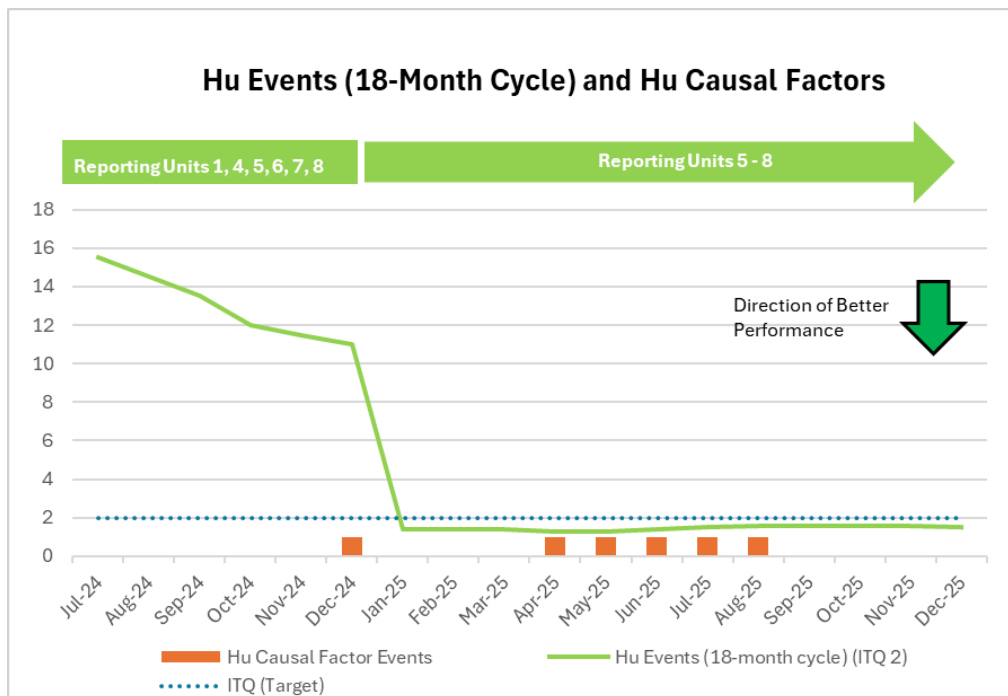


Figure 11. Pickering NGS Hu Events (18-Month Cycle) and Hu Causal Factors Events between Q3 2024-Q4 2025

2.2.2 Personnel Training

OPG's *Training* program for regular staff, contractors, temporary personnel and other staff assigned work at OPG is compliant with CNSC REGDOC-2.2.2, *Personnel Training*, and provides the structure, processes, and tools for defining, developing, implementing, documenting, assessing, and improving the training required to ensure staff have the appropriate knowledge, skill, and attitudes for safe and efficient plant operation.

Training and qualification information for all staff, including contractors is stored and tracked in the Training Information Management System (TIMS) database. The system also provides automatic notifications via email for upcoming scheduled training and identifying expiring qualifications to employees and their supervisors.

The health of training is carefully monitored with a defined program to ensure that there is a Systematic Approach to Training (SAT) foundation for OPG's nuclear training programs upon which it continues to build and improve. Operations, Maintenance and Engineering departments have a robust continuing training program, and continuing training plans are revised and reissued on a 5-year cycle.

The Health of Training reports continue to drive improvements to OPG's major training performance areas. Actions from the Health of Training reports successfully maintain a solid SAT foundation for OPG's Nuclear Training programs upon which it continues to build and improve. Improvements to the training programs are driven by feedback from internal and external OPEX, Station Condition Records, Curriculum Review Committees, self-assessments, audit reports, CNSC inspections and in response to the training committee's needs.

Innovation in Training

The objective of innovation in training is to incorporate innovative solutions and technology. Line and Training Managers effectively collaborate to create learning solutions and technologies that support exemplary workers and station performance.

Some examples of where innovative training techniques were developed are provided in Section 1.5.

Current Learning Culture and Use of Technology

Pickering NGS has established a learning culture where development is encouraged and learning resources are available to promote proficiency and encourage employee development. Improvement initiatives in support of continued operational excellence include:

- The creation of Proficiency Heat Maps and Individual Development.
- Extensive use of Dynamic Learning Activities, JITT, Job Familiarization Guides.
- Micro-learning through Video Learning-On-Demand library with over 3100 videos is available to refresh skills.
- Adaptive Learning was piloted in 2021 in the Nuclear General Employee Training program and is now used in 18 high demand courses. It provides the right training to the right people based on previous experience, training and education.
- All Leaders are trained on Facilitative Leadership Techniques to enable learning and development.

Operations Training

The development of knowledgeable, skilled, and highly competent Operations staff at Pickering NGS is accomplished through comprehensive initial and continuing training programs for non-licensed Operators and for persons in Certified positions. The training programs are SAT-based and incorporate OPEX as a key element of continuous learning and performance improvement.

JITT is delivered to ensure critical evolutions are conducted safely and efficiently. Some examples of when JITT is conducted for Operations include unit shutdown, heat transport system warm-up and cooldown, approach to critical and turbine run-up and shutdown. JITT will be instrumental in the successful return to service of the refurbished Pickering NGS Units which will contain fresh fuel cores and where systems will have been extensively modified.

More recently, the use of Prepare-Execute-Learn as a methodology was introduced to minimize the probability and consequences of human performance events. This is accomplished by identifying human performance precursors up front, implementing well established human performance tools to prevent and mitigate errors, and strengthening feedback processes to promote continuous learning. Operations trainers assist line management by promoting self-awareness of proficiency among staff and working with line to enhance proficiency through targeted training for individuals and operating crews. Operations Training reinforces the use of human performance error reduction tools and other techniques during training activities in the classroom and the simulator. This aids to engrain use of these tools in the day-to-day operations in the plant and the control room.

Other initiatives include:

- Incorporation of a flight simulator in Human Performance training which introduces the trainees to the psychology behind the human performance tools. Following completion of the theoretical classroom portion, trainees are provided an opportunity to practice the human performance tools/techniques using various interactive simulations in a flight simulator. This places the trainee in an unfamiliar environment, different from the station, where they are able to observe the full benefits of the human performance tools/techniques while being challenged with distractions and competing priorities.
- Development and upgrades to control panel simulators for Fuel Handling.
- Use of Video Learning-On-Demand as a valuable tool available 24/7 to enhance work preparation and pre-job briefs.
- Development of Dynamic Learning Activities to promote effective use of Operator Fundamentals and Human Performance error prevention tools.
- Main Control Room simulator upgrades to improve versatility and maintainability.

Maintenance Training

Maintenance Training and Station Maintenance organizations continue to collaborate on Workshops and Dynamic Learning Activities to build proficiency and verify performance to standards and expectations.

OPG has implemented innovative solutions using virtual interfaces, including a Crane Virtual Reality Simulator. This training approach also improves accessibility to training resources when station equipment is in use. In addition, portable demonstration units have been implemented for gasket and leak mitigation training. These units focus on bolted joint proficiency building and

are available for use in both the training environment and onsite to support work preparation and ongoing rehearsal.

Engineering Training

Engineering training focuses on core elements of nuclear professionalism and culture by concentrating on key elements of conduct and behaviours within the learning material. Engineering training includes an extensive Learning on Demand library of videos and other presentation material of individuals sharing lessons learned.

An important component of this training program is the Conduct of Engineering Workshops. Every year senior engineering leaders select a new topic and the material is developed and delivered to OPG engineers. The chosen topic is a backdrop to the application of expected behaviours within the engineering community and an opportunity to reinforce culture.

Emergency Response Organization Training

Emergency Preparedness Training and Enterprise Emergency Management teams maintain alignment through formal reviews of potential training needs identified in field performance observations during training sessions, both through classroom and on-the-job training. OPG extensively uses drills as a means of continuous learning through drill evaluation and post-drill training critiques and feedback.

In September 2023, OPG participated in the Exercise Unified Command “full scale integrated” emergency exercise in which over 200 OPG staff participated (see Section 2.10.2 for additional details). These exercises will continue to be scheduled as per regulatory requirements. Emergency exercises along with regular drills (smaller scale exercises, at least 5 per year at each site) provide an excellent opportunity for continuous learning, feedback on current training material, and to help identify any focused proficiency improvements opportunities. For example, over the last few years, there has been a focused effort to increase the proficiency of the Emergency Shift Assistant (ESA) and Off-Site Survey Teams (OSST).

In 2026, additional training and drill focus is being placed on the use of Emergency Mitigating Equipment. Building on the learnings from the October 2025 Darlington Exercise Unified Command, OPG implemented fleet-wide enhancements to further strengthen EME performance and demonstration. These enhancements span three areas: equipment readiness, procedure and guidance clarity, and responder proficiency. From a governance perspective, OPG has increased the frequency and consistency of EME demonstration by integrating EME asset deployment into all 2026 nuclear preparedness drills and introduced a minimum requirement, starting in 2027, for at least one EME-focused drill per site per year,

To sustain this improvement over time, OPG also established an EME working group to proactively identify and address equipment reliability issues, advocate for ongoing EME availability, and maintain consistent fleet alignment. In addition, OPG clarified program ownership and roles and responsibilities to strengthen accountability and execution.

Together, these actions increase the regularity and quality of EME practice and validation, improve clarity in how EME is deployed and managed, and strengthen long-term program sustainability through defined ownership and proactive oversight.

2.2.3 Personnel Certification

As required by the PROL, the initial and continuing training programs for the certified persons at Pickering NGS are designed in accordance with CNSC regulatory document, REGDOC-2.2.3

Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2. This regulatory document specifies the requirements to be met by persons working, or seeking to work, in positions for which a certification by the CNSC is required.

Pickering NGS's PROL requires individuals who are appointed to the following positions have valid CNSC certification:

- (i) Responsible Health Physicist (RHP)
- (ii) Shift Manager (SM)
- (iii) Control Room Shift Supervisor (CRSS)
- (iv) Authorized Nuclear Operator (ANO)

Pickering NGS is responsible for training and testing workers to ensure that they are fully qualified to perform the duties of their position, in accordance with the regulatory requirements. Both initial and continuing training programs are based on *Systematic Approach to Training* as required by CNSC REGDOC-2.2.3 Volume III Version 2 and REGDOC-2.2.2.

Table 8 contains the number of certified staff employed at Pickering NGS as of December 31, 2025. With the defueling of Pickering NGS Units 1 and 4 completed in 2025, changes have been made to the Minimum Shift Complement (MSC) for Pickering NGS, as there is no longer a requirement for certified staff on Pickering NGS Units 1 to 4. This allows certified staff on Pickering NGS Units 1 to 4 to be redeployed to other areas of the business, including the Pickering NGS Refurbishment Project.

Table 8. Certified Staff at Pickering NGS (December 31, 2025)

Certified Position	Station	Number of Certified Staff
Shift Manager and Control Room Shift Supervisor	Pickering Units 5-8	19
Authorized Nuclear Operator	Pickering Units 5-8	50
Responsible Health Physicist	Pickering	2

The continuing training program for Certified Operating staff is at a mature stage. This training includes refresher training and update training for design or engineering changes, infrequently performed test and evolution exercises, JITT and formal evaluations (knowledge and performance) of certified staff. Certified Operating staff complete at least 200 hours per year of continuing training.

In line with our industry peers, Pickering NGS Certified Operating staff have internalized the need to maintain a Line of Sight to the Reactor Core in all aspects of unit operations. This includes initiatives to improve leadership and team effectiveness; creating a culture of continuous learning, promotion of conservative decision-making; recognition and mitigation of proficiency shortfalls, improving operator training, promoting understanding of procedures important to the protecting the core and utilizing independent oversight. Integral to this is a Training to Improve Performance initiative whereby line-identified performance issues are addressed in a timely fashion through training. This initiative has been very effective at preparing crews to respond proficiently to unit upsets.

The MyPerformance application was developed to enable certified operating staff and supervisors to monitor trends in performance in the simulator. The data is used in identifying opportunities for improvement in developing individual and crew improvement plans.

In October 2023, the Commission published CNSC REGDOC-2.2.3 *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*. Version 2 incorporates changes that provides more flexibility for those persons seeking initial certification as either an ANO or Control Room Shift Supervisor. The update streamlines the requirements for maintaining or reinstating existing certifications. OPG will comply with the licensing requirements for REGDOC-2.2.3 Volume III Version 2.

The long-range training plan outlines the schedule of initial certification classes necessary to meet certified operating staffing demand. The plan is updated annually to account for changes in business needs and staff attrition. The plan further identifies Authorization Trainer and Examiner resources required to meet the initial and continuing training demand. Authorization Trainers and Examiners are drawn from certified operating staff resources and included as part of the certified operating staff attrition.

In cooperation with our industry partners, Pickering NGS is investigating opportunities to optimize and strengthen the initial training programs for Certified Operating staff. This includes improvements to the selection process, plant familiarization program and schedule optimization. The desired outcomes will be to improve the trainee learning experience, optimize program duration and improve candidate throughput.

2.2.4 Initial Certification Examination and Requalification Tests

OPG administers the certification examinations and requalification tests required REGDOC-2.2.3 for persons in Certified Operating positions (e.g., SM, CRSS, ANO) in accordance with the following CNSC documents:

- CNSC-EG1, Rev.0: *Requirements and Guidelines for Written and Oral Certification Examinations for Shift Personnel at Nuclear Power Plants*;
- CNSC-EG2, Rev.0: *Requirements and Guidelines for Simulator-based Certification Examinations for Shift Personnel at Nuclear Power Plants*;
- CNSC document: *Requirements for the Requalification Testing of Certified Shift Personnel at Nuclear Power Plants, Revision 2*.

OPG's Simulator Training program maintains Pickering NGS Units 5 to 8 full scope training simulator. The simulator is used for the training and examination of persons seeking or holding certification as SM, CRSS or ANO. The simulator replicates the Pickering NGS Unit 5 main control room and is modelled to operate and respond as plant systems will do under normal and transient conditions.

With the refurbishment of Pickering NGS Units 5 to 8, construction of a second, full scope simulator to aid in meeting anticipated training demand is planned for completion in late 2027. Going forward, the second Pickering NGS Units 5 to 8 simulator will provide greater flexibility in delivery of initial and continuing training for certified operating staff.

The initial certification examinations provide assurance that, at the time of their certification, candidates for certified positions have acquired the level of knowledge and skills required to work competently in their assigned positions.

Requalification testing for persons in Certified Operating positions includes written tests and simulator-based tests for all Certified Operating staff.

As per CNSC REGDOC-2.2.3, the initial certification examinations and requalification tests for the Responsible Health Physicist continue to be administered by the CNSC.

As required under CNSC REGDOC-3.1.1 version 2, *Reporting Requirements for Nuclear Power Plants*, Section 3.3, Item 6 (b), and subsequent implementation of REGDOC-3.1.1 Version 3, Section 3.3, Item 4(d), OPG submits a report detailing certification exam results and pass/fail rates. Results are also supplied to the CNSC in accordance with CNSC-EG1 and CNSC-EG2 *Examination Follow-up* sections during the Certification process.

Authorization Training instructors and examination staff are normally persons who were previously or are currently certified at Pickering NGS. OPG training governance includes a provision for qualifying persons as training instructors and examiners in cases where the person was not previously certified at Pickering NGS. A Mentored Training program serves to provide assurance that those examiners who were not previously certified at Pickering NGS are fully familiar with the knowledge and skill requirements of the persons being examined.

The Pickering NGS LCH currently permits, as a pilot project, the use of Multiple Choice Question (MCQ) format examinations for General Written Initial Certification Examinations. OPG and its industry partners will be seeking to formalize the use of the MCQ format not only for General Written Initial Certification Examinations but to extend use of this examination format to other initial certification written examinations. MCQ format examinations are widely used across the industry and are used for requalification testing at OPG currently. The MCQ format offers a more objective method of testing candidate knowledge than modified essay style examinations and allows for the sampling of a greater number of knowledge areas over a given examination time period.

OPG will continue to demonstrate to the CNSC its capability to self-administer the Certified Operator staff training and examinations and to ensure sufficient qualified staff are available to ensure safe and reliable operation of the Pickering NGS station. This includes the requirement that sufficient trained and qualified staff will be available to deliver these training programs throughout the continued operation and refurbishment timeframe.

2.2.5 Work Organization and Job Design

Minimum Shift Complement

Pickering NGS Minimum Shift Complement (MSC) is the minimum number of qualified workers who must be present at all times to ensure the safe operation and maintenance of the facility, to respond to all station emergencies that may arise, and to ensure adequate emergency response capability for the most resource intensive conditions.

MSC has been updated based on the strategies accepted by the CNSC. The change in MSC staff is in accordance with the reduced risk profile of the facility and aligns with CNSC REGDOC-2.2.5, Minimum Staff Complement. An updated list of required MSC positions is documented within P-INS-09100-00003, Pickering Minimum Shift Complement. Related training has been developed and delivered to impacted positions. Procedures have been revised accordingly. The changes have allowed Units 1 to 4 certified staff to be redeployed, strengthening Operations and Training staffing in support of Refurbishment.

Management of Minimum Shift Complement

OPG uses the Minimum Complement Compliance Program (MCCP) as the approved information management system software program to manage the MSC system. There are many capabilities of the system, including:

- Assignment of Emergency Response Organization (ERO) roles for each shift.
- Tracking ERO / shift complement staff as they arrive (badge in) and leave (badge out) the protected area.
- Forecasting of staff requirements.
- Various reporting including expiring qualifications, time exception and several accounting lists.

To ensure MCCP uses the most up to date information, it is live linked to the Training Information Management System to ensure the qualification of staff assuming MSC roles and the OPG Time reporting software to track staff schedules.

The software is updated regularly to add improvement, increase efficiency and make it more robust.

2.2.6 Fitness for Duty

Pickering NGS maintains robust procedures and policies to ensure that all staff members are fit for duty. OPG prioritizes the safety and well-being of employees and recognizes the importance of their physical and mental readiness to perform their roles effectively. To achieve this, comprehensive measures to assess and monitor the fitness of the workforce are in place to comply with:

- REGDOC-2.2.4, *Fitness for Duty: Managing Worker Fatigue*;
- REGDOC-2.2.4, *Fitness for Duty, Volume II: Managing Alcohol and Drug Use, Version 3*;
- REGDOC-2.2.4, *Fitness for Duty, Volume III: Nuclear Security Officer Medical, Physical and Psychological Fitness*.

The OPG procedure *Fitness for Duty: Policy of Managing Alcohol and Drug Use* identifies the standards for addressing fitness for duty as it applies to alcohol and drug use and possession. Fitness for duty is addressed through initial and continuing training elements that focus on explaining company policies, expectations, and various employee support programs available. In addition, random and pre-placement drug and alcohol testing for safety critical staff has been implemented as of Q4 2025.

Other training include:

- The Continuous Behaviour Observation Program (CBOP). CBOP is designed to develop a supervisors and managers ability to recognize and respond to behaviours that could impact worker performance and safety.
- Additional training is provided for SMs and CRSSs on monitoring fitness for duty for safety sensitive and safety critical personnel.
- Training is conducted for the Fitness for Duty: Policy of Managing Alcohol and Drug Use program through 3 computer-based training courses:

- Nuclear General Employee Training (for all site staff), with requalification every 2 years.
- Fitness For Duty – Managing Alcohol and Drug Use for Safety-Sensitive and Safety-Critical Workers.
- Fitness For Duty – Managing Alcohol and Drug Use for Supervisors of Safety-Sensitive and Safety-Critical Workers.

If an OPG Security Officer suspects a worker is unfit, they will deny access to the facility and notify appropriate supervisory personnel. Supervisors are required to assess for fitness for duty and initiate alcohol and drug testing for certain categories of workers as required by the Policy. OPG also periodically uses canine drug monitoring at the security monitors as an additional barrier to alert Security Officers to review the fitness for duty of suspected staff entering the protected area.

Procedures are also in place to monitor and control the Hours of Work (HoW) for Nuclear Broad Population and Safety Sensitive employees to meet the requirement set out by REGDOC-2.2.4, *Ontario Employment Standards Act* and Collective Agreement provisions. It includes guidance and instruction on:

- Hours of work (Including Regulatory limits, shift schedules and special exceptions);
- Reporting requirements; and
- Management of worker fatigue.

The process requires that employees are aware of their time limitations, track work hours and promptly notify the first line manager in advance of a potential violation. Supervisors are also required to ensure that their employees are aware of their prescribed limit and are also responsible for monitoring their employees' HoW.

Additional HoW monitoring is completed by workgroup Single Point of Contacts (SPOC). OPG has implemented a new time keeping and reporting system that allows for custom reports to be generated which has improved the discernment of HoW. Each workgroup SPOC monitors and reports on HoW for their departments. There has been a concerted effort by the SPOCs to educate those that approve time sheets on how to identify situations that can lead to HoW violations and how to disposition when they are identified.

Through education of time sheet approvers, and reinforcement of standards, OPG continues to improve in managing worker's hours of work.

2.2.7 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Human Performance SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

Human Performance Program

The Human Performance program will continue to be implemented during decommissioning activities to help manage multiple priorities and proficiency and ensure activities are executed safely, effectively and efficiently with no impact to public and environmental safety.

Pickering NGS is focusing on the individual, team and organizational Proficiency Model as well as human factors to improve human performance.

In addition, OPG has developed a *Pickering Human Performance Strategic Plan*, which is focused on strengthening the use of proactive, risk-based approaches to improve Human Performance during outages and decommissioning activities.

Personnel Training

OPG's *Training* program provides the structure, processes, and tools that will be used for defining, developing, implementing, documenting, assessing, and improving the training required to ensure nuclear staff have the appropriate knowledge, skill, and qualifications for a safe and efficient Decommissioning program.

Work Organization and Job Design

Staff transitioning into new roles are provided appropriate Training to ensure they are qualified in the new role as required by *Systematic Approach to Training* procedures.

Fitness for Duty

Through the stabilization and decommissioning of Pickering NGS Units 1 and 4, upon changes in MSC, staff who support the operation of these units in Safety-Sensitive positions, will transition to new roles. Employees in Safety-Sensitive positions support the entire station.

Employees who support the entire station or assigned to Pickering NGS Units 5 to 8 are unaffected by the stabilization and decommissioning of Pickering NGS Units 1 and 4, with regard to Fitness for Duty.

Employees remaining at Pickering NGS Units 1 to 4 will be re-screened for Safety-Sensitive or Broad Population using screening criteria within the *Listing of Broad Population and Safety Sensitive Job Codes*. Re-screening will take place at milestones which may impact classification. Any identified changes to Safety-Sensitive or Broad Population job codes will be updated with prior notification to the CNSC in accordance with the LCH.

Staff who transition to Pickering NGS Units 5 to 8 or Darlington NGS will become trainees at their new location. As trainees, they are not considered qualified to be in positions classified as Safety-Sensitive nor Safety-Critical and do not hold accountabilities that are safety-sensitive or safety-critical. However, they will return to these classifications upon qualification or certification in their new role, as appropriate.

Limits of Hours of Work will continue to be implemented during decommissioning. Contractors will be required to have an equivalent program.

2.2.8 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Human Performance SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Human Performance Program

The Human Performance program will continue to be implemented during Units 5 to 8 Refurbishment with site and fleet strategies updated annually. The *Pickering Refurbishment Program Management Plan – Human Performance*, has been created to support Pickering NGS Units 5 to 8 refurbishment.

Pickering NGS facilitates recurring Station Excellence Meetings, with the focus on prioritizing initiatives that support continued station excellence. Lessons Learned and Darlington NGS Refurbishment OPEX are integrated into the station excellence initiatives focused on Pickering NGS Future Organizational Transitions, expected to occur between 2025 – 2034. The incorporation of Darlington Refurbishment Lessons Learned and OPEX support future transitions to change management strategy, structure and process, vendor partner integration, training and development, communication and information flow, and management and leadership challenges.

In addition, Pickering NGS has developed a Human Performance proactive plan to support the refurbishment of Pickering NGS Units 5 to 8 and to mitigate potential human performance risks during this time. The Human Performance proactive plan is updated every 6 to 12 months with planned interventions in collaboration with Conventional Safety.

Personnel Training and Certification

In the *Pickering B Refurbishment Training Program Management Plan*, major program milestones have been established to ensure outage, execution, installation and Available-for-Service (AFS) readiness of all Refurbishment employees at each stage of the project. A dedicated project training team will ensure end-to-end tracking and timely completion of all required training actions for each modification and scheduled verification point, including incorporation of any new training into the existing training programs. Vendor training oversight will be managed using corporate governance, and as required by the service level agreement. As the project progresses, training groups and line business units will address any performance gaps and promote continuous learning, focusing on task proficiency and learning innovations for project success.

A combination of new and existing buildings will house equipment for Engineered Tooling Transition Training.

OPG will be utilizing an off-site Training and Mock-Up Facility (TMF), which will be upgraded and fitted as per the CanAtom mock-up requirements, to support the Retube, Feeder, and Boiler Replacement (RFBR) project. The facility will be used for mock-ups, training, and warehouse storage. This facility will host a full-scale replica of the Pickering NGS reactor, as well as mock-ups of various configurations, including Fuel Channels, Feeders, Retube Tooling Platform/Retube Tool Carrier, and Boilers, which will enable design verification and integration testing of tooling, and will also be used for training and qualifying the trades executing the replacement work in the field. These mock-ups will ensure that personnel are properly prepared for the successful execution of the RFBR project and minimize the potential for human performance events during refurbishment.

Pickering Unit 2, a permanently shut down unit currently in SWS, will also be utilized as a mock-up for personnel training and rehearsal for some major activities in preparation for the RFBR project. To support retube and feeder replacement, engineering changes required to transport waste from the reactor room through the service room is planned to be rehearsed on Unit 2 in 2026. To support boiler replacement, system severing and welding mock-up activities on Unit 2 is planned in 2027. The training on Unit 2 is intended to improve refurbishment execution performance and prevent rework by replicating RFBR activities under field conditions that closely resemble those in Units 5-8. The qualification of workers and tooling will be completed at the TMF prior to the Unit 2 mock-up activities.

A Pickering Refurbishment Operations Staffing and Training Plan, is currently under development and will be used as the framework for ensuring Certified operating staff are updated on system changes and qualified to restart and operate the refurbished Pickering NGS Units 5 to 8. The plan will address the unique manner in which Pickering NGS is conducting refurbishment with all units defueled for a period of time.

Certified staff will continue to perform in role until the units are defueled. After all Pickering NGS 5 to 8 Units are defueled and changes to Minimum Shift Complement (MSC) reflecting the defueled unit take effect, Certified staff will be assigned to inactive status consistent with REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2* requirements.

Certified staff will continue to receive update training, refresher training and simulator-based training throughout the refurbishment period. In addition, Certified staff will receive specialized training as appropriate to the unique aspects of the Unit 5 start-up, e.g., restart and operation of the unit with a fresh fuel core.

Prior to new fuel load on Unit 5 and the re-establishment of MSC requirements for a fueled unit, a core group of Certified staff will be returned to active status. Prior to surrender of the Guaranteed Shutdown State (GSS) for Unit 5, OPG will ensure the core group of Certified staff are able to perform their duties competently and safely as required for GSS surrender and the subsequent startup of Unit 5. Reactivation of the remainder of the certified staff will follow the normal OPG process.

Just-in-Time Training (JITT) for certified staff will be an essential element of the restart of each refurbished unit.

Construction Island and interface Training OPG refurbishment and contractor staff will receive construction islanding and interface training to ensure that expectations are clearly understood for access and egress from the construction and operating island prior to Unit 5 Return to Service. Training will also be provided to station staff, either as an update to the Nuclear General Employee Training or by completing the same construction islanding and interface training as refurbishment and contractor staff.

Management of Training Change Control

To extend the life of Pickering NGS Units 5-8, the refurbishment scope engineering changes will be assessed on training impact for both OPG staff and supplemental employees contracted for the Project. Where required, training will adhere to OPG governance and vendor Quality Assurance (QA) programs, while also meeting closely monitored Project schedule milestones.

Contractor Training

Contractors will be required to train their personnel to be competent to perform the work they are assigned. They will also be accountable to provide QA training to their staff. Evidence of QA training activities will be supplied to OPG.

Training for contractor staff will follow agreed to project specific contracts and contractor training qualifications in accordance with the contractors QA program. OPG will remain accountable for OPG specific qualifications, e.g., radiation protection, work protection, and islanding and interface training.

Contractors will maintain documented evidence of all training provided to their staff including exams, training attendance, assessments, certificates, course correspondence and objectives.

OPG will exercise due diligence regarding training through observation and review of contractor training delivery and materials as part of oversight function accountabilities. OPG Project Managers or delegate will provide oversight of training that the contractor is conducting through routine or strategic observation and audits of materials.

Training Provided by Contractors

For some equipment the contractor/vendor/manufacturer will provide the training materials and deliver training to OPG staff. This is carried out in accordance with existing governance which provides the necessary information to facilitate the revision or development of training material for the operation and maintenance of that equipment. If information changes due to commissioning results, then just-in-time training will be provided prior to system available-for-service.

Work Organization and Job Design

OPG has proposed changes to minimum complement which reflect the changes to the risk profile during Pickering NGS Units 5-8 Refurbishment. The overall strategy for minimum complement reductions was presented to CNSC staff on February 3, 2026. Following shutdown and defuel of the units, staff will be redeployed in the organization to support Pickering Refurbishment projects and be available to support minimum complement and certification requirements prior to unit RTS. Changes will be made to support unit restarts by incrementally increasing Operations minimum shift complement staffing. These staffing transition plans are currently being developed in detail.

OPG will leverage the lessons learned from Pickering NGS Units 1 to 4 Decommissioning MSC reductions and apply them to the Pickering NGS Units 5 to 8 Refurbishment project. MSC changes will be implemented upon key refurbishment project milestones.

These changes will be managed in a manner that does not impair OPG's ability to fulfill its overall emergency response capability for resource limiting accidents nor impact its ability to provide effective control over significant decommissioning and refurbishment evolutions on the defueled units.

2.2.9 Pickering Waste Management Facility

2.2.9.1 Human Performance

The Human Performance program at PWMF is defined by the OPG Nuclear Human Performance program as described in Sections 2.2.1, 2.2.2 and 2.2.6.

An OPG fleetwide strategic plan is developed each year in response to human performance trends and events noted in the previous year. The strategic plan is also influenced by industry developments and emerging best practices in sustaining high levels of human performance. The strategic plan focuses on individual, supervisory, and organizational enhancements. By systematically identifying and addressing error-likely situations, reducing organizational vulnerability to errors and events and by questioning or enhancing the integrity of defenses, PWMF is positioned to continually improve organizational effectiveness through the use of best practices, enhanced behaviours and learning.

During the current licence period, there were no Site Event Free Day Resets and no Department Event Free Day Resets as a result of operations at the PWMF.

Supervisors and managers are expected to conduct and record regular observations and checks. Each month there is a designated focus area, which is emphasized by leadership presence in the field. Collected data is consolidated and reviewed at recurring meetings to identify trends and opportunities for improvement, with follow-up actions as needed. Sharing of lessons learned across the organization has increased, as demonstrated by a rise in documented learning events compared to previous years. Regular oversight meetings have been established to enhance monitoring and demonstrate the effectiveness of the performance improvement program.

2.2.9.2 Training Performance

PWMF staff are trained and qualified under OPG's Nuclear Training Program as described in Section 2.2.2. The staff training and qualifications includes initial training, on-the-job training, and evaluation. This training is then maintained by periodic re-qualification and refresher training as appropriate. PWMF utilizes the Training Information Management System (TIMS) database to store and track training and qualification information for all staff, including vendor partners. A monthly TIMS report is generated that is reviewed during Monthly Curriculum Review Committee Meetings for each program area, Quarterly NSS Training Performance Review Committee meetings and quarterly Nuclear Waste Division Training Council meetings to ensure training adherence and performance. PWMF tracks training attendance, expired qualification, and qualified rate performance for all staff.

2.3 Operating Performance

Pickering NGS has an effective Operations Program that meets or exceeds all applicable regulatory requirements and related objectives. The program ensures that plant operation is safe and secure, with a focus on health, safety, security, radiation and environmental protection, and international obligations.

2.3.1 Conduct of Licensed Activity

The *Nuclear Operations* program implements a series of standards and procedures to ensure that Pickering NGS is operated safely and reliably. The program establishes safe, uniform, and efficient operating practices and processes that provide nuclear professionals at Pickering NGS the ability to ensure the facility is operated in such a manner that the PROL, the *Operating Policies and Principles*, and other applicable regulations and standards are followed. It also supports the alignment and prioritization of equipment maintenance in a manner that protects the health and safety of workers, the public and the environment.

In addition, the Nuclear Operations program implements instructions and requirements for consistent and safe operation of Pickering NGS. This includes instructions on the systematic approach to decision making, identifying and reporting common and site-specific performance, the control of fuelling operations, and management's expectations on conservative decision making with regards to the safe operation of the plant.

The following subsections describe critical aspects of the Nuclear Operations program.

Heat Sink Management

Heat Sink Management specifies the requirements for management of reactor heat removal in all planned reactor states and planned configurations when the reactor is operating in low power conditions.

Response to Transients

The roles and responsibilities of operating crews when responding to transients are defined to ensure the unit is placed in the appropriate safe state. Following any transient event and once the unit is in a safe operating state, a post-transient response meeting is held to confirm the cause of the event, verify that all systems and components of the unit operated as expected, ensure responses were per procedures, and initiate the appropriate corrective actions where required. Furthermore, a control room performance critique of the event will be conducted after the unit is in a stable steady state to evaluate the team's behaviours and use of operator fundamentals. Utilizing lessons learned allows for the operations team at Pickering NGS to continually improve their performance and ensure the continued safe operation of the station.

Reactivity Management

OPG implements systematic processes for monitoring and controlling reactivity in the core and stored nuclear fuel to ensure that reactivity is consistent with fuel design and operating limits.

The reactivity management performance of the station is measured using the Reactivity Management Index (RMI) (refer to Figure 12). The RMI is a standard calculation used in the industry to gauge performance and facilitate benchmarking comparisons between individual plants and utilities. RMI has improved over the licence period as a result of facility focus and effort on Fuel Handling Reliability.

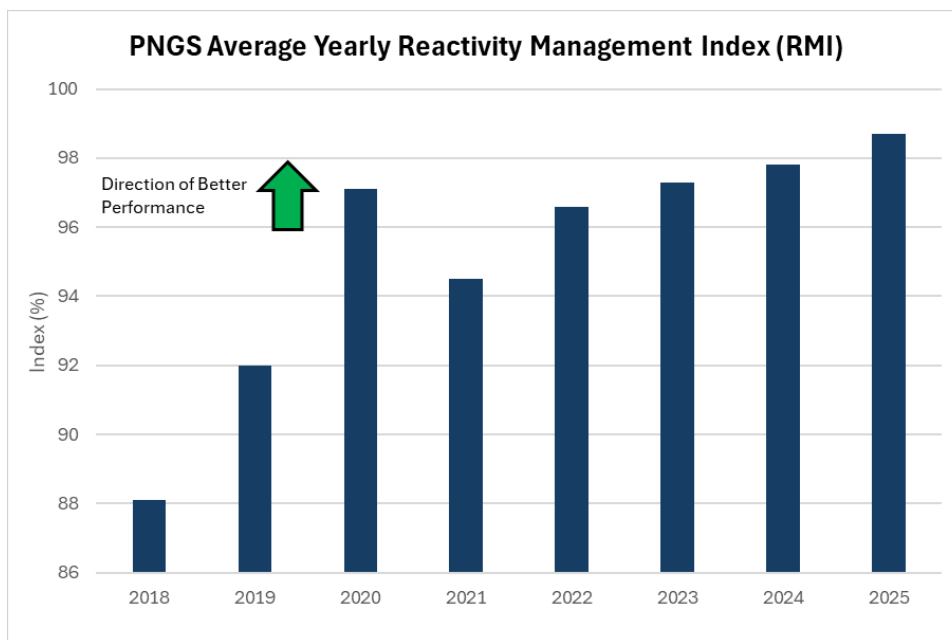


Figure 12. Pickering NGS Average RMI

Plant Status Control

The Plant Status Control program ensures that configuration of the station systems and components are monitored and controlled through the tracking of various operating conditions, parameters, and activities of the plant in real-time to ensure safe and efficient operation. Plant status control serves several important purposes including ensuring safety, improving operational efficiency, and fault detection.

Pickering NGS tracks significant mispositioning events using Mispositioning Index Value (MIV) (refer to Figure 13). Prior to 2021, Pickering NGS had a target of 97% which has been increased in recent years to drive continual improvement, along with the implementation of several initiatives and corrective actions for improved performance.

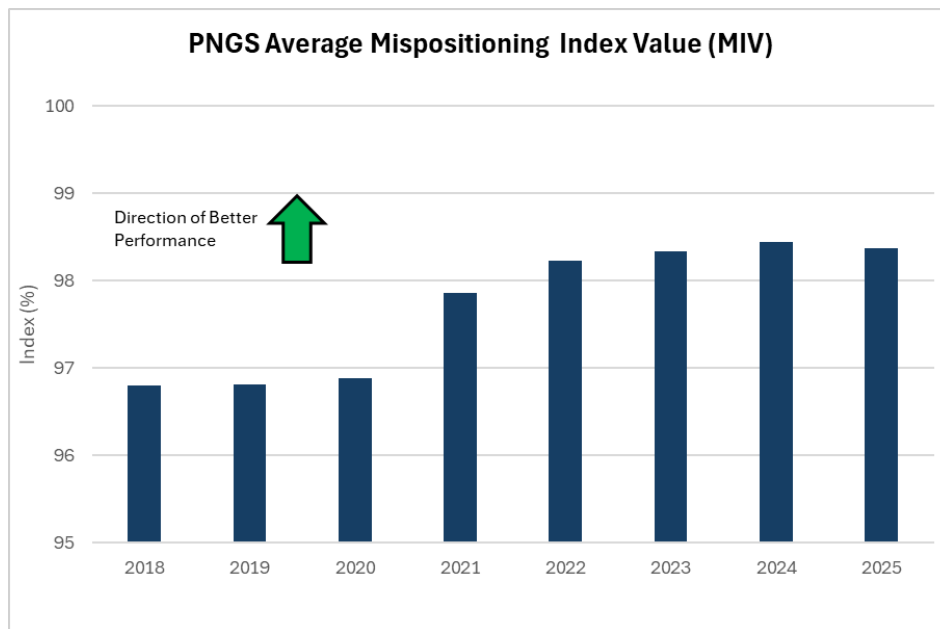


Figure 13. Pickering NGS Average Mispositioning Index Value

The Plant Status Control program at Pickering NGS strives for continuous improvement through new initiatives, innovation, and automation. The following software applications are utilized by Pickering NGS and PWMF for plant status control, and improvements have been made to the applications as discussed below.

- Equipment Status Monitoring (ESM) is used for tracking the position of system devices and components, work protection administration, temporary change requests for documenting system changes and reactor outage alignments, flowsheet management, and creating equipment tags and status control tags. The current version of the program is fully electronic, which has improved efficiency and eliminates the potential for human errors found in older processes that were a combination of electronic and paper-based.
- Operator Shift Log (OSL) is a computer program for administering Operational narrative logging requirements. It documents the chronological summary of shift activities and is used as part of shift turnovers to acquaint operators with unit conditions. It allows for quality operations logs to be maintained and include pertinent information such as enhanced monitoring requirements, equipment condition summaries, and abnormal

station conditions. A version of the OSL program has been implemented, which has benefits such as remote accessibility.

- ESL is used at Pickering NGS by Fuel Handling and Chemistry for control and monitoring of ion exchange columns, in addition to monitoring, controlling, and tracking of changes to plant systems, structures, and components. The ESL program was updated during the current licence term to improve speed and user experience.

Improvements have also been made to signage at the station including signage updating and simplification to ensure proper access and operation of overhead doors, and signage installation for emergency mitigating equipment to ensure clearance is maintained for emergency access. Plant Status Control governance has also been updated to establish sensitive area signage and barriers to restrict movement of staff and work activities around plant sensitive equipment.

Current ongoing initiatives for the Plant Status Control program include:

- New harsh environment tags being made available to improve readability and assist in identification of components in areas that are more difficult to access.
- Main Control Room (MCR) key storage equipment and labelling has been updated. Key lists and tracking logs have been updated. Close control of keys and upgrades to security door for vital area access ensures only authorized staff have access to sensitive equipment.

Work Protection

The *Work Protection* program describes requirements that are in place within OPG nuclear to ensure worker safety where work on equipment requires isolating and de-energizing equipment.

Worker safety is achieved through the effective application of a work protection standard and procedures to ensure physical and administrative barriers are established between the energy source and the worker.

Operations Managers own the Work Protection program at the site and provide oversight through the:

- Nuclear Work Protection Review Board reviews and provides oversight of the work protection performance in Nuclear. This includes significant trends or events and their associated corrective action plans.
- Local Work Protection Review Board (LWPRB) provides oversight of the Work Protection performance at the Site. The LWPRB reviews and provides oversight and analysis of recent events at all sites, corrective actions of events, Operating Experience (OPEX) and work protection training issues.
- Site Work Protection Working Committee meet monthly to allow workers the opportunity to raise any work protection issues at site. Issues and actions are reported to LWPRB as required.

The Work Protection Performance Index (WPPI) is a measure of work protection performance. The number and significance of work protection events that occur on site each year affects the index. The annual trend in the WPPI metric is shown in Figure 14.

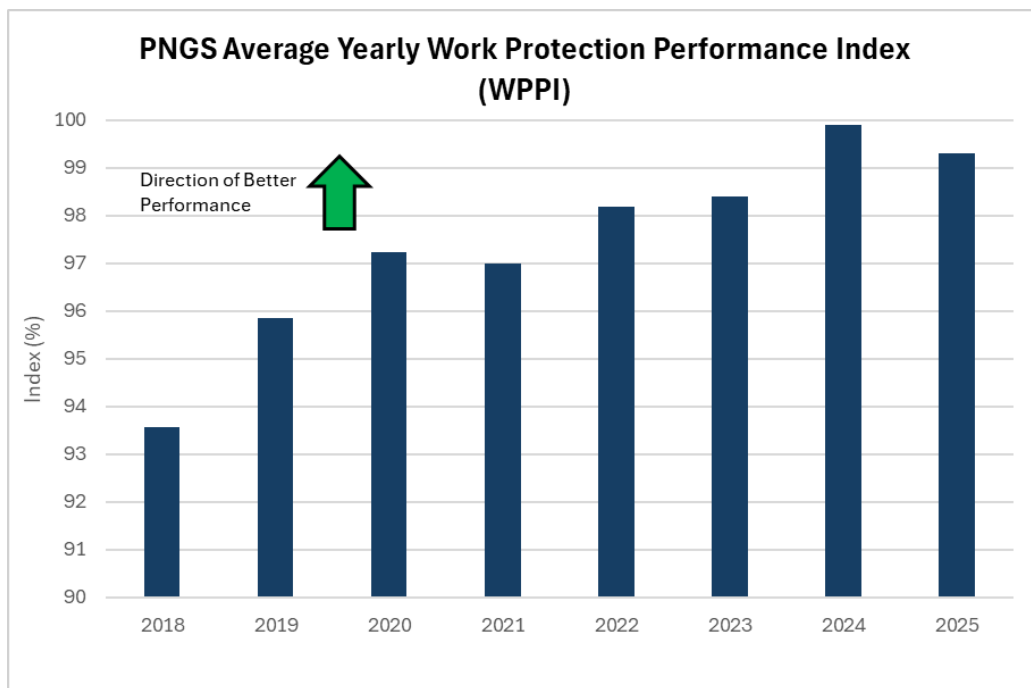


Figure 14. Pickering NGS Yearly Average WPPI

Production Work Management

OPG's *Production Work Management* program details the requirements for identifying, prioritizing, planning, scheduling and executing work in support of the operation, maintenance and engineering changes of the plant, and described in more details in Section 2.6.2.

Heavy Water Management

The purpose of the heavy water Management program is to establish overall requirements for effective heavy water management to ensure safety to workers, public and the environment, and to ensure there is a coordinated effort to achieve effective and efficient heavy water lifecycle management.

2.3.2 Procedures

Clear, concise, and accurate procedures are essential for the safe operation of the plant and for efficient and adequate response to transient situations. Pickering NGS's operating procedures are developed and revised using defined processes to ensure compliance with operational limits and regulatory requirements, incorporating human performance and error-prevention tools such as second-party verification and place-keeping.

Validation is completed on both new procedures and procedures with extensive revisions, as required. For procedures normally executed by MCR staff, the validation is completed before issuance by certified staff using the full-scope simulator, with additional input sought from trainers. Field validations are normally completed after issuance. Procedures requiring field validation are issued with a validation watermark and contain instructions on how to complete the validation.

Pickering NGS has multiple departmental procedures groups (e.g. Maintenance, Operations, Refurbishment, Fuel Handling, Operations Support, Nuclear Sustainability) that are dedicated to

updating the technical procedures that their department has ownership of. Due to interfaces between different systems, the different procedures groups collaborate as required to revise various procedures.

Numerous procedure updates have either been completed during the current licence term or are ongoing to support station projects and engineering changes. OPG has initiated several measures to improve the prioritization of implementing procedure updates. This includes development of training materials for new procedure authors, increasing staffing in procedures groups, streamlining the processes for reviews, verifications and approvals, and consolidation of databases into a single software application.

The software application simplifies the process of submitting a Technical Procedure Action Request (TPAR) and increases accessibility and engagement with users. This allows for more detailed information to be requested for specific situations, such as project TPARs or TPARs submitted as part of Corrective Action programs.

2.3.3 Reporting and Trending

OPG's *Performance Improvement* program establishes the processes that support the conduct of performance improvement and, by extension, employs the principles of problem prevention, detection, and correction at OPG.

The implementing processes under this program allow for the prompt identification of adverse conditions, proactive identification and resolution of potential issues, or opportunities for improvement. Non-conformances, deficiencies, and adverse conditions must be promptly identified to prevent impact on plant operations, personnel, nuclear safety, the environment, or equipment and component reliability. These processes ensure that problems are corrected or dispositioned with a level of rigour commensurate with their risk significance. For those problems deemed to be of higher significance or systemic in nature, these processes ensure appropriate levels of management are notified, causes identified, actions taken to minimize or prevent recurrence, action completion and effectiveness verified, and lessons learned communicated.

Adverse conditions are reported via Station Condition Records (SCRs). Each SCR is reviewed and dispositioned by an SCR co-ordinator before going through a screening committee, and a management review committee to ensure the disposition was accurate and complete. Most of the SCRs generated are determined to be not significant on their own and are dispositioned for trending (Category D), closed out to another SCR (Category CO) or determined to be non-events (entered in error, a duplicate or does not represent an adverse condition at Pickering NGS). The remainder of the SCRs require an evaluation of known facts or an investigation to determine the cause and related corrective action(s) that will prevent or reduce the frequency of recurrence of the adverse condition(s). Refer to Figure 15 for distribution of SCR categories in 2025. This distribution of the SCR population is closely aligned with industry best practices based on benchmarking with nuclear utilities.

Additionally, processes are in place for conducting OPEX evaluations for applicable SCRs. Refer to Section 2.1.4 for further details on the OPEX process.

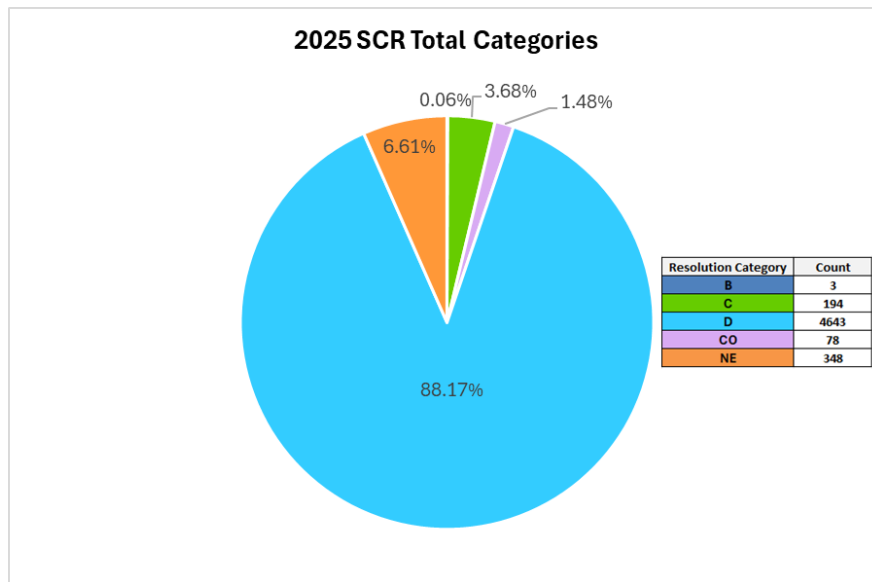


Figure 15. Distribution of SCR Categories for 2025

Root cause and apparent cause investigations are conducted for higher significance events to improve plant reliability and human performance at Pickering NGS. Quarterly reporting and trending analysis is conducted to identify trends in performance at a lower level before they become a more significant issue. Identified adverse trends are addressed by initiating an SCR and corrected as required through the corrective action program.

Pickering NGS maintains a Trend Watch List where potential trends are identified. Oversight is provided by the Management Review Meeting (MRM) where the Trend Watch List (TWL) is reviewed weekly. If a trend is suspected, a Validation of Trend (VoT) is performed to confirm if an adverse trend exists. The VoT process acts as a safeguard, proactively scrutinizing and challenging the potential impact of identified trends to prevent the development of consequential organizational issues. The implementation of a TWL and the utilization of trend performance indicators enhance the team's ability to meticulously observe, assess, and predict evolving patterns, ensuring that strategic actions are rooted in robust analytical foundations. For example, the MRM team identified a potential increase in Ignition Source Permits (ISPs) not being properly terminated after work completion and added this to the TWL. A VoT was requested, and it confirmed an adverse trend caused by unclear application and misalignment with current ISP form revisions. The resulting adverse trend SCR was evaluated, actions taken to arrest the trend ultimately resulted in a 50% reduction of late terminations over the observed period.

Regulatory Reporting

Pickering NGS submits both scheduled and unscheduled reports to the CNSC in accordance with REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants version 3*. There were no significant events that affected the conduct of licensed activities at Pickering NGS.

2.3.4 Outage Management Performance

The objective of the Outage Management program is to ensure that inspections, testing, maintenance, and engineering change activities are correctly identified, planned and safely completed while the unit is in the shutdown state, such that plant safety and reliability are

maintained at the desired levels during normal operation. The outage management processes for preparation and execution of planned and forced unit outages include a standard set of milestones that provides the methodical approach for guiding an outage through its life cycle. The milestones provide direction to plan, execute, monitor, and control outage activities to bring about the successful completion of outage goals and objectives while maintaining safety as the overriding priority. During the current licence term, Pickering NGS outages have been managed in a safe and effective manner.

Planned outages are performed at Pickering NGS to perform inspections and undertake preventative and corrective maintenance of station components and equipment that require a unit shutdown state. Outage plans are focused on nuclear, radiological, and conventional safety and follow a detailed schedule. Outage preparation and execution involve organizations across the station and close coordination amongst work groups. As per CNSC REGDOC-3.1.1 requirements, Pickering NGS follows a process for submitting outage plans and schedules to the CNSC to ensure details of regulatory undertakings and commitments are clearly defined and communicated. The outage management program includes provisions to ensure that following the restart of the reactor, an outage completion assurance is submitted to the CNSC to confirm that all regulatory undertakings and major work on safety related systems have been completed successfully.

The primary objective of forced outage management is to correct the unit issue which caused the unit to shutdown and safely return the unit to service. Pickering NGS maintains ready-to-execute forced outage plans to be completed in the event a forced outage occurs.

Pickering has an outage excellence plan that leverages a fleet approach to outage management. This ensures knowledge capture and help drive improvements to outage performance post-Refurbishment.

Additionally, outage work management will utilize work management fundamentals to continue to focus on risk mitigation and contingency planning to support execution of planned outage work. Accurately identifying and assessing risk ensures that business planning accounts for required contingencies, and key work required for plant reliability is completed within the outage window.

2.3.5 Safe Operating Envelope

The SOE at Pickering NGS is defined, implemented, and maintained compliant with the requirements of CSA N290.15-10, *Requirements for the safe operating envelope for nuclear power plants*. The standard defines the processes, organizational responsibilities, and key program elements to ensure the SOE is defined and documented in a manner which is consistent with the station operating documentation. Furthermore, the standard for SOE is critical to the implementation of the *Reactor Safety Program*.

The objective of the SOE is to define the set of limits and conditions within which the plant shall be operated to ensure conformance with the safety analysis upon which reactor operation is licensed. This set of limits and conditions are monitored and controlled by operators, as applicable per operating requirements. Limits and conditions that are part of the SOE include safety limits, safe operating limits, conditions of operability, actions and action times, and surveillances.

As SOE documents are considered living documents, they are revised and updated as required to reflect new safety analyses and engineering changes. OPG's ECC program has controls in

place to ensure the need to revise SOE documentation is identified as well as ensure these revisions are conducted and implemented correctly.

The SOE program at Pickering NGS has undergone continuous improvements driven by internal and external inspections and audits. Any enhancements identified through reviews of the Operational Safety Requirements (OSRs) and operational documents (e.g. Abnormal Incident Manuals (AIM)) are processed through OPG's document change management process with notifications made to CNSC staff, where applicable, as per regulatory requirements. The Pickering NGS SOE Improvement Project was initiated to iteratively improve SOE documentation over time. As part of this initiative, OPG identified an opportunity to provide further clarity to the technical basis of some existing OSR safety limits and availability requirements. A review of the OSR documents and operational documents was completed. Any enhancements identified in the review of SOE documentation are being processed through OPG's document change management process and notifications have been made to the CNSC staff, where applicable, as per regulatory requirements.

2.3.6 Accident and Severe Accident Management and Recovery

OPG maintains an Accident Management program for Pickering NGS, which meets the requirements of CNSC regulatory document REGDOC-2.3.2, *Accident Management, Version 2*, in conjunction with the elements of safety analysis.

For Anticipated Operational Occurrences (AOOs) and Design Basis Accidents for Pickering NGS, OPG maintains AIMs. AIMs consist of the procedures for responding to events which have an immediate effect on a reactor unit, requiring the response of several major systems, and involving failure or impairment of one or more of the following: reactor power control; fuel cooling; breach of one or more barriers to containment of radioactivity. These are event-based procedures, based on the design-basis accident set.

An Emergency Operating Procedure is required for all single failure process upsets which directly and adversely affect reactor power control, and/or fuel cooling functions which are not satisfactorily terminated by automatic action of the process or mitigating systems.

A Beyond Design Basis Accident (BDBA) is a classification of an accident with a low frequency of occurrence (less than $1\text{E-}5$ occurrences per year) and is therefore not part of the design basis of the station. For BDBAs at Pickering NGS, OPG maintains Emergency Mitigating Equipment Guidelines and Severe Accident Management Guidelines (SAMGs). OPG's BDBA management program is implemented through N-STD-MP-0019, *Beyond Design Basis Accident Management*. Severe Accident (SA) management provides an additional layer of defence-in-depth to mitigate the consequences of accidents that fall beyond the scope of events considered in the plant design basis. Instead of the rule-based approach, SAMG uses a symptom-based/knowledge-based approach that includes steps for plant status diagnosis and equipment evaluation, making it well suited for responding to events involving failures affecting multiple components, systems, or lines of defense. The transition of the different strategies to prevent an event from progressing are shown below in Figure 16.

Barriers to Event Progression

Multiple barriers to event progression, and multiple means to supply cooling water and electrical power are in place to ensure adequate defences under BDBA.

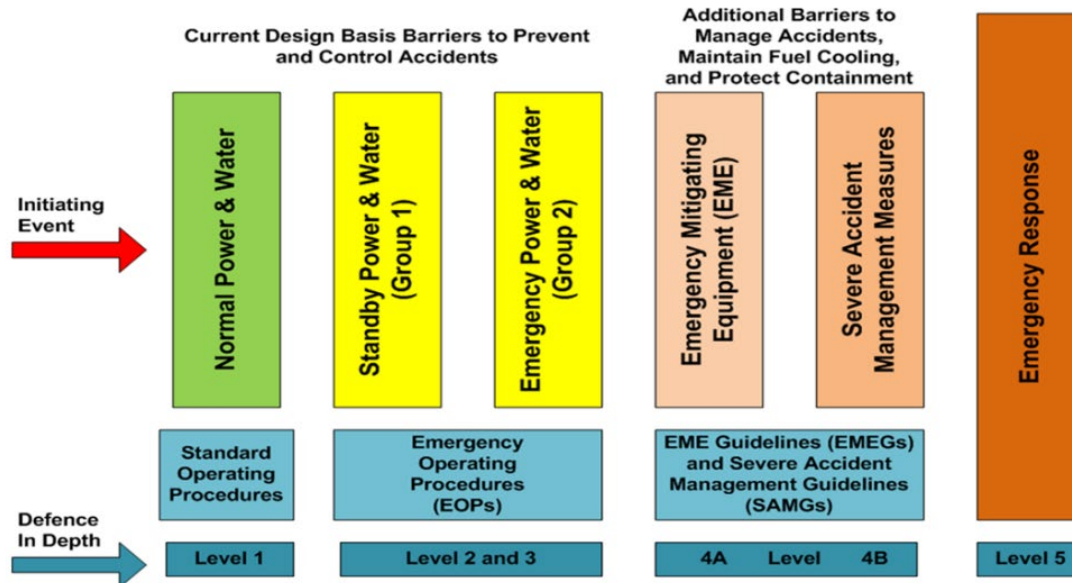


Figure 16. Barriers to Event Progression

In response to a plant transient, control room staff will diagnose the initiating event and to select the appropriate event-specific response procedure. It is critical to achieve acceptable fuel cooling in accident scenarios, through correctly diagnosing the initiating event, correctly implementing the response procedure(s), and ensuring functionality of mitigating equipment. In parallel with this event-based response, independent control room staff employ a symptom-based approach to assess the effectiveness of the procedure and its implementation by monitoring Critical Safety Parameters (CSPs). If any of the criteria for achieving acceptable fuel cooling are not met, one or more of these CSPs may exceed its specified setpoint, control room staff will take specified actions to restore the CSP value(s) within an acceptable range. These CSPs, their setpoints, and the related restoration procedures are specified in the AIMS.

For SA response and recovery, there are several key positions, roles and responsibilities established to support SAMG implementation at Pickering NGS, such as the Site Management Centre decision making authority (i.e., Emergency Response Manager/Authorized Duty Manager), the SAMG Technical Support Group, the Shift Manager, and the operations crew. Critical actions in the SAMG are listed below, and each action has different steps of responsibility (i.e. evaluate, recommend, authorize, implement), with specific personnel assigned to each step.

- Transition from Emergency Operating Procedures (EOPs) to SAMG;
- Implement SA mitigation actions;
- SA recovery strategies;
- End SAMG use and initiate long term recovery.

Details on the roles and responsibilities of OPG staff during a nuclear emergency, including communication strategies and interface with the public and with regulatory or other agencies can be found in the *Consolidated Nuclear Emergency Plan*.

As per the requirements of the Reactor Safety program, OPG regularly performs self-assessments of the SAMG and BDBA management framework. The scope of these self-assessments is to review relevant engineering changes and confirm their implementation in the BDBA framework documents, address pending corrective actions, and verify completion of the actions initiated as a part of the previous self-assessments and/or audits. The self assessment results concluded that the implementation of the program meets requirements. In 2025, CNSC conducted a fleetwide desktop inspection of OPG's beyond design basis accident management program and found no evidence of unsafe operation that would result in undue risk to the public and environment.

2.3.7 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Operating Performance SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

2.3.7.1 Conduct of Licensed Activities

OPG's Operating Performance programs will remain in place during all phases of decommissioning to ensure that the public, environment, and employees continue to be protected.

Plant Status Control (PSC)

During Decommissioning, Plant Status Control will be managed to ensure:

1. Status of SSC are known and controlled within bounds of analyzed conditions for safe operation and all phases of Decommissioning.
2. Changes to status of plant SSC are approved, documented, performed and verified by qualified personnel.
3. Changes in plant status that affect plant operation during Decommissioning are incorporated into procedures, flowsheets, and other operating documentation.

All changes to plant status will be captured using the electronic Equipment Status Monitoring program. A new version of the Temporary Change Record (TCR) and Order to Operate (OTO) has been created specifically to document final configuration of each end-stated system.

Heavy Water Management

OPG plans to transfer an estimated 1,500 Mg of heavy water from Pickering NGS Units 1 and 4 to the Darlington NGS as per OPG's heavy water management program. This transferred heavy water will become Darlington NGS's heavy water inventory.

2.3.7.2 Safe Operating Envelope

Decommissioning unit configurations and activities will continue to meet the Safe Operating Envelope.

Pickering NGS Units 1 and 4 OSRs have been revised to reflect applicability once the unit is defueled and/or dewatered. The basis for OSR applicability as Pickering NGS Units 1 and 4 move through different states of stabilization is provided in the *Safety Case Basis for P14 Safe Store Transition to SWS*. Prior written notification of the revised OSRs was submitted to the CNSC in September 2024. CNSC staff reviewed and had no concerns.

2.3.8 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Operating Performance SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Lessons Learned from Darlington NGS Refurbishment OPEX are actively incorporated into Pickering NGS Refurbishment planning. Some Operations staff who previously worked on Darlington NGS Refurbishment have been assigned to Pickering NGS to facilitate planning for refurbishment pre-requisite activities. In addition, Pickering NGS Operations staff has performed extensive benchmarking and reviews of OPEX and Lessons Learned reports. Focused lessons learned sessions have been held with Darlington and Pickering Operations staff, covering various ranges of technical topics relevant to Pickering NGS Refurbishment.

Operations oversight has been present in preparation for refurbishment to ensure that all safety aspects have been considered for design changes, such as planning for the removal of systems and components from service for engineering changes.

2.3.8.1 Conduct of Licensed Activities

Plant Status Control (PSC)

During refurbishment PSC will be managed to ensure:

1. Status of SSC are known and controlled within bounds of analyzed conditions for safe operation and all phases of refurbishment.
2. Changes to status of plant SSC are approved, documented, performed and verified by qualified personnel (unless the SSC is isolated and de-energized).
3. Changes in plant status that affect plant operation, during or following refurbishment, are incorporated into procedures, flowsheets, and other operating documentation.

All changes to plant status will be captured using ESM. Each entry will be documented by unit, unit pair or common designation to ensure status is maintained.

Nuclear Refurbishment and Pickering NGS staff will establish a plan to transfer responsibility for the plant status control of a refurbishment unit. This will be documented in the Operations transfer plan. The exact status of the unit plant status control will be captured prior to a unit entering or exiting refurbishment. Continuous plant status control oversight will be performed by the Nuclear Refurbishment Operations and Maintenance Plant Status Control group.

To support the islanding of the refurbishment unit, there will be boundary points and physical barriers in place to capture the partition between the operating station systems and the refurbishment systems. There will also be physical barriers to limit access to the refurbishment unit to appropriate personnel.

When an SSC is returned to service after maintenance or engineering change, a rigorous process will be used, with alignment checks and an approval process prior to declaring it available for service. The rigorous process has been developed based on detailed OPEX reviews on the process from Darlington Nuclear Refurbishment.

2.3.8.2 Heavy Water Management

Pickering Refurbishment Operations has developed a heavy water management plan which outlines how heavy water will be managed and stored throughout the entire refurbishment project. Most of the heavy water will be stored at the Pickering site in existing, approved storage locations. The strategy includes timing of dewatering activities, availability of storage, upgrading and TRF facilities, and timing of refilling of systems for return to service.

Shipping of Pickering NGS Units 5 to 8 heavy water to Darlington NGS is planned, as a contingency, to temporarily store the units' heavy water from Pickering site during Units 5 to 8 refurbishment.

2.3.8.3 Procedures

Revisions to procedures related to the Refurbishment project will adhere to the strict safety standards of Pickering NGS operations to ensure refurbishment work is executed safely and with high quality. A specific procedures group will be created to manage and author these procedure updates. With the expected large volume of new procedures and revisions during Pickering Refurbishment, the procedures group staffing will increase to support the demand. Procedures will be developed with clear distinction between applicability during normal operation or during refurbishment states.

2.3.8.4 Safe Operating Envelope

OPG will ensure that the refurbishment unit configurations and activities continue to meet the SOE.

The transition from full power operations to the station defueled state and back to full power in a manner that is analyzed to be safe and consistent within the station licensing basis is documented in *Safety Case Basis for P58 Refurbishment*. Changes to the OP&Ps were supported by the appropriate safety assessment and analysis and were subject to CNSC staff notification prior to implementation in accordance with the LCH. CNSC staff concurred with these changes.

Operational Safety Requirements

For any temporary changes being implemented specifically to facilitate the refurbishment outage, it is anticipated that the changes to the OP&Ps described above will be sufficient and no changes to the OSR documentation will be required. This assumption will be verified during the planning process as assessments and analyses progress. In cases where OSR revisions are required, the overall process is described further below.

Permanent engineering changes to the plant will continue to be controlled by the ECC process as appropriate throughout the refurbishment period. This process includes a screening step to evaluate the impact of the engineering change on SOE margins.

The addition of any new SSCs or engineering changes implemented as part of Refurbishment activities which affect existing safety analysis will be incorporated as appropriate to the OSR

documentation in order to properly capture safety limits and surveillance requirements. CNSC staff will be notified of any such impact to OSR documentation as per the LCH requirements.

2.3.9 Pickering Waste Management Facility

2.3.9.1 Operating Performance

OPG's NSS is responsible for the life cycle management of radioactive waste for OPG-owned facilities and has direct responsibility for transportation, processing, and interim storage until final disposition of radioactive waste. The radioactive waste long-term disposal strategy is described in Section 2.11.7.

The *Nuclear Waste Management Program* establishes the overall program for PWMF operations and is described in more detail in Section 2.11. The operating limits and conditions for the PWMF are identified in the PWMF Safety Report and the Operating Policies and Principles.

In order to ensure there is adequate space available in the IFB for operation of the Pickering NGS, PWMF safely and reliably loads spent fuel, transfers, processes, and stores DSCs from the Pickering NGS at the PWMF until disposal solutions for used fuel is available. During the current licence period, the safety performance of the PWMF used fuel processing and storage facilities has been excellent while meeting all targets. PWMF has operated safely without a Lost Time Accident for all 30+ years the facility has been in operation (since 1996). There has been more than 1,400 on-site transfers of loaded DSCs without incident, with 497 DSCs processed and stored between 2018 and 2025 and with dose to the public from the operation less than 1% of the regulatory limit.

During the current licence period, DSC SB4 was placed in service and a transfer campaign was completed to support continued storage at PWMF. An alternate approved DSC transfer route was established on the south side of the Pickering NGS, providing full transport access around the Pickering NGS site. Furthermore, the construction of DSC SB5 and PCSS commenced.

DSC Reverse Loading

In the current licence period, OPG has demonstrated that all of the required DSC reverse loading steps to safely return fuel to an IFB can be performed should it be required. This was a precautionary step, to ensure flexibility and safety in reverse operations and removing fuel, if necessary.

Six-Year-Old Fuel

In August 2024, the Commission amended the PWMF operating licence to allow OPG to process and store up to 100 DSCs at a time containing used fuel that has been cooled in wet storage at Pickering NGS for a minimum of 6 years, after acceptance of the commissioning results by CNSC staff. In December 2024, OPG completed the commissioning phase of this initiative with 6-year cooled fuel successfully loaded into two DSCs, processed and stored in SB3 at the PWMF, and commissioning results were provided to CNSC staff. The dose rates and temperatures measurements for the weld surface and seal tube collected during commissioning were comparable to predicted values. The commissioning demonstrated that OPG is capable of safely processing DSCs containing minimum 6-year cooled fuel. In April 2025, CNSC staff accepted the commissioning results allowing OPG to proceed with processing and storing a maximum of 100 DSCs at a time containing a minimum of 6-year cooled used fuel.

Retube Component Storage Area

The Retube Component Storage (RCS) area at the PWMF provides interim storage for components removed during the retubing of Pickering NGS Units 1–4 (1984–1992). The retube waste is classified as intermediate-level waste and is stored in Dry Storage Modules (DSMs).

During the current licensing period, radioisotope inventories within the DSMs have steadily declined due to radioactive decay. Since 1993, operations at the RCS have been limited to periodic inspection, monitoring, maintenance, and refurbishment of the DSMs.

The RCS area contains 36 DSMs in total. Thirty-four DSMs hold irradiated reactor components in interim storage. The remaining 2 DSMs are empty and retained for contingency purposes and for DSM aging management and monitoring.

As of February 2026, all DSMs have been relocated from the PWMF Phase I to the Phase II area as part of the current licensing basis to allow for the minimum required space for the tunnel boring machine launch shaft pad construction and operation in support of the proposed DWI project.

2.3.9.2 Reporting and Trending

PWMF adheres to the same OPG programs and implementing procedures for reporting and trending as described in Section 2.3.3.

OPG provides scheduled and unscheduled reports for the PWMF to CNSC in accordance with CNSC REGDOC-3.1.2, *Reporting Requirements, Volume 1: Non-Power Reactor Class I Facilities and Uranium Mines and Mills*, and Licence Condition 3.2 of the WFOL. Throughout the current licence term, OPG submitted all required scheduled and unscheduled reports, and there were no significant events that affected the conduct of licensed activities at PWMF.

2.4 Safety Analysis

Pickering NGS has an effective Safety Analysis program which meets or exceeds all applicable regulatory requirements and related objectives. The program ensures the maintenance of the safety analysis that supports the overall safety case for the facility. It also ensures there is demonstrated acceptability of the frequency and consequences of design-basis and beyond design basis events, with the ability of protective systems and emergency mitigating equipment to adequately control power, cool the fuel, and contain or limit any radioactivity that could be released from the plant.

The safety analysis is governed by the *Reactor Safety Program* which establishes organizational responsibilities and key program elements for the management of issues related to Nuclear Safety Analysis (NSA) and includes the following major components of safe operation:

- Safety Analysis Basis and Safety Report Updates
- SOE
- bdba Management

The Safety Analysis Basis includes the NSA and assessments performed to ensure safe operation. Safety analysis consists of three primary parts:

- Deterministic Safety Analyses (refer to Section 2.4.1);
- Hazard Analyses (refer to Section 2.4.2);
- Probabilistic Safety Assessments (PSA) (refer to Section 2.4.3).

The existing safety analysis at the Pickering NGS is a comprehensive and systematic evaluation of the hazards that can potentially result from operation of the plant and considers the effectiveness of preventive and mitigative measures and strategies in reducing the effects of the hazards. The existing safety analysis supports the overall safety case for Pickering NGS. Improvements to the safety case are continuously made including through Conexus Nuclear Inc. programs, and implementation of CNSC regulatory documents REGDOC-2.4.1, *Deterministic Safety Analysis* and REGDOC-2.4.2, *Probabilistic Safety Assessment (PSA) for Nuclear Power Plants*.

All software used by OPG for Deterministic Safety Analysis and Probabilistic Safety Analysis is compliant with CSA N286-12, *Management system requirements for nuclear facilities* and CSA N286.7, *Quality assurance of analytical, scientific, and design computer programs for nuclear power plants*.

2.4.1 Deterministic Safety Analysis

The primary objectives of performing Deterministic Safety Analysis (DSA) are to confirm that the design of the Nuclear Power Plant (NPP) meets design and safety requirements, and to derive or confirm operational limits and conditions that are consistent with the design and safety requirements. Furthermore, DSA must confirm that the structures, systems, and components, in combination with plant procedures and operator actions, are effective in fulfilling their safety functions and keeping the releases of radioactive material from the plant below acceptable limits. DSA is a systematic process of calculating the public dose consequences for specific Postulated Initiating Events (PIEs) (refer to Section 2.4.1.2) and upset conditions at the plant.

DSA is used to determine the limits that define the SOE of the plant, which is the boundaries in which the plant must be operated. The SOE is defined by the safety analysis and the credited systems and equipment in the analysis. The SOE is implemented through the OSRs, IUCs, and other safety related limits and system credits that ensure operation within the safety analysis basis. Refer to Section 2.3.5 for further discussion of the SOE.

OPG's Reactor Safety program defines the key program elements for the planning, execution, and management of DSA. The results of the DSA are documented in the *Pickering Nuclear 5-8 Safety Report: Part 3 – Accident Analysis* and the *Pickering B NGS Analysis of Record*. The documented DSA demonstrates compliance with licensing limits and derived acceptance criteria, identifies limits on process parameters and safety system requirements, and thereby establishes the SOE for the station to satisfy OPG's Nuclear Safety and Security Policy, requirement to control reactor power, cool the fuel, and contain radioactivity (3 C's).

Performing and documenting DSA is governed by CNSC REGDOC-2.4.1, *Deterministic Safety Analysis*, which was issued in 2014. OPG developed the REGDOC-2.4.1 Implementation Plan in 2014 for the OPG nuclear fleet, which outlined the framework for performing new DSA and identified the scope of the new analysis. Execution of the work defined in this plan is progressing and OPG continues to report on the safety analysis upgrades to meet REGDOC-

2.4.1 requirements on an annual basis to the CNSC. The most recent analysis submitted to the CNSC in November 2024 for Pickering NGS Units 5 to 8, addresses safety analysis margins for the PIEs that are most impacted by Heat Transport System (HTS) aging. The latest update on the status of REGDOC-2.4.1 implementation was issued in December 2025.

As required by CNSC REGDOC-2.4.1, DSA for Design Basis Accidents (DBAs) takes into account the appropriate level of conservatism for the class of event analyzed, the acceptance criteria and trip coverage for each event analyzed and demonstrates applicable dose limits are met for the events.

OPG maintains DSA current with ongoing analyses and assessments. In addition, DSA is also performed as required for operational support. Primary Heat Transport (PHT) system Aging Management (refer to Section 2.4.1.1) and CNSC REGDOC-2.4.1 implementation/compliance are two of the major programs contributing to maintaining DSA. Since these programs were created, several safety analysis submissions demonstrating sufficient margin for the plant have been made. Updating the current analysis in the Safety Report to be compliant with REGDOC-2.4.1 is progressing according to the REGDOC-2.4.1 implementation plan.

2.4.1.1 Primary Heat Transport System Aging Management Strategy

OPG's PHT system aging management activities were initiated in 2000 to evaluate the impact of component aging on safety margins. OPG developed an overall Heat Transport System Aging Management Strategy (HTS-AMS) beginning in 2010 to manage safety analysis margin issues related to aging. HTS-AMS also interfaces with the broader *Integrated Aging Management*, in program execution.

The objective was to provide an integrated assessment on the cumulative effects of the identified aging mechanisms, and to develop effective safety margin management strategies based on the results of these assessments. The identification of known PHT system aging mechanisms and effects was completed in 2009 as part of the Technical Basis Document for PHT system safety margin management. Key parameters and phenomena for all important systems and sub-systems with direct interfaces with the PHT system main circuit have been identified and based on these, the critical accident scenarios from the perspective of PHT system aging impacts were determined.

OPG reports to the CNSC on the status of HTS-AMS, which was last updated for 2021 to 2025, and submitted to the CNSC in March 2021. OPG also reports to the CNSC on the progress of safety analysis related to PHT system aging, and the latest progress report was submitted in 2024. The most recent updates to safety analysis demonstrated the continued safe operation of the station until the end of 2026.

During the Pickering NGS refurbishment outage, all fuel channels, feeder piping and boilers will be replaced. Hence, any nuclear safety issues that would arise from the aging of these PHT components will not be present in the newly refurbished reactor units. As the units gradually age following refurbishment, OPG's existing aging management program will monitor and manage the aging process to ensure nuclear safety is maintained at all times.

2.4.2 Hazard Analysis

Hazard Analysis for Pickering NGS is performed in compliance with CNSC REGDOC-2.4.2, *Probabilistic Safety Assessment (PSA) for Nuclear Power Plants*. The Hazard Screening Analysis first involves the identification of a list of the internal and external hazards which could affect the safety of the reactor or the non-reactor sources of radiation (i.e., IFBs and used fuel

DSCs). Internal hazards are those which originate within the site boundary while external hazards are those which originate outside of the site boundary or are outside of OPG's direct control. The list is subsequently screened using both qualitative and quantitative methods to identify the hazards for which a PSA must be conducted.

The Hazard Screening Analysis for Pickering NGS was last updated in December 2021 as part of the 5 year PSA update cycle as per CNSC REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*. The hazard screening analysis was conducted as per OPG's External and Internal PSA Guides and was compliant with CNSC REGDOC-2.4.2.

At the conclusion of the 2021 Hazard Screening Analysis, the required downstream assessments were identified after systematically screening out most of the internal and external hazards based on the established methodology in the associated PSA Guides. Specifically, Hazard PSAs were subsequently performed (e.g., seismic events, internal fires, high winds, and internal floods) in conjunction with activities under Section 2.4.3. Similarly, certain meteorological hazards such as extreme temperatures and ice-storms were not further addressed as their impacts were already considered in the baseline PSA models to cater to events such as loss of switchyard and loss of bulk electricity supply.

The next scheduled update in 2027 for the Pickering Hazard Screening Analysis will be performed as required by CNSC REGDOC 2.4.2 and will be conducted according to the CNSC accepted OPG PSA guides.

2.4.2.1 Climate Change Resilience

OPG completed a comprehensive climate change resilience assessment of Pickering NGS Units 5 to 8. The assessment's purpose was to demonstrate the continued safe operation of the units in light of the potential impacts of climate change and Extreme Weather Events (EWEs).

OPG developed a first-of-a-kind industry methodology that broadly aligns with the nuclear sector's accepted EPRI "*Climate Vulnerability Assessment Guidance for Nuclear Power Plants*" Technical Report. The approach involved a sequence of evaluations, including:

1. *Climate Hazard Identification and Projections*: Climate hazards identification and characterization constitute a critical step in performing a site climate change resilience assessment. OPG collaborated with multiple climate scientists to identify various climate-related hazards, including Gradual Climate Change (GCC), EWEs, and Other Natural External Events (ONEEs). OPG completed a customized assessment of physical climate hazards at Pickering NGS to better understand historical and projected climate-related risks.
2. *Exposure Assessment*: A screening assessment was performed to evaluate a list of SSC and determined if they met criteria for being high value or critical components and determined if they are exposed to climate hazards.
3. *Vulnerability Assessment*: The identified SSCs were further evaluated to determine their susceptibility to climate change and if there were potential impacts on the performance of SSCs from changing climate related hazards.

The assessments have concluded that there will be no safety impacts caused by predicted changes to climate related hazards within the assessed time period. Any potential impacts on performance of SSCs identified through completed or future assessments will be evaluated and either monitored, mitigated or eliminated as required to ensure safe operation of the station.

Analysis of recent industry operating experience data from 2010 through 2020 shows that extreme events have an essentially negligible impact on nuclear generation capacity factors (the percentage of the time the nuclear power plant is running at full power and providing electricity to the grid), which are by far the highest of any carbon - free source of generation.

As a crucial part of the adaptation strategy, OPG has implemented the severe weather emergency preparedness procedure. This procedure is a key strategy for ensuring the safe operation of the plant during EWEs and includes actions like monitoring plant areas for water ingress, reviewing equipment affected by high heat, and clearing snow and ice from critical areas. This procedure has been successfully implemented at Pickering NGS Units 5 to 8.

The nuclear industry has recognized the importance of resiliency; following industry guidance, OPG is working with its industry partners in implementing a more comprehensive resiliency program.

The climate change resilience assessment identified the importance of existing routine preventative maintenance programs and measures to monitor the daily operation of the plant, which are sufficient to discover climate change impacts to operation of Pickering NGS.

2.4.3 Probabilistic Safety Analysis

The purpose of a PSA is to establish whether the design and operation of the plant poses an acceptable level of risk to the public and to identify the primary sources of risk. PSA is a systematic process of radiological hazard identification and risk estimation using quantitative methods. The Pickering NGS PSA identifies the various event sequences that may lead to radioactive releases, assigns them to different categories of consequences, and calculates their frequencies of occurrence. The level 1 PSA estimates the frequency of accidents which may cause severe damage to the reactor core, and this is referred to as the Severe Core Damage Frequency (SCDF). The level 2 PSA estimates the frequency of accidents which may result in a release of radionuclides outside of the boundary of the station, and this is referred to as the Large Release Frequency (LRF).

These PSAs are updated every 5-years, as required by CNSC REGDOC-3.1.1, to ensure that the PSA models accurately reflect the current design and operation of the station. OPG has established Safety Goals for the LRF and SCDF which the station PSAs are required to meet, and these Safety Goals are governed by the *Risk and Reliability Program*. As required by CNSC REGDOC-2.4.2, the OPG PSA guides were submitted to the CNSC, and the CNSC accepted the methodology documented in the guides.

In 2022 and 2023, OPG performed a full update of the Pickering NGS PSAs and demonstrated that the current design and operation of Pickering NGS poses an acceptable level of risk to the public. OPG performs Importance Analysis as a part of the periodic PSA updates to identify the components and equipment of high importance. PSAs are also used to identify any Single Point Vulnerabilities (SPVs) and eliminate these SPVs with appropriate engineering changes or procedural changes. This process of identifying and eliminating the vulnerabilities feeds back into the PSA models to reduce the risk by lowering the frequencies of event sequences that could lead to SAs.

OPG acknowledges the importance of continuous enhancement in PSA practices and methodologies. OPG plans to perform an update to the Pickering NGS PSAs in 2027, however, given that all reactor units will be shutdown and defueled at that time, the scope of the 2027 PSA update will be limited to hazard screening and non-reactor sources PSA. OPG plans to

perform an interim update to the Pickering NGS PSAs in 2029, this update will support the restart of Unit 5 in its post refurbishment configuration and the staggered restart of Unit 6 and Unit 7. A full-scope REGDOC 2.4.2 compliant Pickering NGS PSA update is planned to be performed by the end of 2032, this update will support the final end-state post Pickering B refurbishment. The CNSC reviewed and accepted OPG's plan to update the Pickering NGS PSAs. PSA activities will be compliant with the applicable clauses of CNSC REGDOC-2.4.2 and will be conducted in accordance with the CNSC accepted OPG PSA guides.

2.4.4 Severe Accident Analysis

A Severe Accident (SA) is a subset ofbdba that has the potential to release radioactive material. Severe Accident Analysis (SAA) is the means by which OPG assesses SAs, to ensure that the risk from the operation of nuclear reactors remains low. Response to a SA applies a symptom based/knowledge-based approach that includes steps for plant status diagnosis and equipment evaluation, making it well suited for responding to events involving failures affecting multiple components, systems, or lines of defense.

OPG performs SAA as a part of its periodic PSA updates as per regulatory requirements. OPG last performed SAA as a part of the Level 2 Internal Events PSA update for Pickering NGS Units 5 to 8 in 2022.

Extensive analysis has been carried out to identify BDBAs with the potential to transition to SAs. Included in this work are habitability studies to evaluate the impact of such events on the ability of station personnel to carry out actions as part of the emergency response.

The insights from the SAA are used in accordance with CNSC REGDOC-2.3.2, *Accident Management: Severe Accident Management Programs for Nuclear Reactors*, and REGDOC-2.4.1, *Deterministic Safety Analysis* to identify areas for improvement. This includes plant changes and/or updates to the guidelines and procedures such as Emergency Operating Procedures, EMEGs, and SAMGs. OPG assesses BDBAs at Pickering NGS Units 5 to 8 as per REGDOC-2.4.1 requirements to ensure the as-built design meets the requirements for release limits established, and that the procedures and equipment put in place to handle the accident management needs are effective, taking into account the availability of cooling water, material, and power supplies.

OPG plans to update the Pickering NGS Units 5 to 8 SAA in support of the Pickering NGS Units 5 to 8 refurbishment PSA update. SAA will be performed to support the restart of Pickering NGS Unit 5, 6, and 7 post-refurbishment in the 2029 PSA submission, and for all Pickering NGS Units 5 to 8 in their post-refurbishment configuration in the 2032 PSA submission. The SAA will be performed to implement and assess the impact of planned refurbishment activities on the existing Pickering NGS 5 to 8 PSA. In addition, OPG plans to perform SAA activities to reflect the decommissioning of Pickering NGS Units 1 to 4 and changes to the containment configuration resulting from Pickering NGS Units 1 to 4 decommissioning.

2.4.5 Criticality Safety

The objective of criticality safety focuses on the prevention of fuel criticality both inside and outside the core, for either fresh or irradiated fuel.

Pickering NGS reactors use only natural uranium (0.7% U-235) or depleted uranium (0.4% U-235) fuel, which is incapable of achieving criticality in the absence of an unpoisoned heavy water moderator and precise geometric arrangement found only in the reactor core. Fresh fuel is safely stored and secured in an approved location within the facility and in such a manner that

segregates it from heavy water and heavy water systems. Thus, ex-core fresh fuel cannot be made critical. Ex-core irradiated fuel is stored in the IFBs submerged within light water (H₂O) where the fuel's low fissile content cannot be made critical in any configuration; therefore, no criticality risk exists.

In-core criticality safety control is achieved by procedures specified in the GSS Manual. The four types of GSS at Pickering include: Over-poisoned GSS (RSG1), Rod Based GSS with Drained Moderator (RSG2), Moderator Drained GSS (RSG3), and Rod Based GSS (RSG4). Application of GSS is prescribed by the Operating Policies and Principles.

All criticality configurations are addressed as discussed above to ensure continued criticality safety.

2.4.6 Management of Safety Issues

The Safety and Licensing (S&L) Research and Development (R&D) program addresses issues related to the safety design basis and SOE of existing nuclear plants, in collaboration with Conexus Nuclear Inc. There is a strong focus on supporting the resolution of outstanding generic S&L issues and safety margin improvement initiatives. The program takes into consideration both Canadian and international operating experiences in identifying and selecting R&D work to be performed. In part, this work also supports safety assessments for new plant designs and refurbishments and assists in maintaining the core capabilities, scientific expertise, and the infrastructure necessary for an ongoing nuclear safety R&D program.

The Conexus Nuclear Inc. Industry Standard Toolset program is a consolidation of the maintenance and support, development and qualification activities of the computer codes used for the design, safety analysis and operational support of CANDU reactors.

The Conexus Nuclear Inc. R&D program overview report and operational plans are submitted to the CNSC as part of annual reporting requirements in accordance with CNSC REGDOC-3.1.1. This submission provides a summary of the work completed in the previous year and the ongoing R&D activities that are being performed under the Conexus Nuclear Inc. R&D and Industry Standard Toolkit program. Also, Conexus Nuclear Inc. – CNSC R&D seminars are held bi-annually.

2.4.6.1 Management of CANDU Safety Issues (CSIs)

A safety issue is defined as an issue related to the design or analysis of a NPP that has the potential to challenge safety functions, safety barriers or both.

In 2007, the CNSC assessed the status of CSIs and, while the safety case was not in question, the CNSC identified control measures to address residual concerns on nuclear safety. The initial list of issues was developed using the IAEA TECDOC-1554, *Generic Safety Issues for Nuclear Power Plants with Pressurized Heavy Water Reactors and Measures for their Resolution*, and each issue was classified into one of the following three categories:

- Category 1: Not an issue in Canada
- Category 2: The issue is a concern in Canada. However, the licensees have appropriate control measures in place to address the issue and to maintain safety margins
- Category 3: The issue is a concern in Canada. Measures are in place to maintain safety margins, but further experiments and/or analysis are required to improve knowledge and understanding of the issue, and to confirm the adequacy of the measures

In 2009, the CNSC identified sixteen Category 3 CSIs of which four were related to Large Break Loss of Coolant Accident (LBLOCA) and twelve were non-LBLOCA. For the Pickering NGS station, all 12 non-LBLOCA Category 3 CSIs were previously recategorized to a lower category. One of the LBLOCA related Category 3 CSI was recategorized to a lower category in 2013. In 2024, the remaining three LBLOCA related Category 3 CSIs were requested by OPG to be recategorized to a lower category for all Pickering units. OPG is currently awaiting CNSC feedback for Pickering NGS Units 5 to 8. For Pickering NGS Units 1 to 4 the request was deemed non-applicable and was closed by the CNSC given that the units were no longer in operation.

OPG has demonstrated that appropriate control measures have been implemented and currently are in place to address all sixteen CSIs and maintain safety margins.

2.4.7 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Safety Analysis SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

2.4.7.1 Safety Analysis and Safety Assessments

The end of commercial operation (ECO) for a reactor unit is defined as the final reactor shutdown, establishment of a GSS, and permanent cessation of the electricity production from the units. Unit 1 and 4 were permanently shut down in 2024 and are currently undergoing stabilization.

A Safety Case Basis documenting how Pickering NGS Units 1 and Unit 4 will transition from full power operations to SWS in a manner that is analyzed to be safe and consistent with the licensing basis, was completed and submitted to CNSC staff in 2024.

The Safety Case concluded that the existing Safety Analysis provides adequate coverage throughout the Safe Store period and into the SWS period. Containment will remain fully available until Pickering NGS Units 5 to 8 are shut down and defueled prior to the commencement of their refurbishment outages. Existing procedures for Fuel Bay cooling are adequate and will remain unchanged until the bays are empty of fuel. As the units progress through dewatering, heavy water will be stored in approved facilities analyzed to be safe under existing safety analysis as long as needed by the Station heavy water plan. OPG is revising the licensing basis and associated documents for Pickering NGS Units 1 and 4, such as updates to OSRs, the AIMs, SAMG, Emergency Mitigating Equipment (EME), and the OP&Ps to reflect the stabilization leading into the SWS state. In the SWS state, the residual accidents of concern for Pickering NGS Units 1 to 4 are Pickering NGS Units 5 to 8 Loss of Coolant Accident (LOCA), Seismic event support for Pickering NGS Units 5 to 8, IFB cooling and heavy water break outside of containment. All will be covered by existing procedures or changes that are already in progress.

Additionally, a Decommissioning Safety Assessment has been performed for decommissioning activities, including the SWS phase and an evaluation of risk reduction activities planned for units in SWS. This assessment, provided to CNSC staff with the DDP, systematically analyzed potential hazards and risks to workers, the public, and the environment associated with decommissioning activities. The assessment confirms that with the implementation of identified OPG processes for risk mitigation measures, all activities can be conducted safely and in compliance with regulatory requirements.

2.4.8 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Safety Analysis SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

2.4.8.1 Safety Analysis

The Refurbishment Project will carry out the reactor safety assessments and safety analysis in accordance with the *Reactor Safety Program* and *Risk and Reliability Program* and their implementing procedures.

The scope and extent of the refurbishment outage represents a significant change to the configuration of the plant including defueling, and containment isolation. Each plant configuration will be assessed to ensure the continuing safety of the operating and the refurbishment units during all outage states. Insights from the assessments above will be incorporated, as required, into the OP&Ps.

All engineering changes to the plant are carried out in accordance with the OPG ECC process which includes several steps requiring assessment against reactor safety criteria, including explicit consideration of impact on safety analysis.

Engineering changes during refurbishment have the objective to further enhance safety performance or reliability of the station. Should this analysis, or other analysis performed in support of the Refurbishment Project require an update of Part 3 of the Safety Report or the Analysis of Record, then the update will proceed in accordance with established OPG processes and procedures. Safety analyses will be performed according to CNSC REGDOC-2.4.1, *Deterministic Safety Analysis*.

New or modified systems or components which have been incorporated into the safety analysis will also result in updates of the Operational Safety Requirements (OSR) documentation and, possibly, the OP&Ps.

2.4.8.2 Nuclear Safety Improvements

OPG conducted a number of studies to identify areas in nuclear safety where enhancements to safety could be achieved with the unique opportunities the Refurbishment Project presents. More details on the nuclear safety improvements are discussed in section 1.2.1.1.

2.4.8.3 Hazard Analysis

The OPG ECC process includes several steps requiring assessment against reactor safety criteria, including consideration of impact on hazard analysis.

Engineering changes must be shown to either have no impact on the current assumptions contained in the Safety Report or the PSA or to incorporate mitigating measures, as appropriate within the SOE and in accordance with the Pickering LCH.

Hazards arising from space allocation and transient materials concerns including combustible material, tornado generated missiles, and impacts on the seismic route are addressed and controlled via application of established OPG programs and procedures. In addition to the consideration of hazards via the ECC process, Nuclear/Reactor Safety assessments of temporary work areas and refurbishment specific lay-down areas will be

performed. These assessments will aid in identifying whether current governance is sufficient to control these types of hazards or if refurbishment-specific governance is required.

2.4.9 Pickering Waste Management Facility

Nuclear Waste safety analysis is performed under the OPG Nuclear Reactor Safety program as described in Section 2.4.1. Specifically, as it relates to nuclear waste management, the program provides a basis for the performance of nuclear safety analysis and outlines the governing documents that define the processes associated with maintaining the safety analysis and safety reports supporting the operation of Nuclear Waste Facilities.

OPG has implemented and maintains a nuclear waste facility safety analysis program that complies with CNSC REGDOC-2.4.4, *Safety Analysis for Class 1B Nuclear Facilities*. Results of the PWMF safety analysis are presented in the PWMF safety report, which also provides an overview of the PWMF design and operations.

To assess the overall safety of the operation of PWMF Storage Buildings (SB) and structures, deterministic safety analyses are used. Computational tools are used for the dose consequence calculations when required. Bounding (worst-case) accident scenarios are conservatively identified, and the results of off-site dose consequence calculations are then compared against the regulatory dose limits. The PWMF safety report is reviewed every five years and updated as required to reflect changes in site layout, operational experience and information supporting the assumptions made in the assessments. The safety report update process encompasses the systematic identification of safety issues, their prioritization, their resolution, and the physical updates.

The PWMF safety report was submitted to the CNSC in 2023 and an addendum covering transfer, processing and storage of minimum six-year cooled fuel was submitted in 2024.

The safety report demonstrates that dose rates and emissions from the PWMF under normal and abnormal operating conditions as well as postulated accident conditions are within regulatory limits, and operation of the facility continues to pose an acceptably low risk to the public, the workers, and the environment. The next safety report update will be in 2028 and it will combine the safety report and addendum into one document.

The following subsections describe aspects of the PWMF safety analysis.

Used Fuel Dry Storage Safety Analysis - Normal Operating Conditions

Shielding analysis is performed to determine dose rates from DSCs, both inside and outside the DSC storage buildings. Dose rates external to the buildings are determined for workers on-site and for members of the public off-site. In all cases, predicted dose rates inside the PWMF facility, at the site boundary and for the nearest public populations are estimated to result in doses well below the CNSC regulatory dose limit for Nuclear Energy Workers (NEWs) and well below the CNSC regulatory public dose limit of 1 mSv/year.

Used Fuel Dry Storage – Credible Abnormal Events

The assessment of malfunctions and accidents considered the following main stages of the out-of-station used fuel dry storage operations:

- On-site transfer operations.
- Operations inside the DSC Processing Building; and
- DSC Storage.

Each potential event was screened to determine if it could result in any radiological impact to the public and/or workers. Common-mode incidents such as seismic events, tornados, etc. have been considered. Design provisions and procedural measures that could prevent the event or mitigate its consequences were also evaluated.

Although considered unlikely, for on-site transfer and processing of DSCs (e.g. welding, inspecting, testing, sealing and moving to storage), the bounding accident was identified to be a drop of the DSC, with subsequent 100% fuel sheath failures and associated release of volatile nuclides to the environment. The total doses to the public at the PN site boundary and the occupational doses due to this event were assessed to be below the CNSC regulatory dose limits.

Criticality

Criticality assessments have been completed for the used fuel stored in DSCs for the PWMF. Consistent with expectations for irradiated natural uranium fuel, the analyses and assessments have demonstrated significant sub-criticality margin with no likelihood for criticality of used CANDU fuel.

Used fuel stored in DSCs cannot achieve criticality under normal conditions or under any postulated accident scenario at the PWMF.

Retube Component Storage – Normal Operating Conditions

The PWMF will have two areas that store refurbishment waste, the Retube Component Storage area where DSMs are stored and the PCSS where Pickering NGS refurbishment and decommissioning waste will be stored. These areas have been or will be designed and constructed such that OPG's dose rate targets, (set a fraction of the regulatory targets) at the facility fence and at site boundaries are achieved. Dose rates will continue to be routinely monitored and confirmed to be within facility targets and resulting worker and public doses will continue to be well below CNSC regulatory limits.

Retube Component Storage – Credible Abnormal Events

Potential exposures from refurbishment waste under abnormal operating conditions have been assessed and no credible events have been identified that would lead to a failure of containers and release of irradiated components. Conservative estimates of worst-case doses from extreme conditions, such as seismic events or tornados are well below CNSC regulatory limits.

Pickering Component Storage Structure

A safety analysis was completed for the Pickering Component Storage Structure and was submitted to the CNSC with the PWMF licence amendment application in May 2024. In May 2025, an updated safety assessment was submitted to the CNSC which continued to demonstrate that the proposed operation of the PCSS and storage of L&ILW components will

have a negligible effect on safe operation and public and worker safety. This structure has been designed and is being constructed such that OPG's dose rate targets, which are below the CNSC regulatory limits, are achieved.

Planned Activities

The methodology for performing safety assessments is routinely assessed and updated for the methodology to be as up-to-date and accurate as possible. Any facility improvements that are completed will be reflected in the safety report updates, after the facility improvements are implemented.

The following activities are planned for the PWMF:

- *Support for Additional Structures:* In the current PWMF operating licence, there is provision and authorization for DSC SB5 to be built at the PWMF Phase II site to store a maximum of 1,200 DSCs. OPG is requesting authorization from the Commission to increase the maximum number of DSCs that can be stored in SB5 from 1,200 to 1,410 DSCs. The safety assessment demonstrating that the storage of 1,410 DSCs is safe was submitted to CNSC staff in December 2025. All radiological safety requirements in the *Nuclear Safety and Control Act* and associated *Regulations* will be met.
- *Support for Defective Fuel Storage:* As a part of the ECC for storing defective fuel, applicable safety analysis will be identified and completed for the transfer, processing and storage of DSCs containing conditioned defective fuel at the PWMF. More information about defective fuel is provided in Section 1.2.2.
- *Support for MKIII (V-Groove) DSCs:* OPG is planning to implement the MKIII DSC design, which changes the weld profile in order to improve the welding process. This design change will follow the OPG ECC process as described in more detail in Section 2.5.7, and safety analysis will be completed prior to the implementation of this change.
- *Safety Analysis Update:* Safety analyses are reviewed and updated as necessary including prior to safety report updates, to confirm that facility operations will not result in any unacceptable radiological consequences to the health and safety of the workers and the public, under normal and abnormal operating conditions as well as postulated accident conditions.

2.5 Physical Design

Pickering NGS has an effective program to maintain its design basis which meets or exceeds all applicable regulatory requirements and related objectives. The program ensures that SSCs and Software meet and maintain their design basis given new information arising over time and taking changes in the external environment into account.

Pickering NGS Units 1 to 4 were fully shutdown and ceased operation at the end of 2024. For this reason, additional details for Pickering NGS Units 1 to 4 are discussed in Section 2.5.5 of this SCA.

2.5.1 Design Governance

OPG's design program satisfies the requirements of CSA N286-12, *Management system requirements for nuclear facilities*. The program ensures that SSCs of facilities operate safely, reliably, and effectively, and are consistent with the design basis, safety analysis and quality

control measures. The program also provides assurance that all design activities and their resulting documentation are controlled in a manner consistent with the plant's licensing basis.

The *Design Management* program sets the overall requirement for execution and control of activities that provide design support and documentation for the nuclear facility. This program complies with CSA N286-12. This program also complies with CSA N285.0-08 (and update no. 2), *General requirements for pressure-retaining systems and components in CANDU nuclear power plants/Material Standards for reactor components for CANDU nuclear power plants*, until the end of Darlington NGS Refurbishment project. The program defines the minimum set of documentation that identifies and describes the design basis, design outputs, design processes, and the procurement engineering process ensuring implementation and maintenance of the physical nuclear facilities to meet the design basis requirements.

The Engineering Change Control (ECC) program sets the overall requirement for engineering changes to the nuclear facility. The ECC program ensures design changes to each OPG nuclear facility (including SSCs; software; and engineered tooling) are planned, designed, installed, commissioned, and placed into or removed from service such that the facility configuration is managed and remains within the Safe Operating Envelope (SOE), design basis, and licensing basis. This program ensures all steps of engineering changes are properly assessed, analyzed, and evaluated including identifying the problem statement, determining requirements and risk level, design, review by stakeholders, installation, commissioning and close-out.

OPG's Configuration Management standard ensures that OPG nuclear facilities are operated, maintained, and modified in conformance with their design basis and licensing basis. During all life-cycle phases of the ECC process, it is ensured that constructability, operability, maintainability, and safety issues are identified and incorporated into the design requirements of nuclear design projects and engineering changes.

The Software program complies with CSA N290.14-15, *Qualification of digital hardware and software for use in instrumentation and control applications for nuclear power plants*, CSA N286-12, *Management system requirements for nuclear facilities*, and CSA N286.7-16, *Quality Assurance of Analytical, Scientific, and Design Computer Programs for Nuclear Power Plants*, and ensures software changes support safe and efficient plant operation. The software program identifies the processes and overall requirements for classification of software and identifies governing standards for each software classification defining requirements for software development, maintenance, procurement, qualification, use and retirement.

Any engineering changes which may affect the IAEA monitoring systems or equipment, is reviewed to ensure the changes do not impact compliance with the safeguards agreements. This includes, but is not limited to, potential obstruction of fields of view for the IAEA equipment or impact to the power supplies for IAEA equipment.

The Plant Design department at Pickering NGS oversees the physical design SCA requirements and maintains the station design basis to ensure that systems remain in compliance with applicable standards, codes and licence conditions. As the Design Authority for Pickering NGS, this department specifies design requirements and authorizes design engineering changes to SSCs to ensure that all changes are within the SOE, design basis, and licensing conditions as per the station's PROL.

The Pickering Refurbishment organization at Pickering NGS maintains the station design basis through compliance with applicable standards, codes and licence conditions for design changes

planned as part of the facility and component refurbishment. The Refurbishment Design Authority authorizes Pickering NGS refurbishment design engineering change releases. Details outlining the governance and organizational structure applicable to refurbishment activities are outlined in Section 2.5.6.

2.5.2 Site Characterization and Facility Design

Pickering NGS site is described in Section 1.1.

The description of the systems and equipment at Pickering NGS Units 5 to 8, including the system objectives, functional and performance requirements, interfacing systems, and design and operating conditions are provided in documents such as the:

- Pickering NGS Units 5 to 8 safety reports Part 1 and 2 (updated every 5-years as required by CNSC REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*). The latest update of the Safety Report Part 1 and 2 was completed in October 2022;
- Design Manuals.
- System design drawings.
- Design Guides identifying requirements and standards, which must be met in the design of various systems of a NPP.
- *Bounded Document Set* lists the sets of documents that shall be maintained when modifying the plant or when modifying other bounded document set documents. The bounded document set provides for a consistent set of configuration managed documentation across OPG nuclear.

2.5.3 Structure Design


Pickering NGS Units 1 to 4 are now fully shutdown after ceasing operation at the end of 2024. Refer to sections 1.2.2 and 2.5.5 for information related to Pickering NGS units 1 to 4. This section focuses on Pickering NGS Units 5 to 8.

The main group of buildings forming Pickering NGS Units 5 to 8 comprises the four reactor buildings, a powerhouse, a reactor auxiliary bay, and an extension to the service wing. The vacuum building serves Pickering NGS Units 5 to 8. The buildings, structures, and systems described in this section provide housing and containment for the four units.

The service wing, which is attached to the powerhouse and the reactor auxiliary bay, contains stores, laboratories, and workshops both for active and non-active operations. It is located close to Unit 5. The main passageways of the reactor auxiliary bay provide access on the two lower floors between the service wing and the reactor buildings.

The Pickering NGS site contains the following buildings and structures which support the operations of Units 5 to 8:

1. Four reactor building structures.
2. A Powerhouse with a turbine hall and a turbine auxiliary bay.
3. A vacuum structure.
4. High Pressure Emergency Coolant Injection System Pumphouse.
5. Six Standby Generator enclosures.

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6. Emergency Power and Water Supply Building.
 7. Unit Emergency Control Centre per unit.
 8. Filtered Air Discharge Monitoring building.
 9. Pressure Relief Duct, including equipment running along the top.
 10. Irradiated Fuel Bay and Auxiliary Spent Fuel Bay.
 11. A single intake channel and common forebay.
 12. A service wing attached to the powerhouse and reactor auxiliary bay.
 13. Two Annex buildings for offices, tool and equipment laydown areas, and control maintenance shops.
 14. A Main Security Building and an Auxiliary Security Building.
 15. Administration Building.
 16. Oil and Chemical Storage and Dispensing Building.
 17. Station Upgrading Plant.
 18. Water Treatment Plant.
 19. Pickering Waste Management Facility.

The vacuum building and reactor buildings are part of the containment system, which prevents the release of emissions following postulated accidents in the reactor or other systems and provides shielding between active areas and staff outside the building. The vacuum building is connected to each reactor building by a large pressure relief duct located at boiler room level on the south side of each reactor building. The reactor building encloses the reactor and its directly associated equipment, shields staff from radiation, and together with the vacuum building and pressure relief duct, acts as containment following postulated accidents. The reactor auxiliary bay houses auxiliary systems, which do not contain highly radioactive fluids.

The powerhouse consists of a turbine hall and a turbine auxiliary bay. The turbine/generators are arranged in a line down the turbine hall, which runs the length of the station.

The turbine and reactor auxiliary bays house the condenser circulating water and service water pumps, switchgear, deaerator, feedwater heaters, and other auxiliary equipment.

All major structures of the station, except for the main area of the powerhouse and the cooling water intake duct, are built on piles driven to bedrock or locally just above bedrock on very dense glacial till.

The design criteria and description of station structures is provided in Part 2, Section 2 and 3 of the Pickering Safety Report. Further information regarding design and physical characteristics of plant structures is provided in the Design Manuals for each respective structure.

CSA N287.1-14, *General requirements for concrete containment structures for nuclear power plants* compliance is achieved through the ECC and Design Management programs. Compliance with CSA N287.2-08 *Material requirements for concrete containment structures for CANDU Nuclear Power Plants*, CSA N287.3-14, *Design requirements for concrete containment structures for nuclear power plants*, and CSA N287.4-08 *Construction, fabrication, and installation requirements for concrete containment structures for CANDU nuclear power plants* is accomplished through the ECC and Design Management programs. Compliance with CSA

N287.5-11 *Examination and testing requirements for concrete containment structures for nuclear power plants* is achieved through the commissioning for containment structures.

Pickering NGS containment structures are routinely inspected at regular intervals in accordance with CSA N285.5-18, *Periodic inspection of CANDU nuclear power plant containment components* and CSA N287.7-17, *In-service examination and testing requirements for concrete containment structures for nuclear power plants*.

2.5.4 System and Component Design

The following subsections describe details on the physical design of the station, design and performance requirements of systems and components, key results from the current licence period, and ongoing and future activities over the next licence period.

2.5.4.1 Pressure-Retaining Structures, Systems and Components

The *Pressure Boundary* program manages the processes that control the quality of PB activities at OPG nuclear with a goal of no failure of pressure retaining parts. The program establishes the infrastructure and defines the activities necessary to maintain a sustainable managed process that allows OPG to perform activities associated with repairs, replacements, engineering changes and alterations to pressure retaining items, components and systems, including installation of new systems.

The Pressure Boundary (PB) program ensures PB activities at Pickering NGS are in accordance with CSA N285.0-08 and update no. 2 and the other codes and standards required by the Pickering NGS PROL. The PB program is a mature program that is compliant with the mandated codes and standards.

In addition, OPG maintains a PB program document roadmap that is in compliance with Annex N of CSA N285.0-12 and update no. 1. The index is a document that correlates OPG's processes and procedures to the PB program elements identified in CSA N285.0-12 and update no. 1, Annex N, Table N.1. The reference to this Annex is applicable until end of Darlington NGS refurbishment project.

Based on the agreement reached with the CNSC, the OPG PB program, including the PB program document roadmap and all PB activities at Pickering NGS will be compliant with CSA N285.0:23 starting on January 1, 2027. Only PB activities that are already in progress by this date will be permitted to follow transitional provisions as agreed to by the CNSC.

Pickering NGS has been using the Technical Standards and Safety Authority (TSSA) as the Authorized Inspection Agency (AIA), under a contract between OPG and TSSA, to comply with CNSC requirements for inspection of pressure boundaries and for design registrations. Pickering NGS reports all PB degradations to CNSC (immediate and quarterly) as per CNSC REGDOC-3.1.1.

Since the last licence renewal application, Pickering NGS has had four successful PB Certificate of Authorization (CofA) renewal audits conducted by the TSSA demonstrating PB processes at Pickering NGS including PWMF to be compliant with the OPG Nuclear Pressure Boundary Program Manual. The last three audits were conducted in 2020, 2023, and 2026 respectively. The new certificates were issued in April 2026 and will be valid for 3 years.

OPG is accountable for all communications with the CNSC related to code class approvals, variances or deviations from code requirements and notifications regarding new or revised overpressure protection reports after final registrations.

2.5.4.2 Environmental Qualification of Equipment

OPG's *Environmental Qualification* program, establishes an integrated and comprehensive set of requirements that provides assurance that essential equipment can perform as required if exposed to harsh DBA conditions and this capability is preserved over the life of the plant. Implementation of these program requirements provides consistent methodology, programmatic controls, and interfaces for establishing and maintaining Environmental Qualification (EQ) of equipment and components at Pickering NGS. The EQ program is in accordance with CSA N290.13-05 update no.1, 2009 *Environmental qualification of equipment for CANDU nuclear power plants*.

EQ program controls are integrated into the engineering change governance to ensure engineering changes conform to EQ requirements.

2.5.4.3 Electromagnetic Interference

OPG has guidelines in place for Electromagnetic Compatibility (EMC) testing in conjunction with the ECC process. The guidelines provide design engineering teams with International Electrotechnical Commission (IEC) standards and test levels to consider in their design and testing requirements for instrumentation and electrical equipment. This allows for the mitigation of potential Electromagnetic Interference (EMI) issues and appropriately considers the criticality and safety classification of the SSCs.

Both susceptibility and emission aspects are considered to ensure SSCs are protected from EMI-induced faults without introducing significant electromagnetic disturbances to other equipment within the plant. Considerations for grounding and shielding are covered through the ECC process, which includes references to design guides that provide strategies and best practices.

2.5.4.4 Seismic Qualification

Pickering NGS Units 5 to 8 is designed and constructed to ensure that the effects of an earthquake do not lead to unacceptable radiological releases as specified in the *Nuclear Safety and Control Act*, as a minimum requirement. Seismic qualification is demonstrated in accordance with the requirements of CSA N289.1-08, *General requirements for seismic, design and qualification of CANDU nuclear power plants*, for those SSCs which ensure that, as a minimum, the following safety functions for responding to a Design Basis Earthquake (DBE) are provided:

- a) the capability to shutdown the reactor be maintained,
- b) the capability to ensure the reactor remains shutdown be maintained,
- c) the capability to remove decay heat be maintained,
- d) the capability to limit release of radioactivity from containment be maintained
- e) the capability to monitor the status of the nuclear steam supply be maintained,

- f) systems other than the reactor proper containing significant amounts of radioactivity must not be damaged to such an extent as to lead to radioactive releases above allowable limits,
- g) a seismically induced loss-of-coolant accident be prevented. (required primarily for a site design earthquake (SDE) following a loss-of-coolant accident (LOCA))

In the event of a LOCA, necessary portions of the emergency coolant injection system, the shutdown systems, containment system, monitoring equipment, and supporting systems shall remain functional should an earthquake occur during the recovery period. This period is initiated 24 hours following a LOCA.

The ECC program ensures that engineering changes to seismically qualified SSCs are subjected to the applicable stakeholder review process and that the seismic qualification is not degraded by a proposed design change. It also reviews and ensures that the qualified systems are located in (or in the vicinity of) structures that are likewise qualified, and seismic interaction by unqualified SSCs is prevented. Furthermore, plant engineering changes are controlled to not compromise the function of the seismic routes. Seismic routes are marked on floors or ground to provide assured operator access to safety-related SSCs for which short term actions are credited following an earthquake. Procedures are in place at Pickering NGS Units 5 to 8 to ensure plant operations do not interfere or degrade the function of the seismic routes.

In addition to the seismic qualification of the safety-related SSCs to the DBE and SDE, the SSCs are also assessed for seismic robustness under Beyond Design Bases Earthquakes, which is to assure redundancy of the SSCs and defense-in-depth through common cause failures and to meet the seismic requirements stated in CSA N289.1. These assessments provide an estimate of the overall frequency of predetermined plant-level damage states, such as severe core damage frequency and frequency of release of radioactive materials to the environment through seismically-induced containment failure. As a means to evaluate the seismic robustness of the SSCs for redundancy and defense-in-depth beyond the DBE, the PSA based Seismic Margin Assessment (SMA) is performed for Pickering NGS Units 5 to 8 to assess the risks of severe core damage and seismically-induced containment failure. The last Pickering NGS Units 5 to 8 PSA based SMA was submitted to CNSC staff in 2022. The PSA based SMA demonstrated that the seismic SCDF and SCFF meet the OPG safety goals.

To ensure that Pickering NGS Units 5 to 8 would remain seismically qualified when design modifications were undertaken in the future, the Seismic Design using a DBE and/or verification of the suitability of the resulting Design against Seismic PSA-based criteria (via calculation of the Seismic Capacity) would be also utilized.

Pickering NGS maintains a list of seismically qualified systems that are credited to fulfill the safety requirements mentioned above. Depending on required safety functions during and following the DBE, the seismically qualified SSCs are classified into the following categories, which meet the requirements of CSA N289.1:

- Category A: systems must retain their pressure boundary integrity during and following an earthquake, in order to ensure and maintain the safety related system operation.
- Category B: systems must retain their pressure boundary integrity and/or must function mechanically and/or electrically during and/or following an earthquake, in order to ensure and maintain the safety related system operation.

Structures, systems, and components not seismically qualified for nuclear safety reasons are seismically designed to meet the requirements of the National Building Code of Canada.

Pickering NGS Units 5 to 8 has a seismic design guide which is utilized in determining seismic qualification requirements for SSCs. The Seismic qualifications at Pickering NGS Units 5 to 8 are primarily done by analysis, testing, or a combination of analysis and testing in accordance with the requirements of CSA N289.1, N289.3 *Design procedures for seismic qualification of nuclear power plants*, and N289.4, *Testing procedures for seismic qualification of nuclear power plant structures, systems and components*. The Pickering NGS Units 5 to 8 Seismic Design Guide has been updated and issued to support Pickering NGS Units 5 to 8 refurbishment. Changes to the plant are not expected; however should any be identified, the ECC process will be utilized.

In-plant seismic instrumentation is installed in the plant to monitor and record in-plant seismic motions in compliance with the requirements of CSA N289.5, *Seismic instrumentation requirements for nuclear power plants and nuclear facilities*. The Seismic Monitoring System provides measurement and recording of absolute accelerations caused by seismic events as a function of time. The seismic data obtained by the system may be used in conjunction with plant parameters and inspection reports to set the basis for assessing the effect of an earthquake on the Pickering NGS structures and equipment. Within the Pickering NGS facilities, seismic motions are recorded if the vibrations exceed a triggering threshold level. Outside the Pickering NGS facilities, the seismic motions are recorded by the Southern Ontario Seismic Network (SOSN) that records detailed free-field seismic activities covering Southern Ontario.

The in-plant seismic monitoring network includes eleven triaxial accelerometers spreading over critical nuclear structures. All these recorders communicate with a Central Recorder unit located in Unit 6 Unit Emergency Control Centre (UECC). Recorded seismic motions at the sensor locations are assessed against the component DBE seismic design basis.

In addition to the in-plant seismic monitoring network, a seismometer is located on the free field near the Pickering NGS property boundary, which is part of the SOSN. Recorded seismic motions are assessed against the DBE and other seismic design bases. The records of the SOSN are also used to support the probabilistic seismic hazard assessment.

The combination of the original seismic designs and the current seismic practices provide high confidence that Pickering NGS can withstand applicable design and review-level earthquakes.

The *Systematic Approach to Training* process ensures that engineering, operations, and maintenance staff are aware of station requirements including seismic qualification while performing their respective duties, and that they receive the appropriate training on seismic qualification. The *Conduct of Maintenance* program, outlines precautionary measures to counter incidents that could impact the operation of seismically qualified equipment and seismic routes. The *Integrated Aging Management*, requires seismic qualification requirement be considered during condition assessment of critical SSCs as the plant ages.

2.5.4.5 Fire Safety and Fire Protection System

The OPG Fire Protection Program (FPP) establishes provisions to prevent, mitigate and respond to fires such that fire risk to OPG nuclear workers, public, environment, nuclear physical assets, and power generation is acceptably low and controlled.

The overall approach to the FPP is based on the defense in depth provisions of fire prevention, fire detection and suppression, and limiting or mitigating the effects of fires.

CSA N293-12, *Fire protection for CANDU nuclear power plants*, provides the fire protection requirements for design, construction, commissioning, operating, and decommissioning of NPPs, including SSCs that directly support the plant and protected area.

Fire Protection Assessments (FPAs) are engineering evaluations that assess the plants or facilities against the requirements of CSA N293 to ensure safety in the event of a fire in any plant or facility location. The evaluations are documented for each station in three assessments which are updated every 5-years:

1. Fire Protection Code Compliance Report (CCR) including Third Party Inspection, Testing, and Maintenance Reports.
2. Fire Safe Shut Down Analysis (FSSA) report.
3. Fire Hazard Assessment (FHA) report.

See Section 2.10.3 for information regarding the latest results of these assessments.

During the current licence period, improvements were made to the Pickering NGS Units 5 to 8 Fire Detection and Alarm System (FDAS).

2.5.4.6 Fuel

OPG's *Fuel* program establishes a formal and systematic process for integrating and reviewing information related to fuel, and reporting its performance, condition, and compliance with fuel design basis documents.

OPG provides an annual report on fuel monitoring and inspection to the CNSC as required by CNSC REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*. In-core fuel operating conditions from 2018 to present have been well controlled within the reporting and licence operating limits. Results from in-bay fuel inspection have verified that the overall core operating conditions did not result in fuel exceeding the fuel design basis wear and deformation guidelines, nor adversely affect in-core fuel performance.

2.5.5 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Physical Design SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

As outlined in Section 1.2.2, during stabilization SSCs no longer required for the operation of the nuclear facility will be safe-stated. End state determination reports (ESDRs) have been prepared that document the preferred or planned end-state (Stabilization End-State) of the system to which it is to be transitioned.

Systems that are required to support Decommissioning project activities will remain active (either available for service, or partially in service). These systems will be modified as required, following the ECC process, and Pressure Boundary processes, to perform their new or revised function and portions may be removed from service to reduce their footprint and support requirements, as determined by the ESDRs. SSCs not required to support SWS demands will be removed from service once no longer required, placed in the end-state configuration by multi-disciplinary end-stating teams and abandoned in place or removed. See discussion under "Preparation for Decommissioning" in Section 1.2.2 for additional details regarding inactive end-states.

The systems required for Pickering NGS Units 1 to 4 SWS and for supporting refurbishment and continued operation of Pickering NGS Units 5 to 8 can be found in the associated SWS Plan and the Detailed Decommissioning Plans (see Section 2.11.4 for further details). These systems may change in the future to meet the requirements of refurbishment of Pickering NGS Units 5 to 8.

As discussed in Section 1.2, there are several common systems that will be separated and limited to Pickering NGS Units 5 to 8 to allow independent decommissioning activities to continue at Pickering NGS Units 1 to 4 following the planned refurbishment of Pickering NGS Units 5 to 8.

To support pressure boundary decommissioning of Pickering NGS Units 1 and 4, OPG plans to revise the *System and Item Classification* and *Design Registration* procedures. The revisions to these procedures will further clarify the requirements for declassification and deregistration of the existing classified and registered systems that will no longer to be in service (abandoned).

The ECC process will be followed for systems/sections remaining in service and systems/sections being abandoned. OPG will notify CNSC staff of the systems or sections of systems that will be abandoned. The Authorized Inspection Agency, TSSA, will also be notified for deregistering the abandoned systems or sections of the system.

2.5.6 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Physical Design SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

OPG maintains a comprehensive Refurbishment Lessons Learned Register, which is updated continuously throughout the project lifecycle. This register captures internal and external OPEX, including lessons learned from Darlington NGS, Bruce Power and other relevant nuclear refurbishment projects that have been actively incorporated into the Pickering Refurbishment planning and design process. OPEX items are reviewed and assigned to responsible project teams during project planning and design phases. Relevant lessons learned have been extracted from previous project experiences in the areas of welding challenges, crane and crane pad design, usage, layout, storage and inspection, work protection supplemental training and procedural roll out, resource management, and integrated schedule development. Additional strategies to incorporate OPEX for major scope bundles are in place for the steam generator replacement and the retube feeder replacement activities. OPEX has also been captured in relation to other refurbishment project scopes that highlight various strategies to incorporate previous lessons learned from various sources that are relevant in the areas of design, planning, execution and close-out. Verification of OPEX application is performed at key project milestones, and the effectiveness of implemented lessons is assessed through post-implementation reviews and feedback mechanisms. This approach ensures that relevant OPEX is not only identified but also systematically applied and validated, thereby supporting continual improvement and risk mitigation.

2.5.6.1 Design Management Program

Consistent with the *Design Management* program and *ECC* program, all engineering changes implemented during refurbishment will be defined, planned, designed, installed, commissioned and placed in service within the SOE, design basis and licence conditions.

Plant engineering changes will comply with OPG's ECC process and Design Management procedures. Engineering changes will be implemented with adherence to the code effective dates established by OPG and accepted by CNSC staff.

OPG will monitor and assess design activities and ensure that appropriate interfaces and oversight are maintained throughout the engineering change process. When a Design Agency is engaged, the responsibilities of OPG and the Design Agencies during each phase of the engineering change process as well as the mandatory interface points and oversight requirements are outlined below:

- OPG will be responsible for the requirements for the engineering changes, which includes elements such as Modification Design Requirements (MDRs), Conceptual Design Reports (CDRs), and Modification Outlines, as part of the Modification Planning phase. The Design Agency, working under OPG QA, with approving Section Managers seconded to OPG, will prepare the aforementioned documentation under a Managed Task agreement and established Scope of Work (SOW). OPG will provide authorization/approval of the aforementioned documents, with the exception of any CDRs. Where the Design Agency performs any detailed design activities (even if initiated during or alongside the planning phase), those detailed design activities and resulting products will be controlled and approved under the Design Agency's CSA N286 QA program accepted by OPG, then accepted by the OPG DTL, and subsequently authorized by the OPG Design Authority in accordance with the ECC process prior to release/use.
- The Design Agency will prepare the detailed design deliverables with OPG oversight, which includes new drawings, change papers, calculations, studies/reports, and any other documents required in accordance with governance. Detailed design products will be controlled and approved under the Design Agency's CSA N286 QA program accepted by OPG. Following Design Agency QA approval, OPG DTLs will accept the products. The OPG Design Authority will provide a single authorization after Design Agency QA approval and OPG DTL acceptance, in accordance with the ECC process and prior to implementation and/or engineering change release.
- OPG has established mandatory interface hold points during the detailed design process. In-Process Engineering Hold Points occur at various stages of the design process to ensure the Contractor is progressing the product in accordance with OPG's expectations and contractual requirements.
- All oversight activities will be documented, managed and tracked to completion by the Project Manager in accordance with the Project Oversight Plan. In-Process Engineering Hold Points that require OPG "Approval" or "Authorization" will be included in the Design Plan.
- All design engineering changes are authorized by appropriate authorities as per OPG's managed process for ECC, before their implementation in the field. OPG Design staff and the OPG Design Authority are involved in execution of engineering changes including witnessing of testing, acceptance of commissioning results, and declaration of

AFS. Additionally, they are responsible for overseeing all closeout activities to ensure that all engineering changes are thoroughly documented to maintain the integrity of both Configuration Management and the Design Basis. OPG will maintain oversight of the Design Agencies through activities such as routine communications, product monitoring, and review of required documents confirming the quality of the deliverables. Level of intrusiveness will be commensurate with the overall risk.

2.5.6.2 Pressure Boundary

OPG's *Pressure Boundary* program applies for Pickering Refurbishment pressure boundary activities.

During refurbishment, EPC contractors will perform Pressure Boundary (PB) activities under their own Certificates of Authorization (CofA). OPG will issue a Letter of Authorization to the EPC contractor to prepare registration submission documentation and to submit them to the AIA for registration on OPG's behalf on a project-to-project basis. OPG maintains comprehensive oversight to ensure all PB work meets regulatory and quality requirements.

The EPC contractor will also prepare Code Classification and Exemption evaluation packages.

OPG will be accountable for all communications with the CNSC related to Code Classification Approvals, variances or deviations from code requirements and notifications regarding new or revised overpressure protection reports after final registrations. Final acceptance of PB work is contingent upon successful completion of all required inspections, documentation reviews, and satisfaction of OPG's quality assurance requirements. This process ensures that all PB activities, regardless of party performing the work, fully comply with regulatory and licensing requirements.

2.5.6.3 Environmental Qualification

All engineering changes conducted as part of the refurbishment are subject to a rigorous Environmental Qualification (EQ) review process. Each proposed engineering change is screened for potential impacts on the plant's EQ envelope, including impacts on safety-related equipment and environmental conditions. Where an impact is identified, a detailed assessment is performed to ensure that EQ requirements are maintained or enhanced, and any required updates to the EQ documentation are completed prior to implementation. EQ documentation is maintained in a controlled database, and configuration management processes ensure that changes are traceable and that the EQ envelope remains consistent with licensing and design basis requirements. Periodic reviews and audits are conducted to confirm ongoing compliance with EQ requirements throughout the refurbishment project.

2.5.7 Pickering Waste Management Facility

2.5.7.1 Design Program

OPG has robust processes to ensure that the physical design of the PWMF complies with the current safety basis and that all changes are authorized and performed in a controlled manner, and in accordance with the PWMF licence. Management of the design basis at the PWMF is governed by the OPG Nuclear Design program as described in Section 2.5.1.

The PWMF design will comply with the following codes and standards:

- NRC NBCC (2020), *National Building Code of Canada*;
- NRC NFCC (2020), *National Fire Code of Canada*;

As communicated to CNSC staff on the implementation plans, PWMF is compliant with NBCC 2020 and NFCC 2020 effective December 19, 2025.

The PWMF design will comply with the following codes and standards starting January 1, 2027:

- American Society of Mechanical Engineers (ASME) *B31.1 (2022) Power Piping*;
- CSA B51 (2019) *Boiler, pressure vessel and pressure piping code*, and
- CSA N285.0 (2023) *General requirements for pressure-retaining systems and components for CANDU nuclear power plants/Material Standards for reactor components for CANDU nuclear power plants*.

PWMF has executed various engineering changes with no impact on the PWMF's ability to operate within its safety envelope. These engineering changes have been undertaken to improve the overall performance of the PWMF and to improve safety in design and operations. Some of the significant engineering changes in the current licence period are:

- To facilitate interim storage of used fuel on site, SB4 was constructed and placed in-service.
- An engineering change was undertaken to allow loading, processing, and storing a maximum of 100 DSCs at a time containing minimum 6-year old used fuel in support of the Safe Storage Project.
- Engineering changes were executed to upgrade the DSC welding machine camera system for improved image quality.
- The Weld Cover Gas system design was upgraded to address the lack of overpressure protection for code compliance, as well as several design and equipment issues for improved operation and maintenance activities.
- Broadband Wireless Network (Wi-Fi) was installed at PWMF. This Wi-Fi installation is aligned with the digital transformation initiative taking place across the company which has the goal of delivering digital enhancements, providing employees with seamless and reliable access to OPG's information and fostering company-wide collaboration.

OPG NSS has adopted the standard OPG nuclear fleet metrics for physical design. The current suite of metrics includes measures of the health of the ECC process within NSS. The quality of design products and associated trending is monitored using the Design Review Board Process which is a standard protocol for the entire OPG fleet. A monthly report card is used to record and track performance and to ensure that corrective actions are being taken to address any weaknesses or deficiencies that are observed.

[Planned Activities](#)

The following activities are planned for the PWMF:

- AFS of DSC SB5, with a planned operational capacity of 1,410 DSCs and an anticipated in-service date in 2027, to support continued operations at Pickering NGS.

- AFS of the PCSS, with an anticipated in-service date in 2027, to support Pickering NGS refurbishment and potential decommissioning activities.
- OPG plans to begin dry storage of conditioned damaged/defective fuel in DSCs by approximately 2034. The OPG ECC process will be followed for storing damaged/defective fuel.
- *DSC Design Change*: OPG is planning to improve upon the existing DSC design to increase DSC production at NSS. The new DSC design will be referred to as MK III.

A preliminary dose rate assessment has been completed for MKIII DSC, which indicated an insignificant change to the dose rates and within the available margin at the site boundaries. MKIII is planned to be implemented across OPG's three nuclear waste facilities following the OPG ECC process and written notification to the CNSC will be provided for licensing basis document changes prior to implementation as per the LCHs. At the PWMF, the MKIII DSC will also be used to load minimum 6-year old cooled fuel (as required).

2.5.7.2 Pressure Boundary

PWMF follows the OPG nuclear governance for pressure boundary as described in Sections 2.5.1 and 2.5.4, ensuring all pressure boundary activities including the Fire Protection system as a legacy pressure boundary are performed in alignment with the OPG pressure boundary program.

During the current licence period, OPG has implemented various engineering changes at PWMF to improve the overall performance of its pressure boundary systems and related activities, as well as safety in design and operations.

Pressure boundary self-assessments for NSS were performed regularly, the latest one being completed in 2024, which concluded that NSS meets the requirements as specified in the pressure boundary program manual and program compliance is adequate with areas for improvement.

2.6 Fitness for Service

The Pickering NGS fitness for service program ensures all equipment is available to perform its intended design function when called upon to do so. The physical condition of SSC at Pickering NGS remain available, reliable, effective and consistent with design, analysis and quality control measures.

The reliability, maintenance and aging management programs at Pickering NGS meet the requirements of CNSC regulatory documents REGDOC-2.6.1, *Reliability Programs for Nuclear Power Plants*, REGDOC-2.6.2, *Maintenance Programs for Nuclear Power Plants*, and REGDOC-2.6.3, *Aging Management*, respectively.

2.6.1 Equipment Fitness for Service/Equipment Performance

The objective of the *Equipment Reliability* (ER) program is to ensure high levels of equipment reliability and reduce forced loss rate by ensuring reliable performance of critical components important to nuclear safety and production.

This includes identification of critical components and maintenance strategies, executing Predictive Maintenance (PdM) and Preventative Maintenance (PM) programs, monitoring system and component condition, identifying and predicting aging and obsolescence issues on important components and embedding mitigating strategies and actions into the business plan.

The Plant Health Committee (PHC), provides oversight, direction, and leadership for resolving ER issues and implementing actions from System and Component Health Plans. The PHC consists of managers and directors from the key functional organizations at Pickering NGS involved in implementing ER actions.

Reliability of Systems Important to Safety

The *Risk and Reliability* program ensures Systems Important to Safety (SIS) and Components Important to Safety (CIS) are identified and their performance measures and targets are established with PSA insights being used in the process. SIS and CIS are station systems and components which contribute significantly to the initiation, prevention, detection, or mitigation of any failure sequence which could lead to damage of fuel or associated release of radionuclide or both.

The program requires operational performance of SIS to be monitored, assessed and reported and component reliability data be compiled, analyzed and applied to maintain unavailability models. Supporting program procedures provide requirements for reliability monitoring and reporting of SIS and CIS, consistent with CNSC regulatory documents REGDOC-2.6.1 and REGDOC-3.1.1.

The SIS/CIS list is developed using all available plant PSA studies. Expert panel reviews are completed to ensure that deterministic insights, historical licensing practices and industry reviews are considered while finalizing this list.

Pickering NGS has identified 1 SIS for Pickering NGS Units 1 and 4 and 12 SIS for Pickering NGS Units 5 to 8. There are currently 12 CIS at Pickering NGS.

Following defuel of Unit 1 and 4, most systems are no longer required to provide a nuclear safety function. As a result, Pickering NGS Units 1 to 4 SIS and CIS were removed from the *Pickering NGS Systems and Components Important to Safety* report, except for Negative Pressure Containment, as defuel is complete. Pickering NGS Units 1 and 4 Negative Pressure Containment system will be applicable to support extended operation until the end of Pickering NGS Units 5 to 8 defuel.

As per CNSC REGDOC-3.1.1, the reliability and performance of SIS/CIS is documented and reported through the Annual Risk and Reliability Report (ARRR). The ARRR discusses changes to the SIS/CIS list and their reliability targets, SIS/CIS performance, updates to unavailability models, reviews of surveillance activities, the number of initiating events, and major changes in failure modes/failure rates. SIS performance is measured using unavailability models, which incorporate internal and external component failure data to reflect current design, operation, and maintenance practices to calculate the Predicted Future Unavailability (PFU) of each system. Furthermore, SIS operational performance is evaluated through routine testing per the requirements. The field reliability data collected from operability testing and other sources is then incorporated into system unavailability models.

ARRRs have been submitted to the CNSC each year of the current licence term, where annual SIS performance is documented and directly compared to respective reliability targets. As per

the 2024 Pickering NGS ARRR, twenty-four of twenty-five SIS met their respective unavailability targets.

Equipment Reliability

The ER key performance indicator through 2023 was the Equipment Reliability Index (ERI). Conexus (formerly COG) established the ERI, which the industry used to assess health of a plant's reliability program and equipment performance and enabled benchmarking against other plants. The ERI provided a measure of long-term trends of ER improvements and sustainability, utilizing a composite of key sub-indicators that have a weighed value to add up to 100 as the highest score.

Figure 17 below depicts the ERI score trends from 2018 to 2023 for Pickering NGS in comparison to the target. Pickering NGS's ERI improved over the current licence term. The 2023-year-end ERI score for Pickering NGS was 91, which is an improvement from the 2022 Q4 score. Pickering NGS has maintained an average ERI score of 85 points since 2018. Pickering NGS has focused on several initiatives to sustain an improved ER. Key actions include backlog reduction, PM program sustainability, establishing System Health Teams (SHTs), improvements to scheduling of critical PM work orders to ensure equipment reliability.

In 2024, the ER key performance indicator transitioned from ERI to the INPO Equipment Performance Index (EQP) as shown in Figure 18. This standardized metric for ER performance is utilized for INPO reporting stations from Canada, USA, Mexico, Romania, UAE, and South Africa, allowing for broader comparison and industry benchmarking. Five weighted sub-indicators measuring equipment reliability performance balanced across both a 12-month (EQP12M) and 18-month (EQP18M) rolling period add to a score of 100, with performance measured at the unit level and station level.

Pickering NGS is dedicated to achieving industry top quartile for performance resulting from station initiatives focused on equipment reliability vulnerability assessments, single-point vulnerability elimination and mitigation, fuel handling reliability, cross-functional engagement and action in equipment failure reviews and system health teams, and enhanced system performance monitoring.

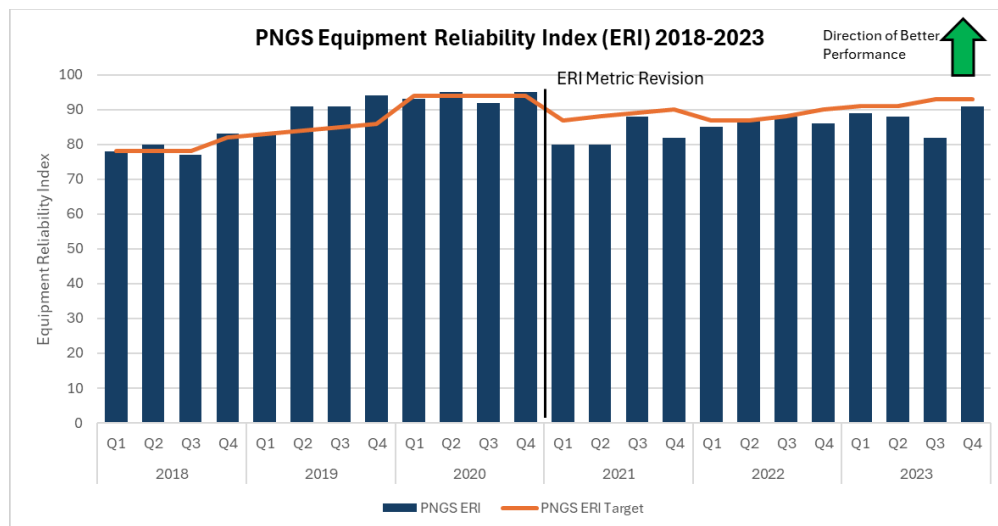


Figure 17. Pickering NGS Equipment Reliability Index Results

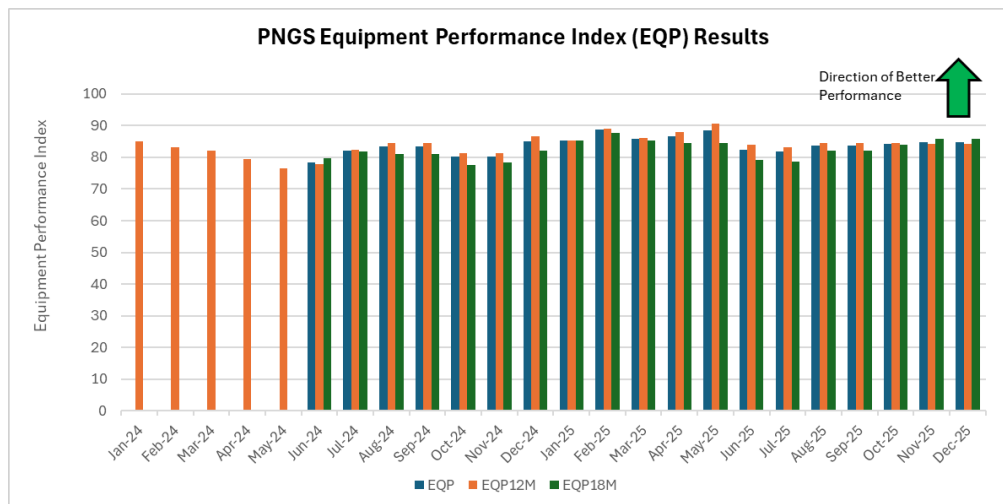


Figure 18. Pickering NGS Equipment Performance Index Results

Pickering NGS is actively advancing multiple initiatives to enhance ER, for Units 5 to 8, for the future. These initiatives aim to reinforce a robust safety and human performance culture, ensure high plant reliability of station systems and equipment, and enhance work planning and execution. They also support sustainability and the future development of the station. Pickering NGS is committed to driving continuous improvement in ER by focusing on enhanced oversight and monitoring of plant reliability risks and cross-functional ER behaviours. Efforts include implementing actions such as stronger cross-functional support, stronger mitigating strategies, and stronger bias to risk elimination. Additional strategies involve cross-functional engagement for identifying and mitigating system vulnerabilities through the completion of Equipment Reliability Vulnerability Reviews with oversight from the Plant Health Committee. The preventative maintenance program is continually optimized through PM feedback and changes driven by operating experience with oversight provided by the Preventative Maintenance Review Board (PMRB).

Pickering NGS has intensified its focus on Fuel Handling Equipment Reliability (FHER) by implementing a process to review trends and take action to adjust maintenance programs as necessary. This will also be balanced with an increased focus on FH Equipment Reliability for defuel.

Additionally, Pickering NGS has dedicated System Health Teams (SHTs) for critical systems that have historically contributed to significant equipment-related events. These systems include main power output, fuel handling, turbine, generator, and primary heat transport. The SHTs facilitate cross-functional analysis and collaboration, enhancing equipment reliability through improved self-awareness and proactive self-correction.

2.6.2 Maintenance

Pickering NGS meets the requirements of CNSC REGDOC-2.6.2 *Maintenance Programs for Nuclear Power Plants*, which states that effective maintenance is essential for the safe operation of a nuclear power plant. Specifically, the Pickering NGS facility is monitored, inspected, tested, assessed and maintained to ensure that SSCs function as per design.

The Pickering NGS Maintenance program, is designed to ensure personnel and public safety, protection of the environment and reliable operation, as well as, to ensure that safety systems remain available and that equipment failures are minimized. This is accomplished through corrective and preventative maintenance activities as well as routine inspections of system components and equipment to ensure they continue to operate as expected.

The Pickering NGS Maintenance program interfaces with the *Production Work Management* program to support the process by which maintenance, engineering changes, surveillance, testing, engineering support and any work activities that require plant coordination or schedule integration are implemented. This program details the requirements for identifying, prioritizing, planning, scheduling, and executing work, including planned and forced outages, in support of the operation, maintenance and engineering changes of the plant. Refer to Section 2.3.4 for additional information on outage management.

The maintenance program is organized to align closely with the Engineering, Work Management, Operations and Supply Chain organizations to support equipment fitness for service requirements.

Maintenance is key to equipment reliability. Maintenance at Pickering NGS largely consists of preventative maintenance with a focus on condition-based maintenance, wherein systems with the ability to measure or monitor parameters that determine when the maintenance is required, are used. This allows for efficient work scheduling and the completion of maintenance on condition-based approach.

The Maintenance organization works closely with the work group responsible for planning and scheduling of work – known as Work Control. Work Control establishes the process of planning work to ensure common base requirements are uniformly supported across nuclear. Through a collaborative and cross functional series of meetings, required tasks are prioritized and scheduled to preserve, repair and/or test equipment that supports safe operation of the station. In addition, this process is benchmarked against the industry standard to ensure alignment with top performing nuclear stations.

The Maintenance organization establishes the process of performance of maintenance activities within OPG to repair or replace malfunctioning SSCs to re-establish conformance with program requirements. This allows Maintenance and Work Control to optimize the planning and execution of work that directly and indirectly supports continued operation and/or maintaining the safe operation envelope within licence limits.

Upon completion of maintenance activities, Post-Maintenance Tests (PMTs) are conducted as per requirements.

[Maintenance Backlog](#)

Pickering NGS ensures that work is prioritized, planned and executed in a manner that focuses on maintaining personnel and nuclear safety, increases plant equipment reliability and reduces the station Forced Loss Rate.

Part of the prioritization of this work is in identifying components important to safety and reliability and to ensure that where those components can no longer reliably perform their function, that the repair is executed with priority. These components receive coding as either Corrective Critical (CC), Corrective Non-Critical (CN), Deficient Critical (DC), or Deficient Non-Critical (DN), depending on component criticality as it relates to nuclear safety.

It is a priority to ensure that CC, CN, DC and DN backlog is maintained low, which in turn allows important preventive maintenance programs to be executed to maintain system designed redundancy.

The volume of corrective and deficient maintenance backlog work orders continues to steadily decrease since 2019. As of 2024 Quarter 4, the backlog of Corrective Critical and Corrective non-critical (CC/CN) Work Orders (WOs) was reduced by 93% since 2017. Over the same period, the Deficient Critical and Deficient Non-Critical (DC/DN) WO backlog was reduced by 97%.

The Pickering NGS work order backlog performance has significantly improved over the past few years. As shown in Figure 19 and Figure 20 below, the updated data shows continued improvement to the end of 2025 through the sustained decrease of the CC/CN and DC/DN maintenance work order backlog. This is largely due to a number of station initiatives and dedicated resources to ensure that Pickering NGS achieves industry best performance in this area. The station team has also undertaken a Plant Reliability Station Excellence Initiative to systematically review the PM program. Under this initiative the team will review and update the frequencies of PM WOs based on available operating experience.

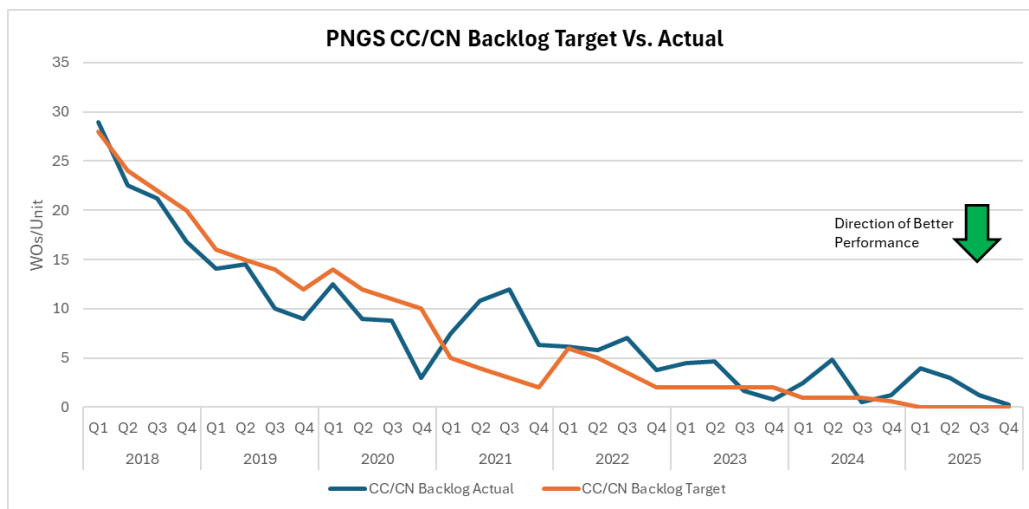


Figure 19. Pickering NGS CC/CN Backlog

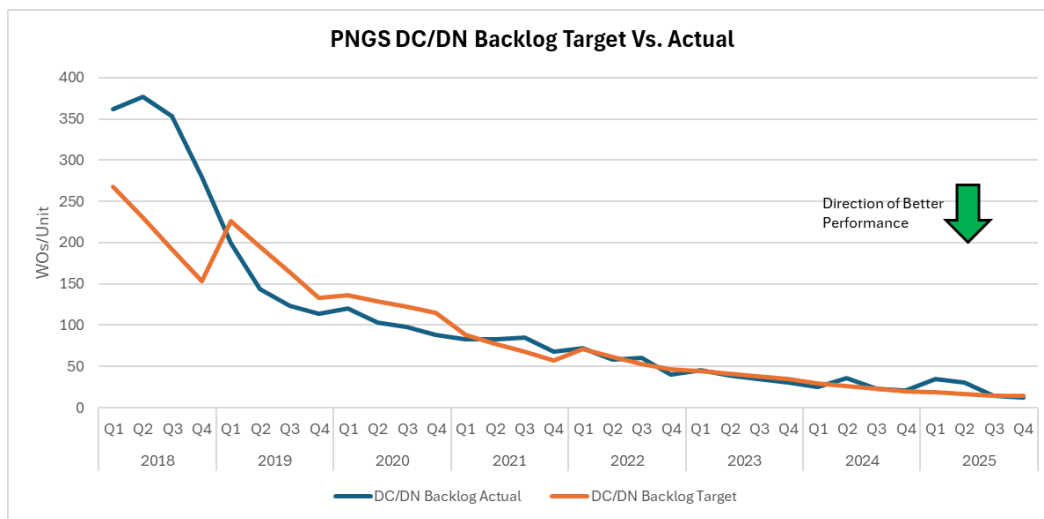


Figure 20. Pickering NGS DC/DN Backlog

The Pickering NGS Maintenance Department continues to drive improvements in areas such as Hoisting and Rigging and Foreign Material Exclusion (FME) practices through the use of the Performance Improvement program, and using insights gained in leading processes like the Observation and Coaching program. Through the continuous monitoring of programs, small declines in behaviour are observed and corrected, using a Staying on Top philosophy. The Staying on Top philosophy of Self Identification and Self Correction is key in maintaining an exemplary Maintenance Index while the department transitions from supporting an operating station to a station undergoing refurbishment.

Indices in DN backlog work orders, although slightly above Station target, will continue to improve to Industry Best Quartile by leveraging a strong focus on Equipment Reliability and availability.

Preventative Maintenance Activities

The *Predefined Process* provides a formal means to facilitate planning, scheduling, and execution of work of a recurrent nature. The management and scheduling of preventive maintenance activities are completed using OPG's enterprise software system 'Asset Suite', which also retains records of all maintenance tasks completed.

PM program improvements have focused on changing behaviours and reinforcing expectations around performance metrics that promote a healthy, and sustainable living program. Key performance indicators have been established and are reviewed weekly at the oversight forum, Senior Work Management and PMRB, to monitor progress and take actions as required.

Key cross-functional initiatives driven through Engineering, Work Management and Maintenance include:

1. Maintenance consistently achieving greater than 95% as found condition compliance, which prompts engineering to evaluate and refine PM strategies. This ensures maintenance is performed at the correct frequency.
2. Reduced PM Modification Requests (PMMRs) Backlog: minimize the backlog of PMMRs, maintaining a "live zero". This translates into PM strategy changes to the program on an on-going basis.

3. The PMRB focuses on operating experience and critically evaluates PMMRs modification requests, challenging their necessity, enabling factors, and required resources. This ensures that each modification is justified and aligned with the overall goals of the PM Program.

Maintenance Program Assessment

The Pickering NGS Maintenance team demonstrates a commitment to continuous improvement through the self-assessment process. Pickering NGS Maintenance conducts annual department self-assessments on maintenance fundamentals and technical skills to identify improvement opportunities where focused actions will sustain performance. In addition, specific programmatic elements (e.g. FME, Hoisting and Rigging, Work Protection, and Pressure Boundary) are periodically reviewed to ensure that documentation, performance and behaviours are aligned with the expectations of those processes.

By participating in self-assessments, Pickering NGS Maintenance ensures contribution to cross-functional teams that work to achieve and sustain high levels of plant reliability.

Proactive initiatives, corrective actions and development of leading and lagging indicators inform our continuous improvement plan and provide a path to consistent improvement.

2.6.3 Aging Management

The *Integrated Aging Management* (IAM) program is an overarching and comprehensive program, that ensures the continued safe and reliable operation of the station's structures, systems, and components (SSCs). IAM provides the framework for managing aging at Pickering NGS and demonstrates how the current processes and programs meet the requirements for effective aging management in accordance with CNSC REGDOC-2.6.3, *Aging Management*.

The objective of the IAM program is to ensure that the condition of critical nuclear facility equipment is understood and that required activities are in place to ensure the health of these components and systems while the plant ages. This is accomplished by establishing an integrated set of programs and activities to ensure that the performance requirements of all critical station equipment are met on an ongoing basis. The IAM program covers all SSCs defined as critical based on a nuclear safety, production, environment and cost significance perspective. The IAM process is summarized in Figure 21.

To ensure effective implementation and management of the IAM program at Pickering NGS, roles and responsibilities are defined. The objectives of overall IAM is achieved through implementation of the procedures and the interfacing programs as described below.

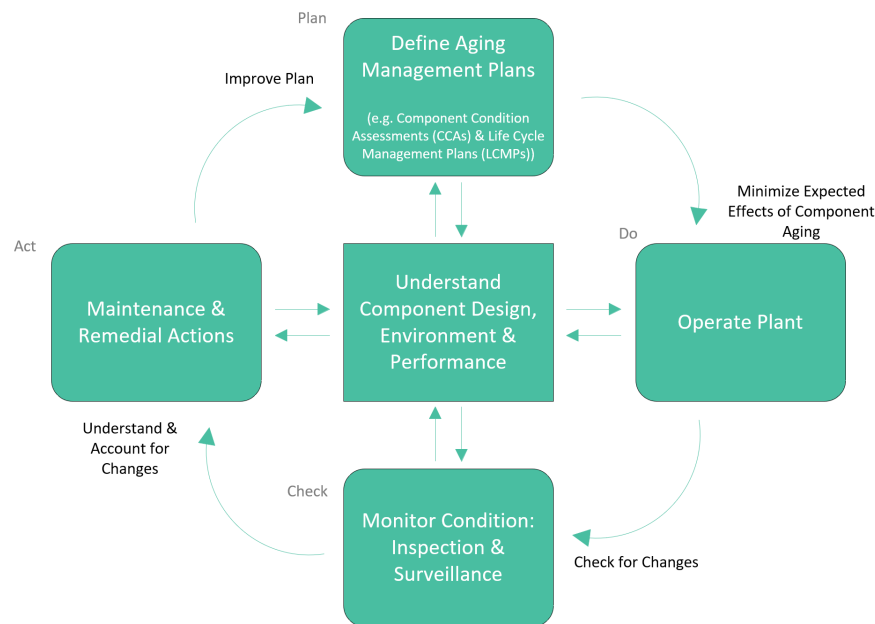


Figure 21. Integrated Aging Management Process.

Aging Management Interfacing Programs

The following aging management interfacing programs are in place to support reliability and availability of required safety functions of SSCs throughout the service life of Pickering NGS. This includes programs that ensure all equipment is available to perform its intended design function.

Major Components: This interfacing program establishes an integrated set of processes and activities to demonstrate fitness for service for the four major component areas: fuel channels, feeders, steam generators, and reactor components and structures. Developing a long-term Life Cycle Management Plans (LCMPs) is one of the primary objectives of this program. It provides a framework for integrating and reporting of the component performance, condition, and compliance with the licence requirements. This program ensures that these four major components will perform safely and reliably until the end of commercial operations, maintaining design and licensing bases and operational safety requirements while optimizing production and cost effectiveness.

Component and Equipment Surveillance: This interfacing program document describes the program elements that establish a focused surveillance monitoring process. Implementation of these programmatic requirements provides a consistent methodology for performing component and equipment surveillance for select components at all OPG nuclear stations and Nuclear Sustainability Services Facilities. It consists of activities to evaluate, inspect, test and report on the health of a select group of nuclear facility components. The effectiveness of the component and equipment surveillance engineering programs are periodically evaluated against the nine attributes of an effective aging management program as listed in REGDOC-2.6.3.

Equipment Reliability: This interfacing program established the process for maintenance activities and system performance monitoring of critical components. The Equipment Reliability program and its implementing procedures ensure that critical components meet their defined or desired level of reliability for the lifespan of the station.

Obsolescence Management: This interfacing process takes authority from the aging management governance. The purpose of this standard is to define and implement a sustaining process to manage the proactive and reactive obsolescence issues associated with critical equipment and components. The process activities interface with equipment reliability and life-cycle management strategies designed to sustain continued safe and reliable plant operation.

Chemistry: This interfacing program specifies processes, requirements, and staff accountabilities to ensure effective control of plant chemistry, including provisions for analytical services. Systems are operated and consistently tested using approved operating procedures and chemistry specifications to ensure aging degradation remains as documented in the design basis and completed condition assessments.

Several other programs, processes and activities such as, Environmental Qualification, Fuel, Design Management, Engineering Change Control, Performance Improvement, Nuclear Operations, Conduct of Maintenance, Reactor Safety, Risk and Reliability, Decommissioning, Nuclear Waste Management, and Items and Services Management also support aging management.

OPG's comprehensive monitoring of component and equipment aging is accomplished through the implementation of all the above programs and the integration of interfacing activities that are managed under the various programs listed above.

2.6.3.1 Systems, Structures or Components-Specific Aging Management Plans

An SSC-specific Aging Management Plan (AMP) defines all relevant aging mechanisms, current condition, any accredited engineering, inspection, or maintenance programs, and preventative actions to maintain or improve the health of the SSC and minimize degradation.

AMPs are addressed via LCMPs for major components (listed below) and compliant with the requirements of CNSC REGDOC-2.6.3. A 10-year outlook detailing required inspection and maintenance activities is provided within each of the following plans and updated annually. Accordingly, post-refurbishment activities will be captured in future LCMP revisions and provided to CNSC staff throughout the licence period. The LCMPs define the inspection and maintenance activities required to support the operation of Pickering NGS Units 5 to 8 leading into refurbishment, required to be performed during refurbishment (including replacements), and required to support safe and reliable post-refurbishment operation.

The LCMPs for the Major Components are:

- Feeders Life Cycle Management Plan;
- Fuel Channels Life Cycle Management Plan;
- Reactor Components and Structures Life Cycle Management Plan; and
- Steam Generators Life Cycle Management Plan.

OPG ensures that AMPs are reviewed periodically to ensure continued effectiveness and that they meet the following requirements:

- Supplement the ongoing engineering surveillance activities.
- Are implemented in accordance with the overall IAM program framework.

- Address the nine attributes of an effective aging management program as listed in CNSC REGDOC-2.6.3.

Since OPG completed CNSC REGDOC-2.6.3 (2014) implementation in July 2017, effectiveness reviews of the IAM are periodically performed and these reviews have confirmed that the implementation of Pickering NGS's IAM program is effective and sustaining, compliant with its governance and REGDOC-2.6.3 (2014).

These programmatic activities will continue through Pickering refurbishment and the post-refurbishment operating life of the station. Component replacement, inspection, and maintenance activities to be performed during refurbishment are described in Section 2.6.7.6.

Fuel Channel Aging Management

Extensive pre-refurbishment Pickering NGS operating experience, combined with broader industry operating experience, manufacturing advancements, and ongoing research and development activities, has informed design improvements made to the replacement fuel channels as described in Section 2.6.7.6. Operating experience gained through the fuel channel aging management program will also be leveraged and used to inform the inspection and maintenance activities necessary to support safe and reliable operation of the replacement fuel channels post-refurbishment. Aging management strategies necessary to support post-refurbishment operations will be defined in ongoing fuel channel LCMP updates.

Fuel channel aging management is a comprehensive program of in-service inspection, maintenance, engineering assessments and research and development for fuel channels. The fuel channel LCMP is prepared to ensure the applicable requirements of CSA N285.4, *Periodic inspection of CANDU nuclear power plant components* are satisfied. The LCMP describes and summarizes the major known fuel channel aging mechanisms, identifies expected life limits posed by each aging mechanism, and provides strategies required to manage fuel channels to station specific target operating life (pre- and post-refurbishment). Detailed reports regarding the status of aging mechanisms, compliant with CNSC REGDOC-2.6.3, are available as separate documents for Pickering NGS. Some of the aging-based inspection and maintenance activities are as follows:

- Flaw monitoring
- Body of tube and rolled joint scrape sampling and confirmation of hydrogen isotope concentration prediction models
- Elongation measurements
- Diametral expansion measurements
- Wall thinning measurements
- Monitoring for pressure tube fretting
- Pressure tube to calandria tube (PT-CT) gap measurements
- Pressure tube volumetric inspection
- Annulus spacer fitness for service assessments

Pressure tubes are periodically removed from operating reactors for material surveillance purposes. The primary purpose of the material surveillance program is to monitor changes in material properties with the objective of assessing the effect of aging mechanisms on pressure

tube properties and confirming that material models remain valid for the fitness for service assessments of in-reactor pressure tubes. Clause 12.4 of CSA N285.4 identifies mandatory material surveillance requirements for pressure tubes removed for material property testing. Revisions of the fuel channel LCMP and Pickering Fuel Channel Periodic Inspection Program (PIP) Plan will map out future pressure tube removals for compliance with Clause 12.4 of CSA N285.4 post-refurbishment. OPG is committed to the long-term use of CSA N285.8, *Technical requirements for in-service evaluation of zirconium alloy pressure tubes in CANDU reactors* for its pressure tube fitness for service evaluations. The plan to comply with CSA N285.8 is outlined in N-REP-31100-10061, *Compliance Plan for Long-Term Use of CSA N285.8 for In-Service Evaluation of Zirconium Alloy Pressure Tubes*, which will continue to be maintained and updated throughout the licence period.

The fuel channel LCMP is updated annually to capture new information from outage inspections, research, and operating experience, in addition to activities planned in compliance with CSA N285.4. With the implementation of the fuel channel LCMP, OPG will continue to demonstrate that aging mechanisms are understood and confirm that component condition remains acceptable via monitoring and inspection for post-refurbishment operation.

Reactor Components and Structures Aging Management

The reactor components and structures LCMP establishes the strategy and identifies actions necessary to ensure the effects of aging on reactor components and structures are appropriately managed for the operating life of OPG's fleet of nuclear units. Refurbishment presents a unique opportunity to perform inspection and maintenance on reactor components that are normally inaccessible. Details on Pickering refurbishment inspection and maintenance activities are provided in Section 2.6.7.6, the results of which will inform the aging management strategies necessary to support post-refurbishment operations. Post-refurbishment aging management strategies will be defined in future LCMP revisions.

The technical bases for these strategies and required activities are provided in the *Reactor Components & Structures Life Cycle Management Plan: Technical Basis Document*. The aging management of the components addressed within the reactor components and structures LCMP are as follows:

- Calandria and shield tank assembly
- Calandria tubes
- Calandria Tube to Liquid Injection Shutdown System (CT/LISS) nozzle clearance
- Guide tubes
- Moderator inlet nozzles
- Calandria end shield support
- Lattice tubes
- End fittings
- Calandria relief ducts
- Other reactor internals to maintain fitness for service

The reactor components and structures LCMP is updated annually to capture new information from outage inspections (including refurbishment activities), research, and operating experience, in addition to activities planned in compliance with CSA N285.4.

Feeders Aging Management

Extensive pre-refurbishment Pickering operating experience, combined with broader industry operating experience, manufacturing advancements, and ongoing research and development activities, has informed design improvements made to the replacement feeders as described in Section 2.6.7.6. Operating experience gained through the feeder piping aging management program will also be leveraged and used to inform the inspection and maintenance activities necessary to support safe and reliable operation of the replacement feeders post-refurbishment.

The feeder piping system aging management program contains the CSA N285.4, *Periodic inspection of CANDU nuclear power plant components* program, in-service inspection, and PROL compliance inspection activities, the overall strategy to maintain the system integrity, and the fitness for service guidelines. The most significant feeder aging management programs are listed below:

- Flow Accelerated Corrosion, managed through scheduled wall thickness measurements and stress analysis
- Fretting damage, managed through visual or clearance inspections and chafing shield installations on the reactor face and in the feeder cabinets
- Instrument line fretting inside the feeder cabinet, managed through visual inspections
- Feeder replacement, in place for feeders that are not expected to reach the end of the planned operating life of the unit
- Damaged support/spacer are identified through visual inspection and managed by performing maintenance activities as required or by conducting fitness for service assessments.

If detected wall thinning or a flaw indication does not satisfy CSA N285.4 acceptance criteria, the Standard permits a fitness for service assessment to determine acceptability. Evaluation procedures and acceptance criteria for performing such fitness for service assessments are provided in COG-JP-4107-V06, *Fitness-for-Service Guidelines for Feeders in CANDU Reactors*.

The feeders LCMP is updated annually to capture new information from outage inspections, research, and operating experience, in addition to activities planned in compliance with CSA N285.4. The LCMP is updated annually to incorporate changes to these requirements that may be warranted from inspection results on the thinning rates and extent of active degradation, as well as significant feeder-related operating experience from OPG and other CANDU stations. The plan also contains strategies to deal with plausible aging mechanisms that are not active but may become active. In the plan, the operational risk, areas of vulnerability in the piping system, and mitigating actions to ensure that feeders remain within the design basis leading into and post-refurbishment are identified. Aging management strategies necessary to support post-refurbishment operations will be defined in ongoing LCMP updates.

Steam Generators Aging Management

Extensive pre-refurbishment Pickering operating experience, combined with broader industry operating experience, manufacturing advancements, and ongoing research and development activities, has informed design improvements made to the replacement steam generators as

described in Section 2.6.7.6. Operating experience gained through the steam generator aging management program will also be leveraged and used to inform the inspection and maintenance activities necessary to support safe and reliable operation of the replacement steam generators post-refurbishment. Aging management strategies necessary to support post-refurbishment operations will be defined in ongoing steam generator LCMP updates.

The steam generator aging management program ensures all units operate safely and reliably with the existing steam generators through the service life of the station, while maintaining the design and licensing bases, and optimizing station reliability, production, and cost-effectiveness.

Steam generators continue to be closely monitored by an inspection program to manage active and plausible degradation mechanisms. The main goal of the steam generator LCMP is to maintain thermal performance by means of an effective inspection and maintenance program to prevent or mitigate steam generator degradation and failures. Inspection of pressure boundary shell welds, nozzles and external vessel supports is prescribed in the periodic inspection program specific to each unit in compliance with CSA N285.4 and the in-service inspection. If a flaw is detected in a steam generator tube through inspections, CSA N285.4 permits a fitness for service assessment to determine acceptability. Evaluation procedures and acceptance criteria for performing such fitness for service assessments are provided in Conexus Nuclear Inc Report COG-07-4089 rev 02, *Fitness-for-Service Guidelines for Steam Generator and Preheater Tubes*.

Periodic and In-Service Inspection Programs

Periodic Inspection Programs (PIP) define the inspection plans required to ensure acceptability of specific nuclear power plant and containment components, in accordance with the relevant edition of CSA standards N285.4, *Periodic inspection of CANDU nuclear power plant components*, N285.5, *Periodic inspection of CANDU nuclear power plant containment components*, N285.8, *Technical requirements for in-service inspection evaluation of zirconium alloy in pressure tubes in CANDU reactors*, and N287.7, *In-service examination and testing requirements for concrete containment structures for CANDU nuclear power plants*.

The PIP plans are developed and maintained within the relevant governing programs identified above and include non-destructive examination techniques and procedures developed and implemented as per the CSA standards, specific program requirements, the nature of the degradation, and the regulatory requirements, as applicable. The generic process and accountabilities for evaluating CSA N285.4 and N285.5 periodic inspection results, and the requirements for preparing and submitting component dispositions when required, are established in OPG's *Flaw Dispositioning* procedure.

The Pickering NGS CSA N285.4 PIP is divided into four system/component groups addressing specific clauses of CSA N285.4 including the general pressure boundary components, fuel channel pressure tubes, fuel channel feeder pipes, and steam generator tubes. See Section 2.6.5 for further details on PIP.

Administrative Requirements for In Service Inspection and Testing for Concrete Containment Structures, provides the administrative process required by CSA N287.7 and general requirements of CSA N287.1, *General requirements for concrete containment structures for nuclear power plants*, for the examination and testing of concrete containment structures at OPG. Additionally, the requirements of CSA N287.7 and N287.8, *Aging Management for concrete containment structures for nuclear power plants*, are met by the *Aging Management Plan for Concrete Containment Structures and Safety Related Structures*. CSA N287.2, *Material*

requirements for concrete containment structures for CANDU nuclear power plants, is required to be used in concert with CSA N287.1 and CSA N287.8.

2.6.4 Chemistry Control

Chemistry control refers to the control of chemical impurities which contribute to degradation and accelerated aging in plant systems. Plant fitness for service is adversely affected when uncontrolled chemistry results in equipment damage and reduced system availability. Through implementation of management system programs and procedures, OPG maintains a robust system of processes to control plant chemistry, allowing plants to remain fit for service.

OPG implements a *Chemistry* program which ensures effective control of plant chemistry, including the provision of analytical services to ensure critical plant equipment performs safely and reliably over the life of the station. The chemistry program complies with CSA N286-12 and also interfaces with the environment program to limit and monitor the release of chemicals and radioactive material.

Control of system chemistry and chemistry work management procedures establish the chemistry surveillance program to detect undesirable trends and consequences. It is implemented through the suite of OPG nuclear systems chemistry specification manuals.

Consideration is given to utilize online monitoring where possible through OPG nuclear systems chemistry specification manual and chemical control, under which specifications and corrective actions against online out-of-range chemistry are defined. The online instrumentation availability is tracked through performance indicator online analyzer availability to drive visibility and improvements throughout the station. The calibration and maintenance program for online and laboratory instrumentation is under chemistry work management.

In addition, the Pickering NGS chemistry laboratory ensures analytical services are available at all times. Defense in depth is employed through redundant instrumentation and an external laboratory.

Implementation and Management of Process Chemicals and Hazardous Materials

OPG has established procedures for the processes to prevent use of impure or ineffective process chemicals through the control of process chemicals procedure, and *Hazardous Material Management*. These outline the approval, labeling, and training protocols to safeguard OPG employees and OPG supervised contract workers from risks related to working with or near hazardous materials. These procedures ensure the required quality of chemicals is maintained throughout their usage. OPG also maintains a list of approved process chemicals documented by the chemistry colour classification as per control of process chemicals procedure.

Chemistry Performance

The chemistry program execution performance is provided through quarterly program fleetview reports which is approved by the program authority and presented at the Nuclear Executive Committee for endorsement. The Chemistry Corporate Functional Area Manager (CFAM) provides oversight on station chemistry performance and operational chemistry control effectiveness is assessed using a set of KPIs; CNSC Chemistry Index (CI) and Chemistry Compliance Index (CCI) are reported in the Fleetview Program Health and Performance Report as one of the KPIs of the chemistry program functional area summary and in station program health reporting.

2.6.5 Periodic Inspection and Testing and Structural Integrity

The objective of the PIP is to ensure structural integrity of the nuclear plant systems and components, including containment components in Pickering NGS. The programs are documented in specific PIP plans and associated inspection schedules, and they are administered under corporate and station governing documents. The main objective of the PIPs is to ensure they satisfy the associated CSA standards as outlined in the sections that follow.

Periodic inspections are conducted to provide assurance of the improbability of:

- a) A failure that can produce radiological conditions exceeding the health and safety limits for normal operation as stated in the safety report (CSA N285.4).
- b) The structural failure of containment components when the containment system is required to perform its function as defined in the safety report (CSA N285.5).
- c) Concrete components and their parts failing and leading to:
 - 1) compromising the leak tightness of the containment envelope;
 - 2) adversely affecting the operability and structural integrity of the concrete containment systems (CSA N287.7).
- d) The failure of structural components of non-containment, safety-related structures that could negatively impact nuclear safety systems (CSA N291).

Pickering NGS CSA N285.4 and N285.5 Periodic Inspection Programs

The CSA N285.4 program requires inspection of over 1000 locations across Pickering NGS. Each location is inspected once within each unit's 10-year inspection interval. Inspected components include piping and vessel welds, pumps, valves, piping, and component supports, and mechanical couplings.

The CSA N285.5 program consists of approximately 1700 inspection locations across Units 5 to 8 containment systems. Each location is inspected once within each unit's 10-year inspection interval; except for components whose inspection requires a Vacuum Building Outage, where inspections are performed. Inspected components include containment penetration seal welds, pipe supports, piping/ducting, valves, containment dampers and other containment components.

Inaugural inspections are performed for newly installed components in accordance with the requirements in the CSA N285.4 and CSA N285.5 standards. These inspections are performed to establish the condition of the components at the time it was placed into service. This ensures that when periodic inspections are performed, there will be at least one previous result for each component, thus allowing for comparative analysis between the inspection results.

Pickering NGS CSA N287.7 Periodic Inspection Program

The CSA N287.7 program addresses inspection and testing of concrete containment structures. Separate PIP plans have been created, submitted to and accepted by the CNSC for the vacuum building, reactor buildings, and Pressure Relief Duct (PRD) concrete containment components. These inspection plans identify the civil containment structures and components to be inspected, describe relevant mechanisms potentially affecting these components, identify inspection methods and acceptance criteria, and define reporting requirements.

The PIP for Reactor Buildings (RBs) is performed during every planned unit outage and the PIP for VBs and PRD are performed during a station outage with some of the scope being performed while online. In service inspections will continue for the RBs during planned

maintenance outages on Unit 6 and Unit 8, until the start of refurbishment. The VB and PRD containment structures inspections were last performed during the 2022 VB Outage. The inspection activities were conducted on the concrete components, vacuum building joint sealant, vacuum building roof seal and pressure relief duct joint seals.

In service examinations as part of the PIPs on the concrete, reinforcement, steel, non-metallic liners and coating systems, joint sealant and elements necessary to support the containment structure are performed on each RB, VB and PRD. The current in-service examinations will support the station until refurbishment.

[Pickering NGS CSA N291 Periodic Inspection Program](#)

CSA N291-19, *Requirements for nuclear safety-related structures for CANDU nuclear power plants* specifies requirements for the material, analysis and design, construction, fabrication, inspection, examination, and aging management of nuclear non-containment, safety-related structures. The CSA N291 PIP plan, *Pickering NGS, In-service Inspection Periodic Inspection Program for Non-Containment Buildings and Safety-Related Structures and Components*, was prepared to describe requirements for performing inspections, evaluating the results, and documenting inspection reports for the non-containment, safety-related structures at Pickering NGS. This PIP describes the processes and activities required to monitor, evaluate, and document aging effects on safety-related structures to ensure they will maintain their performance throughout the life of the plant to withstand design basis loads. The goal of inspection is to provide observations which lead to identification of deficiencies associated with building facades, concrete structures and components, masonry wall, roofings and steel structure condition.

2.6.5.1 Structural Integrity

The station's principal structures are discussed in Section 2.5.3.

Inspections to confirm structural integrity are performed in accordance with the associated PIP documents and to the requirements of CSA N285.5-18, N287.7-17, and N291-19.

OPG carries out inspections and tests (as applicable) of the inaccessible components of the Vacuum Building, the Dousing system and the PRD at least once every 12 years. The PRD is tested to measure leakage rates against pre-determined acceptance criteria that meet the requirements of the CSA N287.7-17. The VB in-leakage testing is conducted at the end of a Vacuum Building Outage (VBO) to confirm the VB is buttoned-up following a VBO.

In addition, OPG inspects the accessible portions of the concrete structures of the VB and PRD and their components once every 6-years in accordance with the CSA N287.7-17 PIP.

2.6.5.2 Non-Destructive Examination

Non-destructive Examination (NDE) has a direct bearing on the safe and reliable operation of nuclear facilities and is performed in accordance with applicable codes and standards. NDE is governed by *Non-Destructive Examination*, which specifies the principles and requirements tied to the conduct of non-destructive examination services provided by Advanced Inspection and Maintenance under the Conduct of Inspection and Maintenance Services program. NDE services are conducted in accordance with CSA B51, N285.0, N285.4, N285.5 and N287.7.

2.6.6 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Fitness for Service SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

Equipment Fitness for Service/Equipment Performance (Reliability)

The *Equipment Reliability* program remains applicable during Decommissioning, recognizing that changing station conditions will reduce the extent of activities required in support of this program.

For SSCs that are fully removed from service as specified in the ESDRs, ER program implementation activities will no longer be required.

For systems that remain active or partially active, the ER program will remain in place with maintenance strategies (including frequency of monitoring and maintenance activities) adjusted to be commensurate with remaining hazards and safety significance of systems. System health monitoring will be reviewed for applicability for in-service systems as well as ensuring critical spares remain available where required (recognizing there will be significantly fewer critical components). Work on specific obsolescence issues deemed necessary during Decommissioning will continue.

Maintenance

The *Conduct of Maintenance* program, remains applicable during SWS as described in the SWS Plan, recognizing that changing station conditions will reduce the extent of activities required in support of this program.

Similarly, the Conduct of Inspection and Maintenance Services program remains applicable during decommissioning, recognizing that changing station conditions will reduce the extent of activities required in support of this program. Systems that have been end-stated will be removed from the PIP.

2.6.7 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Fitness for Service SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

2.6.7.1 Maintenance

A major portion of the refurbishment maintenance work program will be completed by vendor partners for activities such as steam generator replacement, fuel channel replacements, fuel channel feeder replacements, turbine and generator overhaul and engineering changes, balance of plant system and equipment work, and various other mechanical and electrical system work.

Contractor work during the refurbishment outage will be completed using a combination of OPG procedures and contractor developed procedures that meet the requirements of CSA N286-12.

OPG will maintain oversight of vendor management programs and vendor performance.

The majority of computer based work as well as cyclical and backlog work that includes preventative maintenance will be performed and supported by OPG staff.

Preventative Maintenance

Nuclear refurbishment PMs are PMs that have been created, scheduled, and accepted for execution during the nuclear refurbishment outage (including return to service) and are managed by the nuclear refurbishment organization to meet the needs of the project.

2.6.7.2 Scope Management

Major scope for Pickering refurbishment was identified and approved through Program Scope Review Board (PSRB). Major scope will continually be evaluated through the Refurbishment Change Control Board (RCCB).

As discussed in section 1.2.1.1, significant safety improvements are being undertaken as physical plant engineering changes to improve long term plant reliability and to increase safety and operational margins of the Pickering NGS Units 5 to 8.

To effectively manage scope throughout the licence period, including during refurbishment, OPG will utilize established processes for scope changes and oversight. This includes but is not limited to forums such as the Engineering Review Board (ERB), AMOC (Asset Management Oversight Committee), and Refurbishment Change Control Board (RCCB). During this project phase, OPG staff will continue to have regular communication with CNSC staff regarding engineering change activities.

2.6.7.3 Refurbishment Outage Management

A planned Refurbishment outage management procedure will be issued which will capture the specific details of roles and responsibilities required to establish an outage management process within the refurbishment project structure.

In addition to the major refurbishment projects being undertaken, the outage will include normal corrective, deficient, and preventive maintenance. Corrective and deficient maintenance will be selected to ensure a high level of system reliability on restart. Existing PM tasks will be evaluated to select those that are required to support the unit and equipment condition.

The outage will be coordinated to link the cyclic maintenance work with the refurbishment project work in defined windows. It is anticipated that system layup requirements will dominate the positioning of outage work windows for non-critical path work. OPG's current plan is to start systems up as early as possible in order to ensure that most system testing and corrective maintenance is completed before the system is required for planned start-up evolutions. This plan will also place systems in normal operational state as a preferred layup condition for many systems.

The coordination of refurbishment projects with cyclic maintenance work will be accomplished using an integrated schedule. This integrated schedule uses key activities from each individual project schedule and ties them together through interfacing milestones.

2.6.7.4 Systems Important to Safety

Assessments and analyses of the specific unit configurations being performed will identify which specific systems are required and which have been declared out of service for all refurbishment configurations.

Systems which are required to be in-service will be subject to testing and reliability monitoring (and reporting) in accordance with current OPG procedures and practices. Systems declared out of service will not be serving any safety related function and thus, do not need to be tested, monitored, or reported on. Systems will be returned to service in accordance with the Systems Available for Service (SAFS) Plan.

This plan provides assurance that the systems being returned to service meet all defined physical, functional, performance, safety, and control requirements, and that relevant documentation and plant configuration records are accurately updated.

2.6.7.5 Equipment Surveillance and Testing

OPG will perform surveillance and testing of equipment and systems that are put into a shutdown or lay-up state, in accordance with applicable equipment and system lay-up specifications.

Equipment Lay-up Specifications have been prepared for the following major equipment categories: pumps, motors, valves, piping and piping components, heat exchangers, pressure vessels, and transmitters and controllers.

Systems that are refurbished early in the outage, upon completion of the refurbishment, will be put into a normal shutdown, or lay-up state. The system lay-up specification identifies the end state after refurbishment, and the applicable equipment and system surveillance requirements.

Systems that are being refurbished later in the refurbishment outage and are not required to be put into a shutdown or lay-up state may not require system lay-up surveillance and testing.

They would progress directly to the associated surveillance and testing during Commissioning and AFS as part of the Return to Service Strategy.

Requirements for testing of removed components to confirm aging mechanisms are driven through OPG's *Aging Management* program. Inspection of removed components (e.g., as found inspections) are a subset of activities to confirm aging mechanisms and predictions.

2.6.7.6 Aging Management

As part of refurbishment, when equipment is refurbished or replaced, resetting the aging management for this equipment is accomplished through the Integrated Aging Management Program. Guides have been prepared to:

- a) Provide requirements for obtaining baseline system/ component performance data, including data for the aging management program.
- b) Prepare detailed restart specifications that:
 - Identify baseline data to be collected to support the aging management programs.
 - Specify any tests required to re-establish baseline information for future system monitoring, if such tests are not already included in operating procedures, test procedures or detailed commissioning specifications.

OPEX

Lessons learned from Darlington NGS OPEX and industry major component replacement projects are actively incorporated into the Pickering Refurbishment for feeders, fuel channels,

reactor components, steam generators and Components and Equipment (C&E). For Pickering Refurbishment, the component expertise will be incorporated during the planning, design, manufacturing, installation, layup, and preservation stages of the major component replacements, through consultation with Major Component Engineering Department (MCED).

This has provided the opportunity to integrate and incorporate component-specific enhancements into Pickering Refurbishment, where design, execution, manufacturing, installation, layup, and preservation will have an impact on Fitness for Service and life cycle management activities. The goal is to maximize component life, optimize the in-service inspection scope, and minimize post-return-to-service outage dose and duration.

Fuel Channel Aging Management

The replacement of the fuel channel assemblies during Pickering NGS refurbishment will reset the effects of aging related degradation mechanisms related to fuel channel deformation and deuterium ingress.

Margins against the following degradation mechanisms are expected to improve post-refurbishment as a result of design and manufacturing changes being implemented for the new fuel channel assemblies:

- a. Pressure Tube Deformation:
 - The new pressure tubes have a higher specified wall thickness than pre-refurbishment pressure tubes. This increase in wall thickness will reduce diametral strain and operating stresses.
 - To better accommodate axial elongation, the outboard bearing sleeves and inboard journal rings are being redesigned (increased lengths) to maximize the amount of available bearing travel.
- b. Pressure Tube to Calandria Tube (PT-CT) Contact:
 - The new fuel channels will use tight-fitting Zr-2.5Nb-0.5Cu spacers currently being installed in the refurbished Darlington NGS units. The use of tight-fitting spacers is expected to mitigate the spacer movement/relocation issues inherent with the current loose-fitting spacer design, ultimately reducing the risk of PT-CT contact.
- c. Pressure Tube Flaws:
 - Increased pressure tube wall thickness and material property improvements (described below) will improve margins and increase overall flaw tolerance post-refurbishment.
 - Modern Foreign Material Exclusion (FME) practices will be followed to minimize the amount of foreign material entrained in the Primary Heat Transport System during construction/maintenance activities. Minimizing the introduction of foreign material will reduce the rate of debris fretting flaw formation post-refurbishment.
 - Using current Zr-2.5Nb manufacturing and inspection processes will minimize the introduction of laminar flaws during forming of the new pressure tubes. These changes will further reduce the already low occurrence of laminar flaws.
- d. Pressure Tube Deuterium Ingress:
 - Manufacturing processes have been modified to reduce the initial concentration of hydrogen in pressure tubes to improve fracture toughness properties. Quadruple melting of the pressure tube ingots, control of furnace vacuums, and

modified machining at intermediate stages of manufacturing have contributed to reduced hydrogen concentrations in pressure tubes. With lower initial hydrogen, hydrogen equivalent concentration is expected to be at lower levels for the same operating time than in the pressure tubes currently installed in Pickering NGS Units 5 to 8.

e. Pressure Tube Material Properties:

- The most important manufacturing-related contributor to fracture toughness is chlorine concentration. With quadruple melting, the new pressure tubes will have the same limit on chlorine concentration as those manufactured for recent retube projects, which is an improvement on the currently installed pressure tubes and will result in improved fracture toughness properties.

OPG expects that continued inspections and monitoring will confirm fuel channel fitness for service to the new target end of life, which will be reflected in future revisions of the LCMP. Programmatic activities that will continue to be performed to manage the post-refurbishment life of the fuel channels are described in Section 2.6.3.1.

Reactor Components and Structures Aging Management

The potential for contact between the calandria tube and LISS nozzle will be mitigated with the replacement of the calandria tubes during Pickering NGS refurbishment. Improvements are also being made to the manufacturing process of the new calandria tubes. The changes (glass shot peening, better control of impurities, and modern stress relief techniques) will increase the overall integrity of the calandria tube during accident scenarios and reduce sag during future operation.

OPG expects that continued inspections and monitoring will confirm the reactor components remain fit for service to the new target end of life through the existing LCMP. Programmatic activities that will continue to be performed to manage the post-refurbishment life of the reactor components and structures are described in Section 2.6.3.1.

Feeders Aging Management

Feeder replacements will be performed during refurbishment with the elimination and mitigation of major degradation mechanisms achieved through improved material, fabrication, and installation specifications. Continued monitoring of feeders through the LCMP is performed to ensure that the aging effects are appropriately managed to support post-refurbishment operation. Programmatic activities that will continue to be performed to manage the post-refurbishment life of the feeders are described in Section 2.6.3.1.

Steam Generators Aging Management

All 12 Steam Generators (Boilers) per unit for Pickering NGS Units 5 to 8 will be replaced as part of refurbishment.

The replacement of steam generators during Pickering NGS refurbishment will reset the effects of aging related degradation mechanisms as well as operational/environmental degradation mechanisms.

Improvements to the material selection of steam generator internal components have been made in order to improve long-term reliability and corrosion resistance. Replacement Steam Generator tubing will be made using alloy Inconel 690 material providing improved corrosion resistance when compared to Monel 400 tubing used in Original Steam Generators. Carbon

steel components within the replacement steam generators that are exposed to secondary fluid will contain a minimum specified chromium content such that the materials will be resistant to detrimental flow assisted corrosion (FAC) over the life of the steam generator. Support structure material within the replacement steam generators have been changed to 410 stainless steel compared to carbon steel in the original steam generators.

Design changes to both the primary and secondary side of the replacement steam generators have been incorporated to improve long term reliability. On the primary side, this includes changes to the design of the primary divider plates and primary head drains. On the secondary side, design changes include improvements to the tube supports and steam separators. Design changes to the tube supports have also been made utilizing a lattice grid type support as opposed to the broached support plate in the original steam generators. The improved tube support design will help minimize flow obstructions and potential for tube support fouling in the replacement steam generators. Improvements have also been made to the continuous blowdown rate of replacement steam generators, increasing the continuous blowdown capacity up to 1.0% steaming rate.

OPG expects that continued inspections and monitoring will confirm steam generator fitness for service to the new target end of life, which will be reflected in future revisions of the LCMP. Programmatic activities that will continue to be performed to manage the post-refurbishment life of the steam generators are described in Section 2.6.3.1.

2.6.7.7 Chemistry Control

Chemistry lessons learned from Darlington NGS Refurbishment OPEX are actively incorporated into the Pickering Refurbishment project. During refurbishment, an engineering change is being made to accommodate an increased continuous boiler blowdown rate for the new steam generators, which will result in improved chemistry control.

2.6.7.8 Periodic Inspection Program

CSA N285.4 PIPs will continue to be performed in accordance with the accepted PIP plans until December 6, 2027, and then the revised PIP plans, which are compliant with the CSA N285.4:19 Update No. 1, as of December 7, 2027 during refurbishment. CSA N285.5 PIPs will continue to be performed in accordance with the accepted PIP plans, until June 1, 2027, and then the revised PIP plans, which are compliant with CSA N285.5:22, as of June 2, 2027 during refurbishment.

A baseline inspection will be performed for engineering changes, repairs, replacements, etc. as required by CSA periodic inspection standards during Pickering NGS Units 5 to 8 refurbishment. Maintaining current PIP inspections and performing baseline inspections will support Pickering NGS Units 5 to 8 beyond refurbishment.

An inaugural PIP for safety related concrete structures for Pickering NGS is in progress and will be issued and implemented prior to Unit 5 to 8 refurbishment.

2.6.8 Pickering Waste Management Facility

OPG is committed to maintaining PWMF systems, structures, equipment and components that are critical to the safe, reliable and economic transportation, processing and storage of nuclear waste in a fit-for-service state. The implementation of OPG's Equipment Reliability and Aging Management programs, as described in Sections 2.6.1 and 2.6.3 respectively, ensures the ongoing fitness for service of these systems.

The following subsections describe aspects of the PWMF fitness for service program.

2.6.8.1 Equipment Reliability

Under OPG's Equipment Reliability program, system performance monitoring is performed on critical PWMF systems to ensure ongoing reliable operation. System performance monitoring involves the trending of system performance and initiation of investigations or maintenance activities before failures occur. Process parameters, field observations, maintenance work order backlogs, Station Condition Records, inspection results and spare parts status are some of the typical sources of data for performance monitoring. Where appropriate, equipment critical to system reliability are identified and maintenance strategies are prepared. Actions to maintain or improve system health are also prepared. Routine reviews of system health status, maintenance strategies and improvement plans are held. There are currently 6 systems at PWMF (Fire, Electrical, Security, Welding, Vacuum Carts and DSC Transporters) that are included in the system performance monitoring program. Other systems are monitored to address specific issues. Ongoing management oversight of these improvement plans provides assurance that the plans are being implemented, and the improvements are being achieved.

2.6.8.2 Maintenance

The PWMF's recurring preventive maintenance activities are planned, scheduled and executed according to the preventive maintenance program. The management and scheduling of preventive maintenance activities are completed using OPG's enterprise software system 'Asset Suite', which also retains records of all maintenance tasks completed. Feedback from maintenance staff and changes to preventive maintenance activities are managed in the Engage program. Non-routine maintenance (corrective maintenance) activities are requested, planned and executed using Asset Suite as well. Significant corrective maintenance issues may be identified using the Corrective Action program and tracked to completion in Asset Suite's Action Tracking module. As part of system performance monitoring, the status of the maintenance program is routinely assessed and reported to facility management for their review. Metrics for the completion of preventive and corrective maintenance activities are presented, and Station Condition Records are issued to address adverse conditions related to equipment health or the execution of maintenance activities. Corrective actions to address maintenance issues are provided for management approval and are monitored to completion.

2.6.8.3 Structural Integrity

OPG conducts various activities to ensure the structural integrity of the storage structures to protect the health and safety of persons and the environment. At PWMF, OPG conducts Phased Array Ultrasonic Testing to verify the integrity of the lid closure weld on each loaded DSC. OPG conducts annual visual inspection of DSMs and carries out on-going maintenance activities for the storage structures. During the current licence period, the following activities were completed: window replacement in 2021, roof replacement in 2022, and concrete floor replacement in 2024.

2.6.8.4 Aging Management

OPG's Aging Management program is compliant to CNSC REGDOC-2.6.3. Aging is effectively managed if aging effects are understood and controlled, and if aging related degradation mechanisms are mitigated through implementation of appropriate corrective actions to prevent the loss of primary safety functions through the asset's service life.

- *Dry Storage Containers Aging Management Program:* The DSC Aging Management program addresses aging mechanisms, such as corrosion, which could potentially affect DSCs. Current aging management activities include:
 - General visual check of the condition of the protective coating on the exterior of the DSC, with emphasis on the condition of the coating on the containment welds;
 - Periodic inspection and re-inspection of the base plates of a baseline population of DSCs;
 - Ultrasonic inspection of indications in the metal of the base perimeter flange; and
 - Monitoring of chloride levels which have the potential to accelerate corrosion.

The aging management reports have yielded the following results:

- Condition of the coating on the containment welds and the DSCs themselves remain in good-to-excellent condition. To date, very few areas on the containment welds have required re-coating (i.e. touch-up);
 - No change in the condition of the base plates between the time of their initial inspection and re-inspection that would have any impact on their ability to safely store the fuel. CNSC is provided with annual summary reports of these inspections; and
 - Measured chloride levels to date have a negligible effect on the potential corrosion of the DSC external surfaces.
- *DSC In Bay and Transfer Clamps Aging Management Program:* DSC In Bay and Transfer clamps have pre-operational checks prior to use as well as annual inspections (Visual and NDE).
 - *Dry Storage Modules Aging Management Program:* During the current licence period, annual visual inspections of the Dry Storage Modules were performed. Twice annually, dose rates at the Dry Storage Modules are recorded, and surfaces checked for contamination to confirm Dry Storage Module integrity. No loose contamination has been recorded to date. Dose rate measurements taken at the east and south fences of the Retube Component Storage area showed no significant change over the current licence period.

As part of the on-going aging management plan, the Dry Storage Modules with the higher contact dose rates are monitored to confirm Dry Storage Module integrity has not changed and contents remain in design configuration.

Planned Activities

The following activities are planned for PWMF to address aging, obsolescence and to ensure ongoing fitness for service of critical structures, systems and components:

- The last major engineering change on the welding system was in 2023 for installation of the new welding camera system along with trigger kit. Future upgrades include a new automated welding system.
- Transporters have been operating without any major issues. Future plans include engine replacement (newer smaller and more efficient engines) on the transporters starting in 2034. This will ensure reliable operation of these transporters for 10-15 years.

- Security system upgrades include Entry Control system, Security Monitoring system, Intrusion Detection and Closed-Circuit Television (CCTV).
- Facility upgrades include HVU and HVAC refurbishment, vacuum cart replacement, LED lighting upgrades, Phase 2 supply transformer, Uninterruptible Power Supply (UPS), Standby generator, automatic transfer switch, crane refurbishment, and fire detection system upgrade (new SB3 booster panel and new PWMF fire panel).

2.7 Radiation Protection

Pickering NGS has an effective *Radiation Protection* (RP) program that meets all applicable regulatory requirements and related objectives.

The RP program controls occupational and public exposure As Low As Reasonably Achievable (ALARA) and prevents and monitors for the uncontrolled release of contamination or radioactive materials from the site through the movement of people and materials. The RP program includes a set of action levels to provide an alert before a regulatory dose limit is reached.

2.7.1 Application of ALARA

ALARA is a foundational principle in RP. Radiation dose to all persons shall be kept as low as reasonably achievable, economic and social factors being considered.

ALARA is implemented at Pickering NGS in accordance with the OPG RP program. This program ensures compliance with regulatory requirements to keep exposures ALARA, implements control of occupational and public exposure, and plan for unusual situations. Notable elements of this program include:

- Limiting individual worker dose
- Managing dose as a resource
- Establishing facility design consistent with ALARA principles (as well as considering ALARA principles in any facility changes)
- Assessing hazards for planning and maintaining knowledge of conditions
- Planning and performing work to keep exposures ALARA and avoiding unplanned exposures
- Controlling the use of licensed radioactive devices and equipment

The Pickering NGS site ALARA strategy identifies initiatives, actions and programs that support achieving these objectives, and how the effectiveness of these initiatives is measured. The strategy applies to all Pickering NGS Units, whether the unit is operating (online), shutdown for planned maintenance, shutdown for stabilization, or refurbishment, and applies to all Pickering NGS personnel, contractors and visitors.

The Radiation Protection department plays an important role in managing the station Collective Radiation Exposures (CRE) and ensuring it is ALARA by providing expertise and knowledge in dose reduction to work groups to minimize their collective exposure for every task they perform.

Frequent updates of RP performance are communicated to the station with an optimized dashboard, highlighting key RP metrics, the latest RP events and the current status of each

department's RP score. The department RP score is based on metrics such as collective dose and contamination control events. Departments are placed in various levels of oversight, depending on current RP performance and score.

The majority of annual station collective dose occurs during major planned maintenance outages. RP and ALARA stakeholders play integral roles in reviewing lessons learned from all outage campaigns. They contribute valuable insights to a report that consolidates these lessons, outlining a strategic plan for their implementation in future outages. Online projects follow the same process for capturing lessons learned, the integrated online work schedule provides guidance and timelines for implementation. Recent industry OPEX regarding neutron dose rates associated with irradiated reactor components has been captured and incorporated into future Pickering NGS reactor maintenance activities as well as full integration into OPG RP program documentation.

Radiological Exposure Permits (REPs) are one of the primary administrative controls by which radiological work is planned and controlled. Radiological controls are applied to all hazard levels of radioactive work and a graded approach is applied to higher-risk work. Requirements to use full-scale mock-ups, and participate in training and simulations are in place to familiarize workers prior to execution to minimize dose during actual execution. Additional radiological controls also include stay time limits, stay timekeeping and remote dosimetry monitoring, to further reduce collective exposure.

The permitted dose and dose rate constraints are subjected to a thorough understanding of the workplace conditions based on radiological surveys and operating experience. In the latter, historical dosimeter records are periodically reviewed, and constraints are updated using industry guidance. Over the licence period, the use of dose constraints in OPG has ensured no internal Administrative Dose Limits (ADLs) or regulatory dose limits have been exceeded (for all sources of radiation).

The OPG standard, *Controlling Exposures As Low As Reasonably Achievable*, and the *Engineering Change Control* program, are interfacing processes that drive the use of tools and checklists for radiological safety to ensure a comprehensive, robust review is performed during the design phase of new designs or proposed engineering changes. These reviews help to understand how exposures can be eliminated or hazards reduced. When appropriate, the administrative controls within the RP program help bridge areas within the chosen design features. Extensive RP oversight has been present to support Refurbishment and stabilization to ensure that all radiological safety aspects have been considered for design changes, such as the setup and operation of the vacuum drying system. For example, the use of temperature elements with local readings was challenged, resulting in the use of Bluetooth-enabled displays that will greatly reduce the number of vault entries required.

The Circumferential Wet Scrape Tool (CWEST) is a new tooling design that was developed to replace conventional sampling tools used to conduct CANDU pressure tube inspections during planned maintenance outages. Periodic inspections of pressure tubes are required according to CSA standards and are typically performed each outage, contributing to the majority of outage collective dose. Since its implementation, CWEST minimized the required time spent at the reactor face, where dose rates are higher, and thus significantly minimized personnel exposure for pressure tube inspections. CWEST has achieved a 4-fold dose reduction compared to previous outages.

The ALARA program drives continuous improvement through annual self-assessments to align with industry best practices and the latest technological development that can be used to minimize dose.

Continuous improvement is also driven through the RP dashboard, which identifies early indicators in decline of department-level RP performance. Additional oversight is provided to improve performance and lessons learned are shared with other station departments to drive overall station RP performance improvements.

2.7.2 Worker Dose Control

Individual worker doses, including those for contractors and visitors, are managed to Exposure Control Levels (ECLs) that are below administrative control levels that are in turn below the regulatory limits. OPG's *Dose Limits and Exposure Control* procedure specifies requirements to manage dose within ECLs and ADLs to control any worker's dose below CNSC regulatory limits. During the licence period, ECL management has migrated to online interactive forms.

Collective dose performance targets for each facility are established annually and consider the reductions achievable through the application of ALARA techniques. As work is planned in detail, collective dose projections are reviewed and actions are taken to ensure the dose is ALARA. Actual performance against targets is reviewed and corrective actions are taken where warranted.

When making engineering changes, engineers and RP staff maintain or improve upon designs that reduce occupational exposures throughout the lifecycle of the facility, in accordance with established procedures. Access to certain areas of the station that are subject to high radiation fields are strictly controlled using procedures and physical controls.

All radioactive work is planned and includes anticipation and evaluation of radiation hazards, selection of appropriate protective measures and dosimetry. The supervisor ensures persons assigned to the work will not exceed exposure control levels in the course of performing the work as planned.

Radiation Personal Protective Equipment (RPPE) is provided for workers and used by workers based on anticipated exposure conditions and maintained in accordance with the *Lifecycle Management of Radiation Personal Protective Equipment* procedure.

Action Levels

As per the requirements of the *Radiation Protection Regulations* and the operating licence, OPG has established Action Levels for Pickering NGS. These Action Levels are specific radiation doses or other parameters that, when reached, serve as indicators to prompt a review and ensure continued effective control of the RP program. Exceeding an Action Level requires notification and reporting to the CNSC, investigation of the cause, and corrective action as required.

During the current licence period, there were two action level exceedances at Pickering NGS for internal dose. Both action levels were reported to the CNSC and corrective actions were taken. Changes to the RP program were made after the event including revision to the tritium protection planning review form and Radiation Exposure Permits.

Radiological Hazard Surveys

Radiological hazard surveys are performed using approved instruments on both a routine basis and prior to the performance of radioactive work.

All RP instruments, fixed or portable, are calibrated at least once a year. Pickering NGS uses software to track the maintenance and calibration of RP instruments.

Routine surveys are performed to support the early discovery of unexpected hazards and to identify longer-term trends in hazard conditions from all radioactive hazard sources. Airborne contamination monitoring is routinely carried out in order that hazards can be accurately assessed. In areas where variable high gamma radiation fields or high airborne radiological hazards could occur, area alarming monitoring equipment is provided, and set to warn against sudden unexpected increases in radiation levels, to prevent a significant acute dose to an individual.

Bioassay and Reporting Doses for Workers

Through work planning, workers use dosimetry appropriate to the anticipated radiological hazard.

All workers are required to wear dosimetry, submit bioassay samples and perform Whole Body Counts (WBC) as required by procedures. The frequency of bioassay submissions and WBCs are determined based on the type of work performed. Electronic Personal Dosimeters (EPDs) are worn in conjunction with Thermoluminescent Dosimeter (TLDs) to record doses received while performing radioactive work. EPD dose is recorded in the Dose Management System (DMS) when the EPD is downloaded. This provides a record of the cumulative dose received by the worker. TLDs are collected and analyzed on a quarterly basis by the OPG dosimetry laboratory, operating in accordance with a CNSC Dosimetry Service Licence. Bioassay samples and other dosimetry (e.g., personal air samplers, extremity TLDs) are collected frequently and analyzed by the OPG dosimetry laboratory. Health Physics staff at site review all EPD dose, bioassay and WBC results as received and investigate any unusual results. All dose data is reviewed on a quarterly basis by the Dosimetry Health Physicist prior to submission to the National Dose Registry. Workers are able to obtain their dose status via the DMS. All worker exposure controls and limits are specified in DMS. Dose reports are sent to all individuals at year-end, to fulfill OPG's obligation to annually provide them with their dose status in writing, as required by the CNSC *Radiation Protection Regulations*.

Monitoring of Workers During Emergency Conditions

During a station emergency, all staff on site are required to report to designated assembly areas and to refrain from drinking, eating or smoking until RHP approval is granted. Frequent surveys are performed of the emergency assembly areas and personnel located there. Hourly habitability surveys are also performed at the Site Management Centre (SMC). During an accident or emergency, the Automated Source Term Gamma Monitoring System (ASTGMS) and Automated Near Boundary Gamma Monitoring Systems are available. ASTGMS provides remote gamma dose rates at incident airlocks and vacuum building. ASTGMS data is used for event categorization, adjustment of off-site dose projections, and associated on-site protective actions. Both Source Term and Near Boundary gamma measurement data are used by the Province to determine protective actions required in response to a potential radioactive release. The ASTGMS provides timely data collection, and determination of possible fuel damage and eliminates the requirement for manual Source Term surveys. The Health Physics Manager (HPM) in the Site Management Centre also reviews data from radiological survey teams,

process system sample results, Fixed Area Gamma Meter (FAGM) readings and remote radiation area monitor trends. HPM also provides recommendations for on-site protective measures including issuance of potassium iodide (KI) pills, ongoing restrictions on eating and drinking and airborne on-site radiological controls. If there are suspected exposures or uptakes, the HPM arranges for expedited readout of bioassay samples or TLDs.

The following category areas document Radiation Protection provisions for planning for unusual situations:

Table 9. Radiation Protection provisions for planning for unusual situations

Category Area	Radiation Protection Provisions
Access Controls	<ul style="list-style-type: none"> • Assembly Areas for personnel accounting to help ensure personnel exposures are minimized from radiological hazards associated with incident area(s). • Number of site support personnel strategically managed through Resource Deployment Manager in Site Management Centre (SMC) to ensure number of potential personnel exposures are minimized. • Site ingress and egress considerations based on weather conditions, radiological conditions, and timing to any planned radiological release.
Habitability Controls	<ul style="list-style-type: none"> • Routine (hourly) radiation surveys conducted to establish habitability. • Eating and drinking provisions under the direction of Health Physics Manager (HPM). • Alarming gamma monitors alert personnel of changing radiological conditions.
Communication Systems	<ul style="list-style-type: none"> • Updates between HPM in the SMC and Health Physics Director in the Corporate Emergency Operations Facility. • Communication available through direct landline, cell phone, third party web platform, fax, or dedicated beyond design basis accident telecommunication system and radio equipment.
Radiation Monitoring Capabilities	<ul style="list-style-type: none"> • Redundancy in exit radiation monitors for personnel. • Live-time transmitting gamma and tritium monitoring; hourly surveys obtained, reviewed, and transmitted. • Routine in-plant surveys for gamma dose rate, airborne tritium, and airborne particulate conducted by in-plant survey team at strategic locations, including corridors, airlocks, and other areas as directed by the Shift Manager. • Chemistry lab includes capabilities for analyzing airborne samples for radioiodine.

	<ul style="list-style-type: none"> • Gaseous Fission Product system includes sensitivity and alarms to key radionuclides associated with fuel defects.
Portable Emergency Response RP Equipment and Instrumentation	<ul style="list-style-type: none"> • Dedicated portable gamma instruments poised for use (includes capabilities for high range detection and extension probe for increased distance). • Standalone dosimetry devices available for use when the standard services are unavailable or when directed by Shift Manager or HPM. • The <i>Maintenance and Testing of OPG Nuclear Emergency Response Organization Facilities and Equipment</i> procedure includes additional site instructions to manage RP equipment checks supporting assembly area cabinets, in-plant survey team cabinets, off-site survey team, and Transportation Emergency Response Plan
Radiation Personal Protection Equipment	<ul style="list-style-type: none"> • The <i>Selection of Radiation Personal Protection Equipment</i> procedure is followed to the extent practical. • Provisions for radiation personal protective equipment under emergent work documented with use approvals required by Responsible Health Physicist.

Radiation Protection Training and Qualification

All personnel working at a nuclear site are assigned an RP qualification level based on the successful completion of training. Personnel maintain their qualification through the successful completion of periodic continuing training and requalification. Personnel performing radioactive work are either qualified to perform the associated RP activities, or there is an individual with the necessary qualification assigned to the work to provide RP for personnel performing radioactive work. The working rights and restrictions placed on each qualification level are specified in the *Facility Access and Working Rights (Radiological)* procedure.

Key positions in the RP program organizations are given additional radiation protection-related training to become qualified to perform in their specialized positions within the program.

2.7.3 Radiation Protection Program Performance

The RP program direction is based on regulatory standards and industry guidance. RP program performance is measured through direct oversight, assessment of key performance indicators and industry benchmarking, the results of which are used to further refine and enhance the program. The RHP is accountable for ensuring that decisions regarding the RP program are technically consistent with sound RP practice and applicable regulations. The RHP approves the execution of specific key activities related to the RP program. The Joint Committee on Radiation Protection provides a forum for communication between management and employee representatives on RP topics, and to develop recommendations to senior management for improvements in the RP program.

RP program self-assessments are conducted to identify opportunities for continual improvement and to confirm that work meets the requirements of the management system.

The effectiveness of the RP program with respect to radiological hazard identification and assessment can be measured using collective dose for the facility and compared against industry benchmarks and station targets. These targets are established based on the approved work scope for the year. In some years, the target may be impacted from additional approved work activities to maintain high plant reliability.

Collective and individual doses were managed well below administrative and regulatory dose limits in the current licence term. OPG employs exposure control levels to ensure administrative limits are not exceeded.

The station sustained strong dose performance due to various factors, including strong equipment reliability, reduced radiological source term, low unit forced loss rate and implementation of dose reduction initiatives. Some key achievements in radiological hazard identification and assessment during the licence term include:

- Implementation of shielding on areas with elevated radiological hazards; the design was customized such that installation and removal time is optimized. This has short and long-term benefits which will be realized during subsequent unit outages.
- Implementation of portable containment driers to control airborne tritium hazards to supplement current plant drier systems; this reduces dose to personnel and the environment.

Overall, the effective identification and assessment of radiological hazards has continued to ensure high standards in ALARA work planning, execution, and close-out. ALARA initiatives, such as improved shielding, source term reduction initiatives and work methods improvements and efficiencies, contribute to year over year improvements in dose performance.

2.7.4 Radiological Hazards Control

The protected area (inside the inner security fence) of the station is divided into zones to facilitate the movement of personnel and materials and control access to areas where radioactive systems are present. Indoor areas of the station are divided into three zones (Zones 1, 2 and 3) based on the presence of radioactive systems and the potential for radioactive contamination in each area. Outdoor areas at ground level within the security perimeter, but outside the powerhouse are referred to as 'Unzoned Areas'. Zone boundaries are marked and changes to the boundaries are approved by the RHP. All materials released into Zone 1 or the public domain are monitored for contamination.

Workers moving through the radiological zones monitor themselves and material as required when crossing zone boundaries (depending on the direction of travel) and at other designated monitoring points. Loose contamination is not tolerated within the zones except within established contamination control areas. If workers detect contamination through monitoring processes, then all efforts are taken to limit the spread of contamination, take action to identify the source of contamination and ensure that it is contained or removed when found.

Trained and qualified personnel utilize portable instrumentation to provide relevant job-site-specific hazards assessments for the safe conduct of work activities. Day-to-day conditions are routinely monitored by these trained personnel as well to ensure conditions are stable and controlled. The results of hazards are communicated to all workers in the facility through local

hazard postings and electronically logged for reference in a common database. This information is used to provide a thorough assessment and plan prior to work execution. The common goal is to ensure work activities are predictable and doses to personnel and the public are kept ALARA.

Enhancements and Methods for Improved Radiological Hazards Control

The following outlines the various enhancements and methods OPG implements with respect to improving radiological hazard control:

Advanced Radiation Instrumentation

Use of advanced radiation instrumentation provides visuals for updated radiological hazards. These updates can support advancements in work planning assessments and worker knowledge of radiological hazards. For example, Pickering NGS utilizes a gamma spectroscopy instrument which visually identifies areas of the station that can have high radiation levels. This supports shielding areas of the plant to lower collective radiation exposure to workers.

Dose Reducing Resin in Heat Transport Ion Exchange Columns

Dose-reducing resin has been used in the Primary Heat Transport Ion Exchange Columns to lower dose rates from the system. This resin has a higher affinity for capturing key source term radionuclides, including Co-60.

Improved Shielding

Specialized shielding, tooling and training have been utilized for several years for fuel channel and boiler inspection outage work programs which have contributed to lower collective radiation exposures. For example, for boiler inspections, Pickering NGS has custom shielding for the size and shape of the Pickering NGS' boilers internal surfaces. In addition, Pickering NGS has recently started 3D printing custom shielding in-house, which has been used in areas such as the reactivity mechanism decks and fuel handling areas.

Real-Time Hazard Monitoring with Remote Instrumentation

Remote instrumentation is used to provide real-time hazard information to staff. This information is displayed directly outside certain radioactive work areas, through dedicated software available to qualified workers and supervisors, and includes historical logs for detailed reviews and trending. When applicable, approved radioactive work plans mandate the use of remote instrumentation such that detailed area hazard maps can be used to optimize personnel exposure conditions during radioactive work activities. This is important for activities that present elevated risks or when multiple areas could be impacted. Monitoring of this instrumentation is conducted by personnel who often have a direct line of sight to personnel at the work site through a dedicated audio and video system. When possible, robotic equipment is used by operations staff to reduce exposure during on-power entries and allow for searches in areas previously inaccessible. For example, the reactor vaults are normally inaccessible while on-power; however, in 2022, an on-power entry was performed with a robot entering the vault to evaluate the Unit 1 Fueling Machine bridge. In addition, in 2023, drone entries into the Unit 5 vault were used to conduct inspections of the vault air conditioning units. Dose savings from robotics for the past licence period have saved more than 0.5 sieverts of dose.

Internal/External Operating Experience (OPEX)

Pickering NGS makes use of relevant CANDU operations outside of OPG with its participation in COG. Conexus Nuclear Inc. actively collaborates with other CANDU organizations around the world to advance nuclear technologies, including successful RP programs. A recent Conexus

Nuclear Inc. Radiological Protection Task Force has collectively agreed to address management of tritiated hazards, based on common CANDU plant experiences. External and Internal operating experience reviews are completed for relevant radiological applications. This includes the disposition of how relevant internal and external plant experiences may help shape radiological hazard identification and assessment during routine and abnormal plant operations.

The organizational drive for continuous improvement within RP is also observed through the site's interface with the broader nuclear industry, including international organizations whose common goal is excellence in operational nuclear safety. This is manifested in the RP program through its active internal self-assessments which focus on understanding how industry best practices can be incorporated, supplemented by industry peer review evaluations, which provide an unbiased perspective to the site's RP performance.

RP Equipment and Instrumentation

Approved Radiation Protection (RP) instruments are managed through a documented lifecycle process that governs their selection, calibration, maintenance and monitoring. Only approved instruments may be purchased with any new makes or models requiring a formal Change Management Plan and approval by the Manager, Health Physics. Implementation plans are prepared and include technical specifications, evaluation, performance testing, and acceptance testing prior to site use.

All RP instruments are calibrated at least annually in accordance with approved procedures, with records and calibration labels maintained. Calibration and maintenance activities are tracked through controlled procedures and software systems. Manufacturer service manuals are registered as controlled documents, and any defective instruments are removed from service, repaired, and recalibrated before being returned to use.

RP instruments are also systematically monitored to manage performance and end of life considerations. Maintenance-related performance indicators approved by senior management are used to track instrument accuracy, availability, reliability, and service life, supported by regular performance reports and trending at both site and fleet levels. Fixed and portable instruments undergo routine checks, challenge testing, and periodic failure testing, with results informing maintenance actions, calibration changes, and replacement planning. System Engineers oversee fixed radiation monitoring systems through formal performance monitoring plans, system health reporting, and proactive remedial actions aimed at addressing emerging issues before equipment failure occurs, ensuring continued reliability and regulatory compliance.

Additional Methods for Improving Radiological Hazards Controls

- Characterization studies are conducted by both OPG Radiation Protection/Health Physics personnel and approved vendors engaged for this purpose. All results are verified and reviewed by OPG to ensure the hazards identified remain within their predicted operating envelope.
- Periodic review of industry standards are performed to ensure alignment and best practices for dose control events. Pickering NGS has updated the processes for establishing oversight of radiological work. The process for workers using specialized dose tracking technology has been improved to ensure there is accountability for monitoring radiological dose during work execution.
- Task specific dose goals are used to anticipate external gamma dose prior to performing radiological work. During a pre-job brief, workers and supervisors discuss the time,

distance, and shielding applicable to their assigned work activity. This form of communication is considered fundamental during the work planning and execution processes.

- Routine radiological surveys are performed in the facility at a frequency sufficient to prevent the prolonged presence of an unknown condition in accessible, normally frequented areas. A review of these surveys is performed to ensure there are no unexpected radiological hazards. Dynamic Learning Activities (DLAs) engage facilitators and observers to examine how workers use their skills and knowledge while performing activities in a simulated environment (e.g., mock-up). The activities reflect plant conditions as realistically and authentically as possible within a non-radiological environment. A DLA can be used to improve worker proficiency, work processes and procedures. Recent DLAs for radiological protection have included contamination control and radiological hazard identification.

2.7.5 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Radiation Protection SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

Decommissioning will be in compliance with the *Radiation Protection* program and its implementing procedures.

The existing program for surveying and zoning the facility will be followed, and non-routine activities resulting from decommissioning will be identified and dose limits will be outlined in accordance with ALARA.

Facility dose target setting will continue to be developed and approved in accordance with procedures. ALARA plan development for stabilization activities follows the work management milestone process as described in the procedure *Storage Execution Planning Management*. ALARA plans have been created for stabilization activities, such as Primary Heat Transport dewatering.

Unit 1 defuel was completed in February 2025, and Unit 4 defuel was complete in June 2025. Radiological hazards during defueling activities are expected to be comparable to that of a refurbishment unit undergoing defuel. OPEX from Darlington NGS refurbishment and Pickering NGS outages have been used to develop routine radiological surveys used for hazards. Hazard monitoring during defueling will include tritium, gamma, iodine, and airborne particulate surveys in boiler rooms as well as real-time monitoring in the accessible areas of the reactor building and airborne particulate monitoring in the IFBs.

One aspect of the RP program that will change during decommissioning is provisions supporting the Access Control System. Radiological hazards will remain after a unit is defueled. However, the access hazards, those involving high radiological fields associated with reactor operation, irradiated fuel and Fuel Handling operation which form the basis for the need for the Access Control System, will no longer be present in the Reactor Building and cannot be reintroduced.

The vast majority of all radioactive work performed at Pickering NGS is not performed in access-controlled areas and the processes outlined in the RP procedures provide adequate guidance and controls and will continue to do so once the Access Control System is suspended. The *Radiation Protection* program and its procedures will remain in effect. Access by persons to

the radiological zones will continue to be controlled and all radioactive work, dosimetry and control of radiological hazards will be governed and controlled by the RP procedures. The only change will be the removal of current areas specifically designated as “access controlled” due to the presence, or potential introduction of access hazards.

Access control will be in effect for the duration of defueling which will restrict parts of the boiler room, Fueling Machine Vaults and Fueling Machine Service rooms. During the dewatering stage, additional radiological hazards will be introduced as the primary HTS and moderator systems are drained. The bulk of the radioactive work and the majority of the dose accrued will be completed during this stage. Routine radiological surveys have been established to address the potential increases in tritium from these activities as well as the potential for changing gamma hazards. Real-time gamma monitors will be set up throughout the boiler room, and moderator room as well as accessible areas of the reactor building during draining activities to monitor for hot spots or increases in gamma dose rates. Radiological surveys have been established at various stages of the dewatering campaign to monitor for gamma, neutron, tritium and airborne hazards. The purpose of these surveys is to identify and respond to changing conditions in accordance with RP procedures.

All radioactive work during decommissioning will be assessed. Work order review and Radiation Exposure Permit assignment for tasks will be performed in accordance with the approved radioactive work planning and execution procedures.

Routine alpha surveys will be conducted at various stages of stabilization to monitor for changing alpha ratios and to confirm the alpha levels that will be established at the beginning of the campaign. It is expected alpha to beta/gamma ratios will change especially with the heat transport/fuel handling systems once defueling is complete.

2.7.6 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Radiation Protection SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Refurbishment activities will be executed in compliance with the *Radiation Protection* program and its implementing procedures. Refurbishment will be executed in a manner consistent with OPG's safety values and objectives, as well as best industry practices. OPG RP field staff will provide oversight to EPC contractors and will ensure that OPG RP program requirements are met. EPC contractors will follow OPG RP procedures for refurbishment activities including compliance with the OPG's RP action levels and ADLs for Pickering NGS.

Lessons Learned from Darlington NGS OPEX is actively incorporated into Pickering Refurbishment planning. The Darlington RP team received the John Hewitt award in 2021 in recognition for innovations in tooling/equipment, shielding and RPPE which resulted in a 38% dose savings to vendor partners and OPG workers involved in the refurbishment of Darlington NGS Unit 3. RP staff who previously worked on Darlington Refurbishment have been assigned to Pickering Station to facilitate planning for refurbishment pre-requisite activities.

The refurbishment project will develop and implement strategies during the execution of refurbishment, such as:

- Controlling or eliminating radiation hazards and implementation of shielding to reduce collective dose;

- Routinely analyzing and reviewing radiological source terms associated with major systems and components likely to interface with the refurbishment; operations, in order to minimize the possibility of unforeseen radiation hazards;
- Ensuring contamination control is adequately addressed in tool, equipment, and process designs;
- Performing thorough review of plans to achieve dose reduction and minimization;
- Ensuring lessons learned from the first outage experience are documented and applied to subsequent outages to further reduce collective doses;
- Monitoring refurbishment work scope that may provide dose reduction benefits for continued operations, such as closure plug redesign, reactor component crud removal, radiation hot spot removal/remediation, and breathing air upgrades; and
- Ensuring Darlington Refurbishment OPEX is incorporated into Pickering Refurbishment, for example, enhanced measures for the monitoring, control and assignment of neutron doses associated with reactor components. Furthermore, areas will be proactively classified as Alpha Hazard Areas based on the potential for alpha contamination rather than alpha/beta ratios which was previous practice. Additionally, OPEX from both Bruce and Darlington Refurbishment neutron hazards to ensure careful radiation hazard monitoring and characterization during Refurbishment activities.

Extensive RP oversight has been present to support Refurbishment activities to ensure that all radiological safety aspects have been considered for design changes, such as planning for the removal of steam generators and zoning changes, which include the setup and operation of Refurbishment and Common Services Satellite buildings.

2.7.7 Pickering Waste Management Facility

OPG has implemented and maintains a RP program, which includes a set of action levels. The RP program is implemented through a series of standards and procedures for the conduct of activities within nuclear sites and with radioactive materials including the PWMF as described in Section 2.7.

The following subsections describe aspects of the PWMF RP program.

Management Control over Worker Practices for Dose and Contamination Control

Performing radioactive work within PWMF requires a systematic approach and is managed via the OPG RP program, which includes the following processes:

- Limiting individual worker dose.
- Managing dose as a resource, in terms of constraints on work activities.
- Establishing facility design consistent with ALARA principles.
- Assessing hazards for planning and maintaining knowledge of conditions.
- Controlling the use of licensed radioactive devices and equipment, and
- Planning all radioactive work, taking into account personnel, engineering controls, procedures, supervision, and the physical environment of the job.

The planning process includes the anticipation and evaluation of radiation hazards and the selection of appropriate protective measures and dosimetry. The degree of formalization of the planning process and the approval levels for a job are proportional to the potential for exposure. Plans include backout conditions and contingencies. RP planning decisions are documented in a radiation exposure permit.

Radioactive contamination controls are in place to reduce occupational and public exposure, and to minimize the release of radioactive materials to the environment. The objectives are to prevent a loss of radioactive contamination control, to minimize the area affected if contamination occurs, and to restore the condition to acceptable levels as soon as possible.

Radiation Protection Program Monitoring and Oversight at PWMF

Established performance indicators include RP program effectiveness measures commonly used in the nuclear industry and OPG defined indicators established for the purpose of monitoring particular program elements. These are captured in OPG's Electronic Performance Reporting systems as well as key performance indicators and RP report card. Specific measures include personnel contamination incidents, regulatory infractions, as well as dose performance versus dose targets. During the current licence period, enhanced health physics oversight has been available. In addition to Fleetview reporting and assessments, the design and execution of the RP program is subject to ongoing monitoring through mechanisms including but not limited to:

- Management review and assessment which includes:
 - Joint Committee on Radiation Protection, and
 - Monthly Management Oversight Meetings.
- Exceptional dosimetry and dose control device measurement results.
- Dose trends.
- Annual review of ALARA targets.
- RP program self-assessments and independent audits.
- Observations and coaching.
- Investigation of events in which an Action Level has been exceeded, trending, benchmarking, and review of industry operating experience.

Dose and Contamination Control

During the reporting period there have been no action level exceedances related to worker dose at PWMF or any loss of contamination control events in excess of PWMF's contamination control action levels.

During the current licence period, there has been increased radiological reporting as a result of incorporation of CNSC REGDOC-3.1.2 *Reporting Requirements, Volume I: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills*.

Collective Dose and Maximum Individual Dose per Year for NEW

OPG's administrative limits include two control levels for exposure: (1) the Exposure Control Level is 10 mSv/year, and (2) the ADL is 20 mSv/year. Exposure control levels are set below administrative control levels, which are in turn below the regulatory limits. Figure 22 shows the

OPG individual exposure control level of 10 mSv (1 rem) per calendar year is significantly below the single year regulatory limit of 50 mSv (5 rem) in a year, and the five-year regulatory limit of 100 mSv (10 rem) over five years for a NEW.

Doses are maintained ALARA, taking into consideration socio and economic factors through the use of engineered barriers, work planning and use of exposure control levels for NEWs.

OPG's contamination control sub-program continues to be in full compliance with regulatory requirements. Facility targets are set annually, based on DSC throughput and other operations, and communicated in Annual Compliance Reports (ACR).

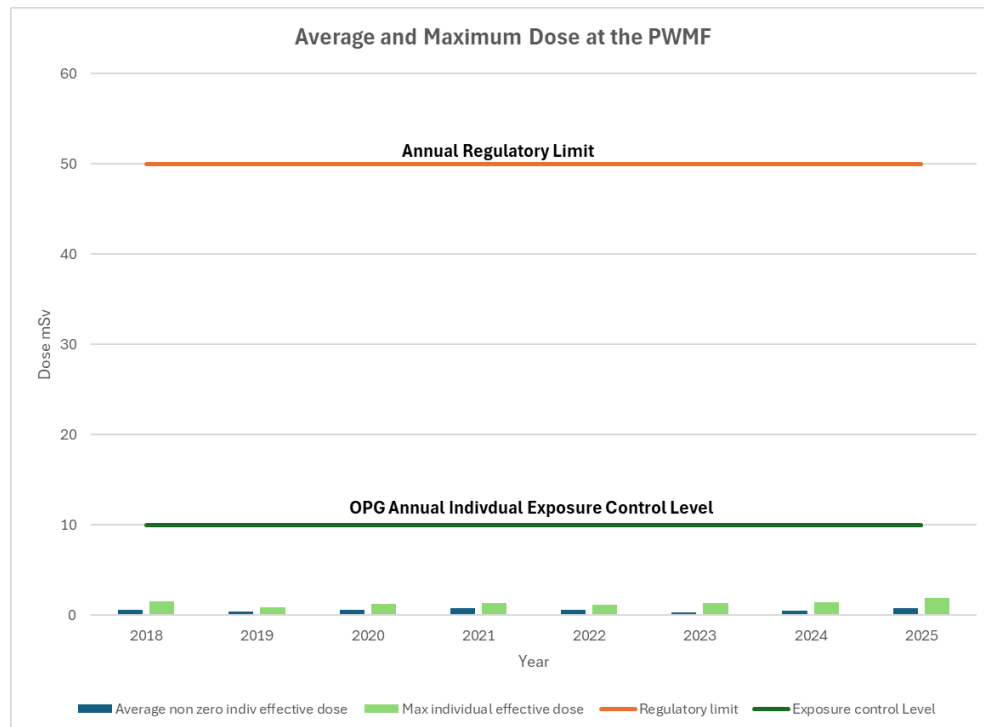


Figure 22. Average and Maximum Dose at PWMF

PWMF Perimeter Dose Monitoring (non-NEW)

Environmental Thermoluminescent Dosimeters are mounted on the perimeter fence of the PWMF and are changed and analyzed quarterly. The Thermoluminescent Dosimeters are located on the perimeter fence – demarking the limit of approach for a non-NEW. Data is reported to the CNSC on an annual basis. Target Dose Rates for these locations is to be less than 0.5 $\mu\text{Gy/h}$ (air kerma rate).

A dose rate of 0.5 $\mu\text{Sv/h}$ (or 0.5 $\mu\text{Gy/h}$ for air kerma) for 2,000 hours of exposure would result in a dose to the public of 1 mSv, the regulatory annual limit. Dose rates at the PWMF non-NEW boundary have historically been well below the derived dose rate target of 0.5 $\mu\text{Sv/h}$, with an average value of 0.11 $\mu\text{Sv/hr}$ or 22% of the target measured in 2024. The maximum potential dose at the site boundary over the course of a year to a member of the public is well below the regulatory annual dose limit of 1 mSv for a member of the public.

All measured dose rates have been below target. Annual performance is reported as the average of all dose rates.

Dose monitoring plans for future buildings will be established in accordance with OPG's RP program.

From 2018 to 2025, there were three events reportable to the CNSC at the PWMF related to RP. In each case, immediate action was taken to resolve the condition and as practical recurrence control actions were implemented.

During the current licence period, routine self-assessments were conducted and improvement actions were taken to achieve best in class performance.

Planned Activities

RP has plans to review the radiological surveys program to assess frequency and scope. As part of Pickering Refurbishment planned activities, Health Physics is looking to deploy state-of-the-art neutron dosimetry (e.g. Starlite) and will be reviewing additional radiological instrumentation for neutron detection purposes. Enhancements to automated report preparation using data analytic tools (such as PowerBI) or other in-house applications are being pursued to support CNSC REGDOC-3.1.2 deliverables.

Any new structures and system engineering changes will adhere to the RP program.

2.8 Conventional Health and Safety

OPG is committed to preventing workplace injuries, optimizing health, and continuously improving employee health and safety performance. The foundational document that upholds this commitment is the *Employee Health and Safety Policy*. The Health and Safety Policy describes OPG's approach to Conventional Health and Safety for the organization and outlines the requirements and accountabilities of all employees to uphold this commitment.

2.8.1 Employee Health and Safety Policy

The objectives of the Employee Health and Safety Policy are to:

- Meet or exceed all applicable health and safety legislative requirements and other associated health and safety standards OPG subscribes to. OPG shall require that its contractors maintain a level of safety equivalent to that of OPG employees while at OPG workplaces.
- Ensure that employees are involved in decisions that have an impact on their health and safety, either individually, as a group, or through their employee representative groups.
- Ensure that work is planned and performed to protect workers. It shall provide its employees with the information, training, tools, procedures, and support required to do their jobs safely; and
- Set health and safety targets as part of the annual business planning process. Health and safety performance against these targets shall be regularly measured and evaluated to ensure the effectiveness of OPG's health and safety systems.

2.8.2 Program and Objectives

OPG's *Environment Health and Safety Managed Systems* program and its supporting governance documents establish operating standards and process requirements for health and

safety risk identification, elimination, and where not possible, mitigation or reduction. It also prescribes the roles and responsibilities of various entities and individuals at all levels in the organization to ensure the activities described above are performed to meet the requirements of OPG's *Health and Safety Policy*.

The objective of the Conventional Health & Safety section of the Environment Health and Safety Managed Systems program is to ensure the safety and well-being of its workers. This is achieved by ensuring that safety is a core value and by managing conventional risks in the workplace associated with Pickering NGS's operations. This program is designed to be an integrated system with OPG nuclear business managed processes, where appropriate, and considers the current organizational structure.

The Environment Health and Safety Managed Systems (HSMS) includes:

- Occupational conditions and factors that could affect the health and safety of workers in all workplaces, or work-related activities under OPG's control.
- Non-occupational health-related conditions and factors that could affect the health of OPG's workers, which impacts the achievement of OPG's business objectives.
- Contractor health and safety.

Risk reduction activities occur across multiple levels. Building resilience to risk is a function of cultivating a competent and proficient workforce and maintaining meticulous safe work planning practices. This approach ensures the implementation of redundant controls capable of mitigating human error and achieving safe outcomes across all aspects of OPG's operations.

OPG's HSMS program ensures alignment with internal and external specifications or standards such as the *Nuclear Management System* and is based on the International Organization for Standardization (ISO) 45001, *Occupational Health and Safety Management System*.

2.8.3 Health and Safety Management (Practices and Awareness)

The Pickering NGS is subject to a robust framework of conventional health and safety regulations. These aim to protect workers from non-radiological hazards such as slips, trips, falls, mechanical injuries, and exposure to hazardous substances. Conventional Health and Safety is distinct from radiation protection and is governed by both federal and provincial legislation, as well as regulatory guidance from the CNSC REGDOC-2.8.1, *Conventional Health and Safety*.

Occupational Health and Safety Act (OHSA) and Corporate Safety Rules

OPG is committed to upholding robust workplace health and safety practices aimed at managing risks for both employers and workers. To fulfill this commitment, OPG has established the OPG Corporate Safety Rules ensuring compliance with or exceeding applicable health and safety legal obligations mandated by the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1 (OHSA) and applicable regulations.

Health and Safety Managed Systems Program

Continuous improvement opportunities for OPG's Health and Safety Managed Systems (HSMS) program are identified using a "Plan-Do-Check-Review" management cycle. The objective is to ensure conventional health and safety risks, work practices and conditions are appropriately managed to achieve a high degree of employee safety. Our internal compliance audits functions

to assess the effective implementation and maintenance of the HSMS, in accordance with applicable ISO standards and regulatory requirements.

Pickering NGS Joint Health and Safety Committee

To further enhance worker safety, the Pickering NGS Joint Health and Safety Committee (JHSC) has been established to work cooperatively to improve health and safety in the workplace, as set out in the OHSA. In addition, a Building Trades Union JHSC has been established, which supports contractors supporting construction and project work on site; both unions work co-operatively to support their respective workers.

Internal Responsibility System

The Internal Responsibility System (IRS) is a system applied consistently throughout OPG nuclear, where everyone has personal and shared responsibility for working together cooperatively to prevent occupational injuries and illnesses. The duties for a healthy and safe workplace fall on every individual, to the degree they have authority (based upon their position) and ability (based upon their expertise and qualifications) to do so. Each person is expected to take the initiative on health and safety issues, work to solve problems, and make improvements on an on-going basis.

The Internal Responsibility System outlines the appropriate resolution level for timely corrections. As part of this system, employees have the right to refuse work if they believe it poses an undue health or safety risk to themselves or others, as per OPG's *Health and Safety Hazard Resolution and Management of Work Refusals and Work Stoppages* procedure. This right is protected and is integral to the governance of the system. Management and leadership are committed to listening to these concerns and resolving them in a timely manner, in alignment with the core principles of the Internal Responsibility System.

Incident Investigation

OPG's *Incident Investigation* standard provides a systematic and consistent approach for evaluating adverse conditions at OPG nuclear stations including determining the cause of an adverse condition or event and developing effective corrective actions to eliminate or reduce the probability of similar events occurring in the future.

Workplace Hazardous Materials Information System

OPG is compliant with Workplace Hazardous Material Information System (WHMIS) and has processes in place for the management, handling, and storage of hazardous materials to ensure regulatory compliance and to ensure workers have information to safely work, store and dispose of hazardous materials in the workplace.

Training

The Nuclear Conventional Safety Training and Qualifications document describes required Initial and Continuing Conventional Safety Training and related qualifications for all major job families and contractors.

2.8.4 Current Operations and Results

OPG staff engagement in personal safety and associated initiatives and programs has instilled behaviours within the organization that have contributed to performance free of lost time injuries since 2021. Pickering NGS staff continuously strive for excellence and continual improvement in our Health and Safety performance. OPG has focused efforts on benchmarking with industry

leaders; and based on these benchmarks, OPG has introduced new initiatives and programs to support continual improvement in Conventional Safety.

In the area of conventional safety, OPG has received the Electricity Canada President's Award of Excellence for Employee Safety, twelve (12) times since 2012. This annual award recognizes OPG's top safety performance within the comparator group in the previous year (this award has discontinued as of 2025). In addition, Pickering NGS was recognized by an international nuclear organization in January 2026, highlighting the station's ability to operate at the highest levels of performance.

OPG's Fail Safe strategy drives continuous improvement of OPG's performance in HSMS and human performance. It relates to the concept that OPG's programs have built-in protections (capacity) against significant injury and consequences, even in the event of employee error or equipment failure. OPG's Fail-Safe approach to safety and human performance is proactive and focuses on building a resilient organization.

To ensure that the overall objective of managing occupational hazards is met, OPG monitors the following performance indicators / elements:

- Total Recordable Injury Frequency (TRIF)
- Accident Severity Rate (ASR)
- Serious Injury Incidence Rate (SIIR)
- Timely Completion of Safety Corrective Actions (TCSCA)
- Total Industrial Safety Accident Rate (TISAR)
- High Maximum Reasonable Potential for Harm (MRPH) / Safety Classification and Learning (SCL) Model

During the current licence term, Pickering NGS has demonstrated excellent safety performance throughout its operations. Below are a few examples:

- Over the last 3 years the Pickering NGS reached 19 million hours without a lost time accident. In 2025, TRIF performance was 0.07, representing the second-lowest results on record which dates back to 2010. TRIF is defined as the number of lost-time injuries, fatalities, restricted work and medically treated injuries divided by exposure hours and multiplied by 200 000. All events that did occur were thoroughly investigated, and corrective actions were implemented to drive improved safety performance.
- Pickering NGS Serious Injury Incidence Rate (SIIR) has remained at zero for the past 3 consecutive years. The SIIR is defined as the number of work-related accidents for all OPG employees that result in serious injuries or fatalities, per 200,000 person-hours worked. This metric focuses on more serious injuries, assists in maintaining attention on high-consequence hazards, and accounts for the actual injury instead of the type of medical treatment.

Timely Completion of Safety Corrective Actions

Timely Completion of Safety Corrective Actions (TCSCA) was introduced in 2018 and aims to prioritize completion of safety related actions in a timely manner. TCSCA is the percentage of corrective actions, arising from safety events, that are completed on or before the initial due date (zero extensions). This metric encouraged positive behaviours and outcomes in OPG employees and work programs. In 2025, TCSCA was evaluated and found to have achieved its

intended goal of increasing oversight of safety-related corrective actions, resulting in sustained excellence in action completion. As a result, TCSCA has been discontinued on January 1, 2026.

Industrial Safety Accident Rate

ISAR is a frequency rate based on the number of lost-time injuries for OPG Nuclear Power Plant per 200,000 hours worked. Pickering NGS has upheld a record of zero lost time injuries since 2022, resulting in top quartile performance in the Canadian utility generation sector for ASR.

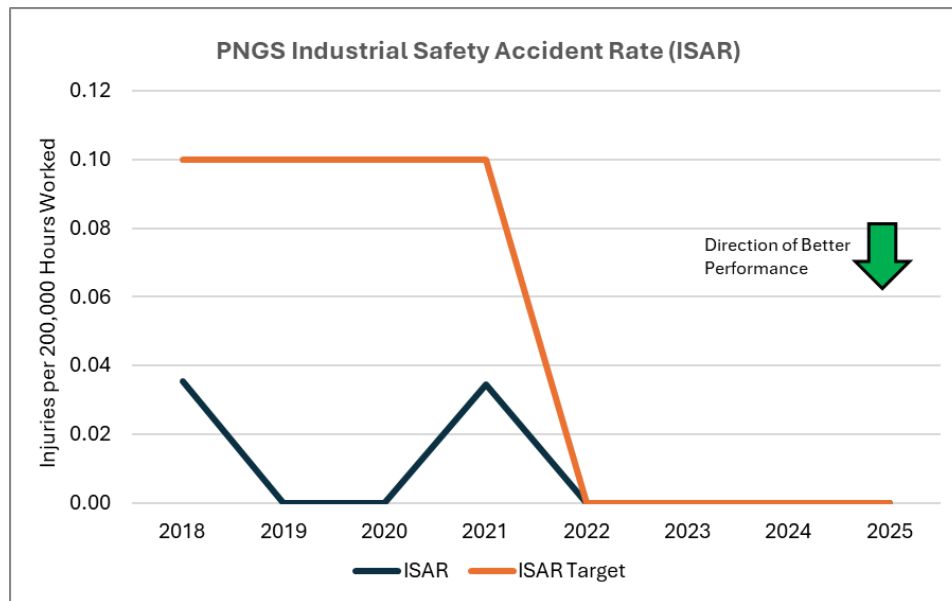


Figure 23. Pickering NGS Industrial Safety Accident Rate (ISAR)

2.8.5 Safety Enhancements and Areas of Strength for the Future

Several health and safety improvement initiatives have been implemented at Pickering NGS as part of the continuous improvement cycle of the HSMS. These initiatives remain on-going which include:

- Implementation of *Fail-Safe Culture Change* initiatives. Fail safe is a culture shift that recognizes that human error can occur, and when that happens, we have enough strong defenses in place to ensure the event occurs safely and individuals are protected. It is a shift in mindset to proactively identify whether the defences in place are sufficient. The initiative has been incorporated into safe work planning, work execution, and event learning. This provides the platform to further improve OPG's safety program. OPG has introduced industry accepted hazard assessment tools including the energy wheel, to better identify hazards in the planning stage to eliminate, control and ultimately protect workers against workplace hazards.
- Building on the Fail-Safety initiative, PN is strengthening all applicable programmatic elements to be focussed on high energy hazards. Flagging high energy hazards during work identification, planning, execution, field time, and learning is aligned with the shifts being made in the industry to prevent significant injuries and fatalities
- Continued adoption of the *Safety Classification and Learning Model (SCL)*. The SCL model will allow OPG to take its safety performance to the next level by vastly increasing

the number of learning opportunities from events and to better characterize our safety performance. Currently, SCL is being implemented in the following ways at Pickering NGS.

- Introduction of industry accepted hazard assessment tools including the Energy Wheel, to better identify hazards in the planning stage to eliminate, control and ultimately protect workers against workplace hazards.
- Leverage *Quality of Safe Practices (QSP)* information to address drifts in worker safety behaviour. The QSP is a safety monitoring report which has been introduced to the station workgroups as a proactive measure to identify gaps in worker safety behaviours concerning high energy hazards. QSP information has been integrated into the station safety scorecard to identify strengths and vulnerabilities. A significant drop in the QSP score can trigger a deep dive into underlying factors to arrest declining performance.
- Implementation of a wellness strategy that supports employees and their families in achieving and sustaining optimal health. The strategy emphasizes health education, health promotion, disease and injury prevention, and timely support during critical events. There is a sustained focus on mental health through targeted training, accessible services, and awareness campaigns that strengthen understanding and reduce stigma.

2.8.6 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Conventional Health and Safety SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

The decommissioning program is aligned with OPG's health and safety framework, covering all previously identified initiatives. Conventional Health and Safety for workers will be managed through OPG's robust Health and Safety program and Systematic Approach to Training program. In addition, documented protection programs and safety assessments will be in place to ensure safety of workers.

A thorough assessment of the radiological, chemical and construction safety hazards that might be encountered during the decommissioning project will be performed during the preparation for decommissioning. A preliminary assessment of some of the hazards likely to be encountered during the decommissioning of the Pickering NGS is summarized in the Detailed Decommissioning Plan (DDP).

Decommissioning contractor(s) will be retained to perform the dismantling, demolition, and site restoration work. OPG will provide the necessary oversight during planning and execution of the work. The decommissioning contractor(s) will be a company or consortium selected based on factors such as decommissioning experience, health and safety programs, safety record, overall approach, and cost.

OPG will remain the owner and licensee of the Pickering NGS throughout the course of decommissioning, but the decommissioning contractor(s) may be given charge and control of the site during the dismantling, demolition and site restoration. Other contractors may also be given charge and control of designated portions of the site during certain phases of the decommissioning. During these periods, the contractor will become the 'Constructor' for the decommissioning work as defined by the construction safety regulations made pursuant to the Occupational Health and Safety Act. The decommissioning contractor(s) and sub-contractors

will be required to comply with OPG procedures related to Nuclear Energy Workers and all federal and provincial *Regulations*.

2.8.7 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Conventional Health and Safety SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Nuclear Refurbishment will comply with the *Environment Health and Safety Managed Systems* program for both OPG employees and contractors.

Nuclear Refurbishment engages contractors that have proven health and safety programs and experience. This is verified in a prequalification process that reviews industry experience, historical safety performance, implemented management system elements and prior OPG experience. With respect to Enterprise Project Contractors, OPG Nuclear Refurbishment is the “constructor”, and the contractors will be the “employer” as defined in OHSA and are governed by the requirements set therein. This allows contractor front line supervisors and workers to work within OPG’s programs and procedures that they are trained and experienced in. This improves safety performance and reduces human performance errors related to working with multiple programs and systems. The process aligns with the internal responsibility methodology fostered in the OHSA.

Guiding health and safety principles, originally developed, documented and effectively used in the Darlington NGS Refurbishment project, are being updated to apply to the Pickering NGS Units 5 to 8 Refurbishment. The guiding principles and requirements will be built into contracts related to the Nuclear Refurbishment program. The guide sets the expectations for conventional health and safety elements related to Pickering NGS Units 5 to 8 Refurbishment, thereby ensuring the contractor is fully aware of and will be held accountable to OPG’s health and safety expectations. OPG reviews the contractor health and safety submissions against our expectations prior to approval and commencement of activities. The document also sets out common elements that will apply to all contractors within the Nuclear Refurbishment, such as:

- Safety performance metrics and key performance indicators
- Problem/incident notification and investigation requirements
- Common safety rules
- Safety culture requirements
- Communication requirements
- Oversight and surveillance

The Nuclear Refurbishment team recognizes that effective oversight throughout all stages of the program life cycle is paramount to the program’s success. Health and Safety has a dedicated team of advisors who will provide daily support and ensure contractors are held accountable to OPG’s health and safety expectations.

Lessons Learned from Darlington NGS Operating Experience (OPEX) are actively incorporated into Pickering NGS Refurbishment planning. Conventional H&S staff who have previously

worked on Darlington NGS Refurbishment have been assigned to Pickering Station to facilitate planning for refurbishment pre-requisite activities.

In collaboration with vendor counterparts, we are jointly working through the Constructability, Operability, Maintainability and Safety (COMS) process to incorporate applicable OPEX when warranted. The H&S team works with the project team to provide inputs within project team managed forums on items that may pose a challenge based on OPEX and H&S legislation reviews.

Additionally, OPG utilizes the Safety Essentials Guide to capture H&S programmatic improvements, OPEX and HU concepts in a single document that is part of vendor contracts tendered. This document is the bridge document for the contractor program and OPG governance and helps shape the Project Site Safety Plan in executing work for Pickering Refurbishment.

2.8.8 Pickering Waste Management Facility

OPG has implemented and maintains a Conventional Health and Safety program as described in Section 2.8.

PWMF demonstrates its commitment to safety by working without a lost time accident for its entire operational period. This period has lasted 30+ years. Of note, during the current licence period, Serious Incidence Injury Rate (SIIR) has remained zero (0) since the introduction of the new safety performance metric. Timely Completion of Safety Corrective Actions (TCSCA) performance has remained at 100% completion rate.

To ensure that the overall objective of managing occupational hazards is met, OPG monitors the following performance indicators / elements: TRIF, ASR, SIIR and TCSCA.

Total Recordable Injury Frequency (TRIF)

The TRIF and ASR are inclusive for the entirety of NSS, which the PWMF is part of. During the licence period, there was one (1) safety event that occurred at the PWMF that impacted the TRIF for the reporting period. In 2022, there was one medically treated injury due to a laceration on a worker's hand. This event was thoroughly investigated, and corrective actions were implemented to drive improved safety performance.

Accident Severity Rate (ASR)

OPG made the decision in 2014 to no longer set a target for ASR.

Nuclear Sustainability Services ASR remained at zero (0) from 2018 through 2025, as there were zero lost time injuries experienced in the reporting period. Specifically, at PWMF, to date, there have not been any lost time safety events. This shows a strong commitment to safety with an exceptional performance of 30 years without a lost time event at PWMF.

Serious Injury Incident Rate (SIIR)

PWMF SIIR has remained at zero since the introduction of the new safety performance metric in 2020.

Timely Completion of Safety Corrective Actions (TCSCA)

Strong TCSCA performance has been observed for PwMF since the introduction of the metric in 2020 with 100% completion rate. As of January 1, 2026, OPG decided to discontinue the TCSCA metric.

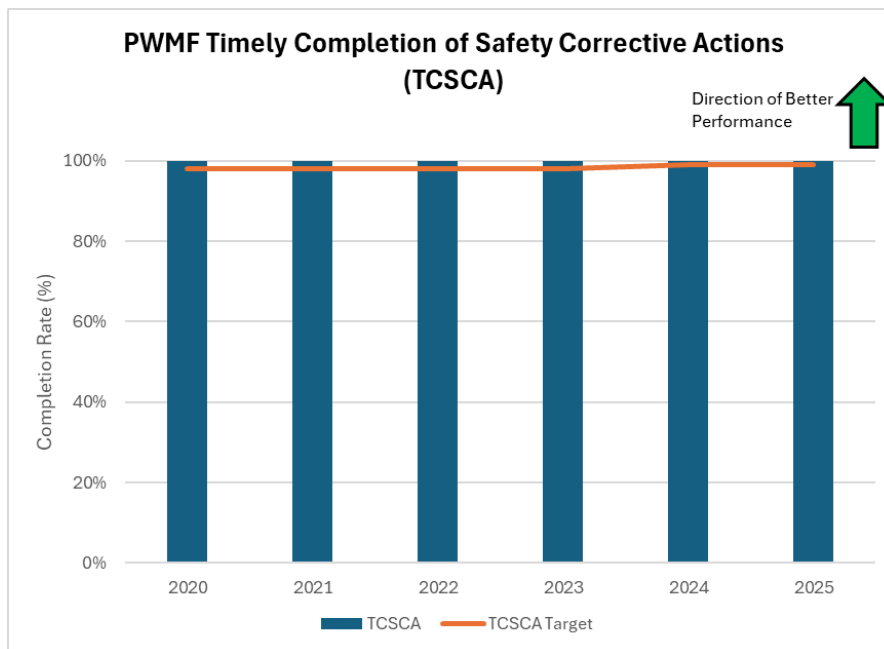


Figure 24. PwMF Timely Completion of Safety Corrective Actions

Safety Event Classification

In April 2024, OPG introduced the Safety Classification and Learning (SCL) model to align with the industry, and transitioned away from the Maximum Reasonable Potential for Harm (MRPH) system for event classification.

Since its introduction there have been no high-energy, high-consequence events.

Safety Enhancements

During the current licence period, a number of safety enhancements have been made to equipment and systems at PwMF, some examples are:

- LED lighting upgrades completed within the facility to increase visibility in work areas.
- Additional cameras were installed on the DSC transporter to support safer operation and increase the range of sightlines for the operator.
- Improved access to SB4 roof with permanent stairs and guardrail system.
- Completed engineering change to replace single bottles of weld cover gas with a productivity pack, reducing the need for multiple attachment points and limiting manual material handling.
- Procured three stainless steel transfer clamps to support facility operations and reduced the required number of crane movements in the IFBs.

A number of health and safety improvement initiatives have also been implemented at PWMF as part of the continuous improvement cycle of the health and safety management system, which include:

- Implementation of Fail-Safe Culture Change initiatives to build defenses into the planning of work, creating a learning organization, recognizing our workers are solutions, avoiding blaming the worker, and other key Fail-safe concepts.
- Implementation of “Wellness in Action: Building a Supportive, Healthy Organization Together,” which emphasizes empowering employees to integrate wellness into daily life. The focus includes accessible tools for mental health, physical vitality, financial wellbeing, and work-life balance, supported by monthly campaigns and resources. The strategy also reflects updated data from Employee Family Assisted program utilization and aligns with psychosocial risk factors outlined by Canadian Centre for Occupational Health and Safety.
- A continued focus on mental health and Musculoskeletal Disorder prevention with campaigns to raise awareness in these areas.
- Industry leading SIIR metric continues to be reinforced to focus on prevention of serious injuries that have life-altering consequences.
- Continuing effective use of SCL model for event classification. Focusing on high-energy, high-consequence events and the use of barriers and strong defenses. Through consistent classification, OPG will be able to more effectively address risks and protect workers from harm.
- OPG’s commitment to continuously improve performance is reflected by setting challenging targets for safety performance metrics.

2.9 Environmental Protection

OPG’s comprehensive environmental protection programs ensure that human health and the environment are protected during station operation. This is achieved by having multiple barriers in place to control and minimize emissions to the environment and to ensure all emissions are monitored.

OPG implements environmental protection programs at the Pickering NGS site in accordance with CNSC regulatory document REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures, Version 1.2*. Given OPG’s robust programs and processes, it is expected that the Pickering NGS site will continue to meet or exceed regulatory requirements within this SCA over the next licence term.

2.9.1 Environmental Management System

OPG maintains an Environmental Management System (EMS), *Environment Health and Safety Managed Systems*, which defines the procedures and supporting documents that implement the requirements of OPG’s *Environmental Policy*. The EMS is consistent with the ISO 14001 *Environmental Management System Standard* and CNSC REGDOC-2.9.1 *Environmental Protection, Environmental Principles, Assessments and Protection Measures*.

The objectives of the OPG Environmental Policy are to:

- Establish an EMS and maintain registration for this system to the ISO 14001.
- Work to prevent or mitigate adverse impacts on the environment, with a long-term objective of continual improvement in its EMS and its environmental performance.
- Execute its Climate Change Plan and strive to achieve the milestones and goals therein
- Manage OPG's sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern. OPG will work with its community partners and Indigenous Nations and communities to support regional ecosystems and biodiversity through science-based habitat stewardship. Where disruption is required, OPG shall take reasonable steps to manage the residual impact to these areas and species.
- Set environmental objectives as part of its annual business planning process, monitor performance against these objectives, maintain associated documented information and communicate environmental performance to employees, governments, local communities, and other stakeholders.

The current OPG ISO 14001 EMS certificate, issued in 2024 following a successful external audit, is valid for 3-years.

The EMS uses a risk-based approach to identify and assess areas of concern with respect to environmental management at the Pickering NGS site. Elements of OPG's activities, products, and services that interact or can interact with the environment are considered environmental aspects. Significant environmental aspects are environmental aspects that have or can have a significant environmental impact. Identified environmental aspects, including significant environmental aspects, are managed appropriately through operational controls at the sites.

The identification of significant environmental aspects allows for more focus on areas where there is the potential to have a negative impact on the environment. The significant environmental aspects that have been identified for Pickering NGS include the following:

- Spills (refer to Section 2.9.1.1 for details)
- Fish impingement/entrainment/spawning disruption (refer to Section 2.9.6 for details)
- Wildlife habitat: enhancement or disruption (refer to Section 2.9.1.3 for details)
- Radiological emissions: production (refer to Section 2.9.4 for details)
- Non-radiological emissions: production (refer to Section 2.9.4 for details)
- Low and intermediate level radiological waste: generation or diversion (refer to Section 2.11 for details)
- Non-radiological waste: generation or diversion (refer to Section 2.11 for details)

Continual improvement of Pickering NGS operations is an ongoing effort under OPG's ISO 14001-certified EMS. Opportunities for continual improvement may be identified through routine EMS audit activities, the OPG performance improvement program, and strategic initiatives such as execution of OPG's Climate Change Plan and Reconciliation Action Plan (available at www.opg.com).

2.9.1.1 Spill Management Program

OPG has a framework in place to manage spills, ensuring implementation of spill prevention, preparedness, response, clean-up, and remediation processes in accordance with applicable regulations. Spills are classified as Category A (Very Serious), Category B (Serious), Category C (Less Serious), or Category D (Exempted or Potential Spills). Spills are identified, classified, and reported.

During the current licence period (2018-2025), there were no Category A or B spills. Category C spills at Pickering NGS were immediately reported and every effort was made to recover any material spilled. As a result, there were no significant adverse impacts to the environment or human health. Corrective actions were implemented to minimize recurrence.

2.9.1.2 Regulatory Compliance

The Pickering NGS site operates under numerous environmental regulations governing plant operations. The primary regulators from an environmental perspective are the CNSC, Department of Fisheries and Oceans Canada (DFO), Environment and Climate Change Canada (ECCC) and the Ministry of the Environment, Conservation and Parks (MECP).

During the current licence term, Pickering NGS met the overall environmental regulatory requirements. However, there were seventeen (17) regulatory non-compliances (compared to twenty four (24) over the previous licensing period from 2013-2018), the majority of which were related to minor exceedances of effluent and temperature limits specified in the ECA with no significant impact to the public or the environment. The temperature exceedances were primarily due to debris and algae events in the lake. Each event was reviewed and assessed and where appropriate, actions were implemented to prevent future occurrences. Following refurbishment, with the implementation of the proposed deep-water intake, temperature exceedance non-compliances due to algae events/debris are expected to no longer be a concern. Since the proposed DWI will draw in cooler water, absolute temperature limit exceedances are expected to be avoided as well.

2.9.1.3 Biodiversity

The Pickering NGS site has a strong Biodiversity and Natural Areas Management program to protect, maintain and enhance the natural environment, species and wildlife habitat on, and in the vicinity of, the Pickering NGS site.

On-site biodiversity initiatives include enhancement of wildlife corridors across the Pickering NGS site, protection of species of concern, and enhancement and protection of the ecological value of the Frenchman's Bay and Duffins Creek watersheds and associated natural areas on and adjacent to the site. Pickering NGS includes a MOTUS tower, part of a global tracking network administered by Birds Canada. With ideal locations along Great Lakes migration routes, OPG's six towers (Saunders, Nanticoke, Pickering, Darlington, Lennox, and Des Joachims) support international research and highlight the importance of our habitats for migratory species.

In 2021, a new 3-year initiative began to remove non-native, invasive phragmites from the Pickering Hydro Marsh with the goal to increase biodiversity in the wetland.

Since 2018, approximately 3,500 trees and shrubs have been planted on or around Pickering NGS OPG property by volunteers from the community and OPG staff.

Pickering NGS continues to enhance habitat offsite through the ongoing partnership with Environmental Stewardship Pickering. Projects have included the creation of a wildflower garden at a local school, tree planting events and the creation of habitat structures for birds and pollinators.

OPG submits applications for Wildlife Habitat Council certification (powered by Tandem Global) of select sites. The Wildlife Habitat Council is an international non-profit, non-lobby group that promotes and independently certifies habitat conservation and management on corporate lands through partnerships and education. Pickering NGS currently holds the gold standard Wildlife Habitat Council certification for the period 2026-2028, which is the top tier certification. In 2026, Tandem Global nominated Pickering NGS for a Pollinator Project Award recognizing OPG's partnership with Wildlife Preservation Canada to study native bumble bee populations in the newly created pollinator garden at the Pickering Learning Center.

2.9.2 Environmental Risk Assessment

Consistent with CNSC REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures*, Version 1.2, and REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, OPG updates the Pickering NGS site ERA at least once every five years. The purpose of the Pickering NGS site ERA is to assess potential human health and ecological risks from exposure to radiological contaminants, conventional contaminants, and physical stressors (e.g. noise) present in the environment as a result of site operations. This is achieved through completion of a human health risk assessment (HHRA) and an ecological risk assessment (EcoRA).

The 2022 ERA, *Environmental Risk Assessment Report for Pickering Nuclear*, focused on the years 2016 to 2020 and meets the requirements of the CSA standard N288.6-12 *Environmental risk assessments at class I nuclear facilities and uranium mines and mills*. The ERA is reviewed and updated based on ongoing environmental monitoring data, operational experience, and advances in scientific knowledge.

The results of the ERA inform the Environmental Monitoring Program and Effluent Monitoring Programs, as per CSA N288.4-19, *Environmental monitoring programs at nuclear facilities and uranium mines and mills*, and CSA N288.5-22, *Effluent and emissions monitoring programs at nuclear facilities*. These programs also in turn inform the ERA by providing information on effluent concentrations and loading, and by providing environmental data to assist in model calibration and validation.

The 2022 ERA confirms that the Pickering NGS and PWMF continue to operate in a manner that is protective of the health of the public and the environment. The ERA results are intended to be conservative and hence do not underestimate any risk to the public and the environment.

This report was shared with Indigenous Nations and communities in 2023 and OPG responded to comments received. The comments received will also be considered for future ERAs, where applicable. OPG continues with its efforts to develop comprehensive and ongoing engagement with the WTFNs around ERAs. The ERA report is available on www.opg.com.

2.9.2.1 Predictive Environmental Risk Assessment

The purpose of a PERA, previously referred to as a Predictive Effects Assessment (PEA), is to identify and assess the potential interactions with the environment as a result of future site activities and to determine whether adequate provision for the protection of the environment and health of persons has been made.

Both the 2017 PEA and the 2022 PEA Addendum reports concluded that there are no potential adverse effects predicted to human health or the environment from continued operation of Pickering NGS (Unit 5 to Unit 8) to 2026 and the proposed Stabilization Phase and SWS Phase activities. OPG shared the 2022 PEA Addendum Report with Indigenous Nations and communities in 2023 and responded to comments received.

For this licence renewal application, OPG has prepared a PERA in accordance with CSA N288.6-22 and CNSC REGDOC-2.9.1 for the refurbishment and continued operation of Pickering NGS Units 5 to 8, as well as the decommissioning of Units 1 to 4. The PERA also encompasses project activities associated with the PWMF.

Based on feedback from the WTFNs during engagement on other OPG PERAs and ERAs, a Harvester receptor was included to conservatively account for Indigenous people who may live and work near the facility and consume traditional foods harvested near the facility. OPG is making efforts to seek additional information to refine the characteristics of the new Harvester receptor over time.

The PERA for Pickering NGS Refurbishment, Decommissioning, and Continued Operations concluded that most of the project activities are not predicted to result in adverse effects to human and/or ecological receptor groups evaluated. While some aquatic habitat will be disturbed or removed due to DWI construction, and there may be infrequent and localized instances when air quality and noise guidelines are temporarily exceeded mitigation measures will be implemented and monitoring will confirm there are no adverse effects. Project activities will be considered as part of the periodic review and update of the monitoring programs and ERAs resulting in a continual assessment of effects on human and non-human biota. The PERA Rev 0 was submitted to CNSC staff on June 20, 2025.

OPG has been committed to engaging with the WTFNs on the PERA to broaden OPG's understanding of surrounding land use and receptor characterization. OPG shared a draft of the PERA Rev 0 report with the WTFNs for review and comments in April 2025. The WTFNs completed their review and provided comments back to OPG in June 2025, and OPG provided a response to the comments in August 2025.

The PERA Rev 1 has been updated to incorporate additional environmental data collected in 2025, applicable changes based on comments received from the WTFNs and CNSC staff, as well as any notable changes in project planning. The conclusions in the updated PERA have not changed. A draft PERA Rev 1 was shared with the WTFNs in March 2026. OPG received comments from Curve Lake First Nation in May 2026 and remains committed to addressing these comments. OPG welcomes and appreciates further feedback. The PERA Rev 1 will be submitted to the CNSC at the end of May 2026.

2.9.3 Assessment and Monitoring

OPG maintains an Environmental Monitoring Program (EMP) in the vicinity of Pickering NGS site in accordance with licence requirements. The EMP complies with CSA N288.4-19, *Environmental Monitoring Programs at Nuclear Facilities and Uranium Mines and Mills*. The scope of the Pickering EMP encompasses protection of both the public and the environment from nuclear substances, hazardous substances, and physical stressors resulting from operations at the Pickering NGS site.

Additionally, environmental sampling and analyses for the Pickering EMP supports the annual calculation of radiological public dose resulting from operation of Pickering NGS, as required by

CNSC REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*. The annual public dose attributed from the operations of the Pickering NGS during the licence period has consistently been a very small fraction of the public dose limit of 1,000 µSv/year.

OPG reports the results of its nuclear facility EMPs annually to the CNSC. They have also been shared with Indigenous Nations and communities and the report is made available to the public on www.opg.com.

2.9.3.1 Groundwater Protection and Monitoring Program

The Pickering NGS Groundwater Protection and Monitoring program was established to confirm the predominant on-site groundwater quality and flow characteristics of the Pickering NGS site and to detect any emergent issues. The overall objective of the program is to ensure there are no adverse off-site impacts from impacted groundwater. In 2020, OPG implemented the requirements of CSA N288.7-15, *Groundwater protection programs at class I nuclear facilities and uranium mines and mills*, at the Pickering site. This standard focused on both groundwater monitoring and groundwater protection. As of June 30, 2025, OPG is in compliance with CSA N288.7-23.

Pickering NGS's annual groundwater monitoring program consists of the collection of samples from over one hundred sampling locations annually on the Pickering site. Collected samples are mainly analyzed for tritium, but some locations are also analyzed for petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, and dissolved iron. Sampling points include monitoring wells and foundation drains (ground tubes). These samples are analyzed statistically to identify any trends.

The groundwater data assessed during the period 2018 to 2024 from many of the key areas at Pickering NGS indicate that tritium, petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, and dissolved iron concentrations have generally remained constant or decreased, showing stable or improved environmental performance. Tritium concentrations in samples taken from the site-perimeter monitoring wells during this licence period have been stable and within historical ranges demonstrating that there are no off-site impacts.

Water level elevation data collected as part of the Pickering NGS site's annual groundwater monitoring program has shown that groundwater flow patterns remained consistent over the licence period. The 2024 inferred shallow groundwater contour map is provided in Figure 25. Outside of the protected area, groundwater generally is inferred to flow from the east landfill towards the station buildings to the southwest and towards Lake Ontario in the south. Inside the protected area and in the vicinity of the powerhouse, groundwater is inferred to flow north towards the Turbine Auxiliary Bay and IFB. Further south of the powerhouse, groundwater is inferred to flow toward Lake Ontario.

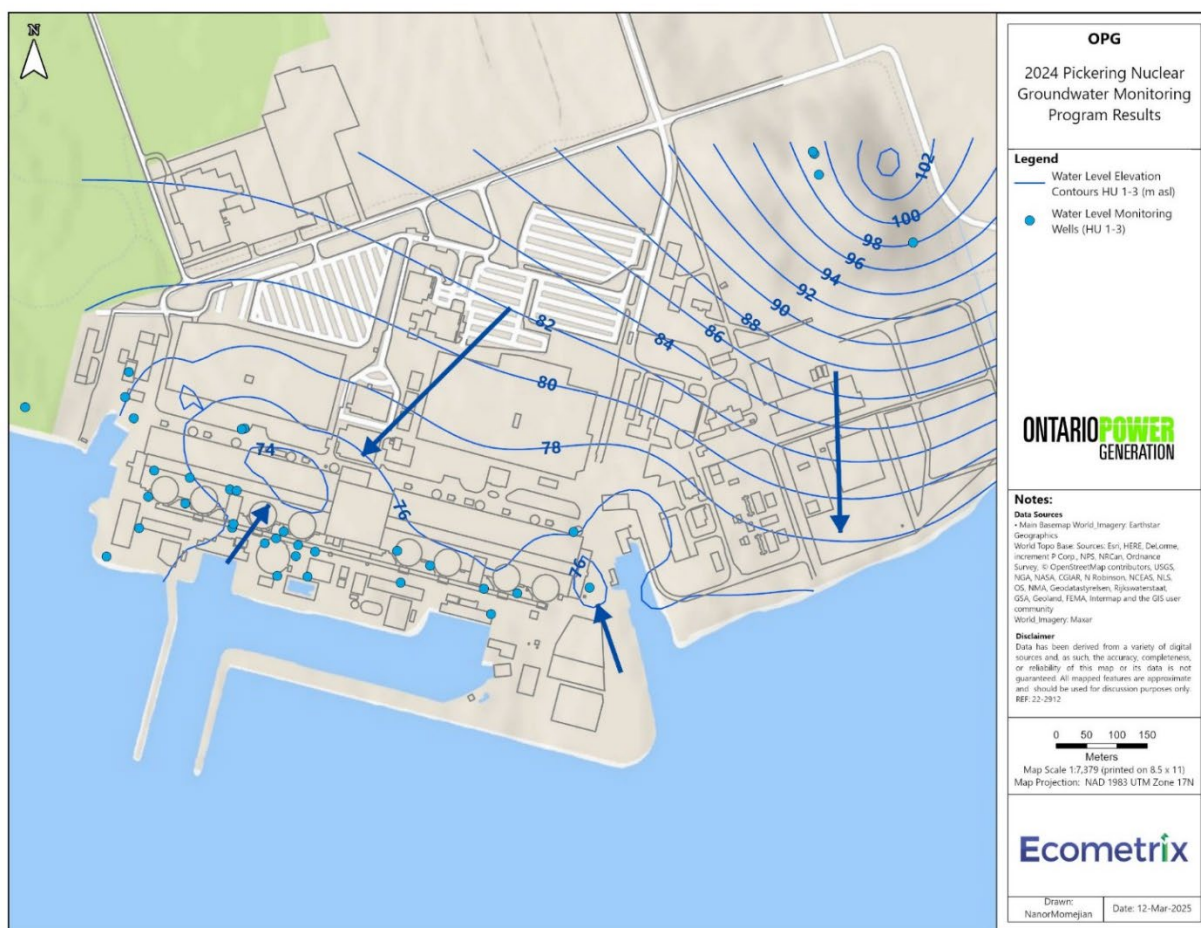


Figure 25. 2024 Inferred Shallow Groundwater Contour Map

The annual *Pickering Nuclear Groundwater Monitoring Program Results* report is submitted to CNSC and subsequently posted online (opg.com) along with a GIS map for public access and viewing.

2.9.4 Effluent and Emission Control

2.9.4.1 Radiological Emissions to Air and Water

The Pickering NGS site effluent monitoring program is compliant with CSA N288.5-22, *Effluent and emissions monitoring programs at nuclear facilities*. The objectives of the effluent monitoring program are to:

- Demonstrate adherence to internal objectives and compliance with authorized release limits and any other regulatory requirements concerning the release of nuclear and hazardous substances from the source.
- Confirm the adequacy of controls on releases from the source and provide assurance to the public on effectiveness of the program.
- Provide an indication of unusual or unforeseen conditions that might require corrective action or additional monitoring.

- Provide data to refine ERA/dose assessments, assess the level of risk on human health and safety, and the potential biological effects in the environment of the nuclear and hazardous substances of concern released from facility.
- Confirm predictions in the environmental impact statement made through the environmental review process.

The *Pickering Nuclear Radioactive and Hazardous Emissions Monitoring Plan*, is developed and addresses design requirements, reporting requirements, and sampling/analytical procedures use, in alignment with CSA N288.5-22, section 6.2 *Systematic planning process for the development of an effluent and emissions monitoring program*; and, as required by section 6(i) of the *Class I Nuclear Facilities Regulations*. Information provided includes:

- the location of points of release (including maps and equipment designation);
- the maximum expected quantities and concentrations (e.g., Maximum Probable Emission Rates and Action Levels for radiological substances, or regulatory limit for contaminated substances); and
- the anticipated volume and flow rate of releases of nuclear substances and hazardous substances into the environment, including their physical, chemical, and radiological characteristics under normal operating conditions.

Pickering NGS has robust treatment systems and control technologies in place as part of its effluent and emissions control program to minimize emissions.

Derived Release Limits

Derived Release Limits (DRLs) for a given radionuclide is the release rate to air or surface water during normal operation of a nuclear facility that would cause an individual of the most highly exposed group around the Pickering NGS site to receive and be committed to a dose equal to the annual regulatory dose limit over the period of a calendar year. DRLs are used to establish controls on the releases of radioactive materials and are calculated for radionuclides of potential dose significance in effluent streams to facilitate the control, reporting, and regulation of radionuclide emissions. DRLs are calculated using CSA N288.1-20, *Guidelines for modelling radionuclide environmental transport, fate, and exposure associated with the normal operation of nuclear facilities*, and submitted to CNSC. The airborne and waterborne DRL values shown below in Table 10 are for the Pickering NGS site which includes both Pickering NGS and the PWWF. OPG transitioned to the 2020 edition of CSA N288.1 and the updated airborne and waterborne Pickering NGS site DRLs shown in Table 10 became effective January 1, 2025. The sewage DRLs shown in Table 10 below are documented in *Derived Release Limits and Environmental Action Levels for Pickering Nuclear Sewage Effluent*.

Table 10. Pickering NGS site - Derived Release Limits

Release Category	Radionuclide	DRL (Becquerel/year)	Operational DRL (Becquerel/week)
Air	Tritium (HTO)	1.14E+17	2.19E+15
	Carbon-14	3.25E+15	6.24E+13
	Noble Gases ¹	3.07E+16	5.91E+14
	Particulate	4.95E+11	9.51E+09
	Iodine (mixed fission products)	3.69E+12	7.10E+10
	Gross Alpha	8.74E+10	1.68E+09
Release Category	Radionuclide	DRL (Becquerel/year)	Operational DRL (Becquerel/month)
Water ²	Tritium (HTO)	7.54E+17	6.28E+16
	Carbon-14	3.00E+13	2.50E+12
	Gross Beta-Gamma	1.49E+12	1.24E+11
	Gross Alpha	2.06E+12	1.72E+11
Release Category	Radionuclide	DRL (Becquerel/year)	Operational DRL (Becquerel/month)
Sewage	Tritium	5.4E+16	4.5E+15
	Carbon-14	9.9E+13	8.2E+12
	Gross Beta-Gamma (limited by Co-60)	1.2E+11	1.0E+10

Action Levels

An Environmental Action Level (EAL) for environmental release is an effluent monitoring level (concentration, activity, rate, etc.) that, if exceeded, triggers an immediate investigation to determine the cause and develop the required corrective actions. This enables the initiation of corrective action, if warranted. In 2017, a standardized methodology for calculating and applying EALs was developed and documented in CSA N288.8-17, *Establishing and implementing action levels for releases to the environment from nuclear facilities*. The primary changes introduced by the standard are that the scope of the EALs must consider both hazardous and radioactive substances, and the EALs calculations are based on the historical performance of the station.

The Pickering NGS site EALs, updated to reflect the guidance and methodology in CSA N288.8-17 are shown in Table 11. As with the DRLs, the EALs apply to the Pickering NGS site which includes the Pickering NGS and PWMF. The updated EALs were implemented effective

¹ Units are in Bq-MeV/year and Bq-MeV/week.

² Waterborne DRLs are based on Units 1 and 4 being shut down (reduced condenser cooling water flow condition)

December 31, 2023. Exceeding an EAL requires notification and reporting to the CNSC, investigation of the cause, and corrective action as required.

Table 11. Pickering NGS site – Action Levels for Environmental Releases

Release Category	Radionuclide (units)	EAL (Gaseous Releases)
Air	Tritium (Bq/week)	2.59E+13
	Carbon 14 (Bq/week)	3.30E+11
	Iodine-131 (Bq/week)	6.85E+06
	Noble Gas (Bq-MeV/week)	9.99E+12
	Particulate (Bq/week)	5.88E+06
	Gross Alpha (Bq/week)	Not Required
Release Category	Radionuclide (units)	EAL (Liquid Releases)
Water	Tritium (Bq/month)	1.41E+14
	Gross Beta / Gamma (Bq/month)	2.49E+10
	Carbon 14 (Bq/month)	Not Required
	Alpha (Bq/month)	Not Required

Note: Waterborne EAL values stated are for releases to the lake outfall.

During the current licence term, the emissions from the Pickering NGS have consistently been orders of magnitude below DRL values as shown in Table 12 and Table 13.

Table 12. Pickering NGS Radiological Emissions to Air (% of DRL)

Year	Tritium (% DRL)	Carbon 14 (% DRL)	Noble Gases (% DRL)	Iodine (% DRL)	Particulate (% DRL)	Gross Alpha (% DRL)
2019	0.55%	0.10%	0.49%	0.00%	0.00%	0.00%
2020	0.64%	0.08%	0.17%	0.00%	0.00%	0.00%
2021	0.51%	0.10%	0.41%	0.00%	0.00%	0.00%
2022	0.49%	0.09%	0.38%	0.00%	0.00%	0.00%
2023	0.47%	0.12%	0.45%	0.00%	0.00%	0.00%
2024	0.40%	0.09%	0.37%	0.00%	0.00%	0.00%

Table 13. Pickering NGS Radiological Emissions to Water (% of DRL)

Year	Tritium (% DRL)	Gross Beta-Gamma (% DRL)	Carbon 14 (% DRL)	Gross Alpha (% DRL)
2019	0.05%	4.17%	0.01%	0.01%
2020	0.05%	1.76%	0.00%	0.01%
2021	0.06%	6.42%	0.01%	0.01%
2022	0.06%	1.07%	0.00%	0.01%
2023	0.05%	1.18%	0.01%	0.11%
2024	0.05%	18.72%	0.01%	0.02%

Stack ventilation flows are monitored to measure the gaseous effluent releases (tritium, iodine, carbon-14, noble gases, and particulate). The results are compiled weekly and compared to the applicable weekly DRL. There were no weekly EAL exceedances for radiological emissions to air during this licence period (2018-2024).

Waterborne radiological release data are compiled monthly and compared to monthly DRLs. These radiological releases are routinely managed through the active liquid waste management system, collecting in tanks which are monitored prior to discharge. During the current licence period (2018-2025), there were four (4) monthly EAL exceedances for radiological emissions to water (for gross-beta gamma), the majority of which were attributed to sediment entrainment from the Lake or laboratory sample contamination. There was also one monthly DRL exceedance (for gross-beta gamma) which was attributed to accumulation of lake sediment and not due to station operations.

Monitoring of sewage discharges includes tracking tritium, carbon-14, and gross beta-gamma activities to detect potential releases. Data from 2018 to 2025 indicates that the EAL for sewage gross beta-gamma was exceeded four (4) times. These exceedances did not impact the health of the public or the environment and were investigated fully. Efforts continue to prevent recurrence. Additional auto-samplers have been installed to enhance monitoring of the sewage system.

2.9.4.2 Conventional Emissions

The Pickering NGS site also monitors conventional substances emitted to air and water as a result of site operations. Reports on emissions of conventional substances are prepared in accordance with provincial and federal regulatory requirements and submitted to provincial and federal agencies throughout the year.

Nitrogen Oxides, and Carbon Dioxide Emissions

Pickering NGS has standby generators to provide back-up electrical power to the station if required. These generators, which produce nitrogen oxides and carbon dioxide emissions, are routinely tested to ensure availability. There were no regulatory non-compliances associated with air emissions from these generators during the licence period.

Hydrazine and Ammonia

Hydrazine is used in the boiler feedwater systems to prevent corrosion. Ammonia is a resulting by-product. Hydrazine and ammonia are released to the environment when steam is vented to

the atmosphere and from station water systems (to Lake Ontario). There were no regulatory non-compliances associated with hydrazine and ammonia emissions during the licence period.

Ozone-Depleting Substances

Ozone-depleting substances (ODS) are used in refrigeration systems. Refrigerant leaks to air are minimized through routine inspections and maintenance of equipment. ODS releases between 10 kg and 100 kg are reported to Environment Canada in semi-annual halocarbon release reports. ODS releases greater than 100 kg are reportable as spills. During the current licence term (2018-2024), there were no ODS releases greater than 100 kg at Pickering NGS.

2.9.5 Protection of People

The EMP monitors off-site air, water (municipal drinking water, well water and lake water), aquatic samples (fish, sediment, and beach sand), and terrestrial samples (fruits, vegetables, milk, soil and animal feed). Data gathered from this program, along with Pickering NGS emissions data, are used to assess the annual radiological dose to members of the public living or working in the vicinity of the Pickering NGS site.

The effective dose limit for members of the public as set out in the *Radiation Protection Regulations*, is 1,000 $\mu\text{Sv}/\text{year}$. As shown in the logarithmic scale in Figure 26 and illustrated in Figure 27, dose to the public from operation of the Pickering NGS site is a very small fraction (i.e., approximately 0.1%) of both the annual regulatory dose limit and the annual natural background radiation in the area.

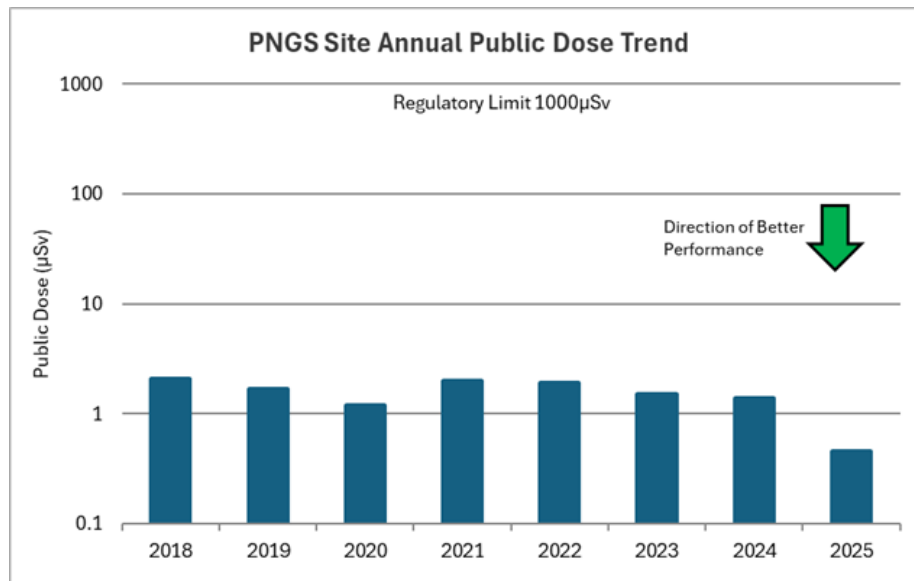


Figure 26. Pickering NGS site Annual Public Dose Trend

Note: A logarithmic scale has been used to effectively illustrate both the public dose and the regulatory limit

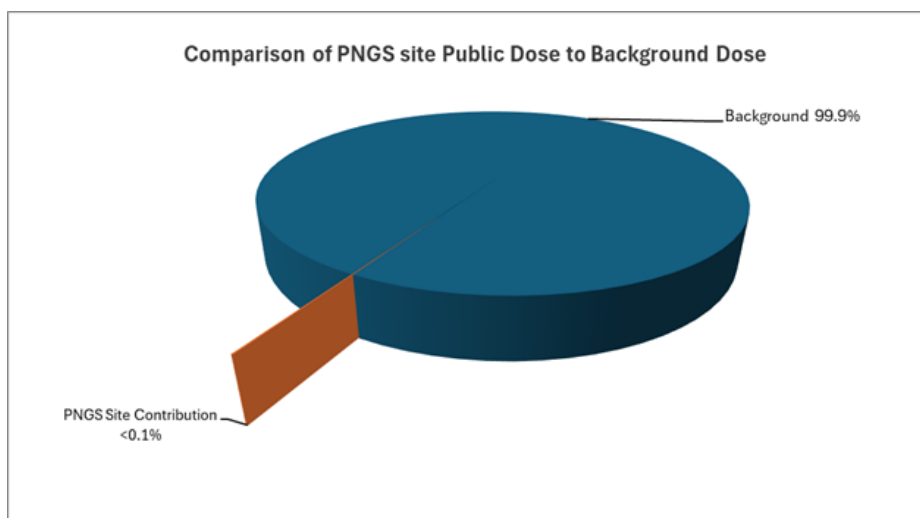


Figure 27. Comparison of Pickering NGS site Public Dose to Background Dose

Municipal drinking water samples collected from downstream water supply plants as part of the annual OPG EMP were well below the Ontario Drinking Water Quality Objective for tritium of 7,000 Bq/L.

2.9.5.1 Abnormal Waterborne Tritium Emission Response

The OPG procedure *Abnormal Waterborne Tritium Emission Response*, provides direction for response in the event of an abnormal waterborne tritium emission from OPG's nuclear sites, and provides guidance for staff to manage the required external notifications in a consistent and effective manner. Specifically, it addresses notifications, default sampling, interfacing with external groups, response network, response facilities, drills and training to support this capability.

Radioactive Liquid Emission Response drills and exercises are conducted annually to demonstrate and assess OPGs ability to respond to simulated Abnormal Waterborne Tritium Emissions, including the effectiveness of response facilities, and the interface with external stakeholders. Radiological liquid emission drills will continue to be conducted with the operation of the refurbished Pickering NGS units.

On December 18, 2024, Pickering NGS conducted an evaluated drill that included participation by the Provincial Emergency Operations Centre (PEOC) to receive notification from OPG. The purpose of the drill was to test the ability of Pickering NGS personnel to determine the extent of the liquid emission, make initial contact promptly and effectively with internal departments and external agencies, notifying that a liquid emission had occurred, and to prepare personnel for the next stage of response. All objectives of the drill were successfully met, including projected tritium release times, and proper and timely notifications to external agencies.

2.9.6 Fish Impingement and Entrainment

Impingement and entrainment of fish within the Pickering NGS occurs from the use of lake water in the condenser cooling water system. With the proposed Pickering NGS Refurbishment activities, the future rate of impingement will be reduced with the planned construction of DWI (see Section 2.9.9).

In 2018, Pickering NGS was issued a Fisheries Act Authorization (FAA) by the DFO. The FAA approved OPG to impinge and entrain a fixed number of fish, eggs and larvae and to counterbalance these losses by undertaking an approved offsetting plan. Effectiveness monitoring is also conducted to assess the efficacy of applied avoidance, mitigation and offsetting measures. The valid FAA period extends from the date of issue (January 2018) through December 31, 2028.

The Fish Diversion System (FDS) is the primary measure to avoid and mitigate fish impingement. The FDS is installed annually by May 1 and removal commences no earlier than November 1. The Authorization requires OPG to demonstrate the FDS is functioning as intended. During operations, functionality and performance are measured through visual checks, inspections and maintenance.



Figure 28. Looking South from Pickering NGS at Intake, West (right) and East (left) Groynes, Installed Debris and Ice Booms (centre) and Fish Diversion System (top)

Routine monitoring of fish impingement is conducted weekly throughout each year of the Authorization. The estimated biomass of impinged fish is reported annually to the CNSC and DFO, and reports are posted to OPG's website.

Over the 2018-2024 period, the combined biomass of all species and ages impinged was below the two-year consecutive threshold of 3,619 kg per year, except in 2018 and 2019. In 2018, impingement was influenced by above average impingement rates in May, June and October which were all higher than the same months in the previous 5-year period. In 2019, annual biomass was influenced by above average impingement rates in January, June, November and December. Subsequent investigations determined that none of the exceedances were caused by Pickering NGS operations and were primarily attributed to unusually cold weather and

thermal upwellings or downwellings that can result in cold shock or cold stress to fish, which is outside of OPG's operational influence. From 2020 to 2024, impingement rates have remained below the two-year consecutive threshold, with annual biomass of impingement for all species ranging from 2,479 - 3,525 kg per year (Figure 29).

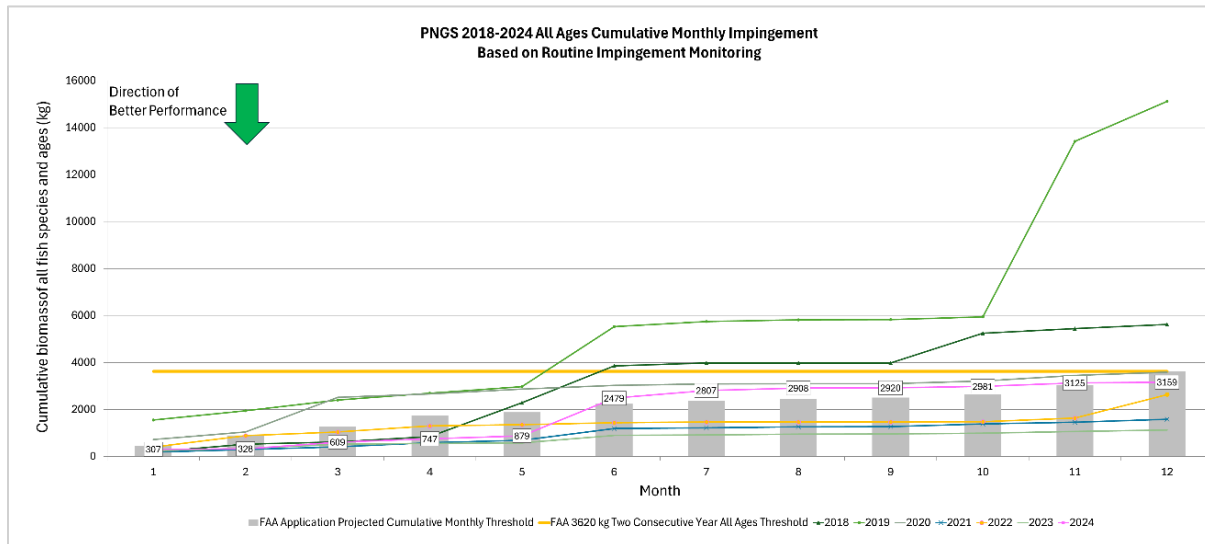


Figure 29. Pickering NGS Annual cumulative biomass (kg) of fish of all species and ages impinged

As per condition 3.2.3 of the FAA, OPG commenced the field phase of a 12-month entrainment study on October 29, 2024. The goal of the entrainment study is to quantify residual impacts from the entrainment of ichthyoplankton (the eggs and larval stages of freshwater fish) at Pickering NGS associated with condenser cooling water withdrawals from Lake Ontario. The field data will be used to: (i) calculate densities of fish eggs and larval stages; (ii) model species specific and cumulative entrainment; and, (iii) calculate entrainment biomass metrics to estimate actual (2018-2025) or predict future (2025-2028) entrainment losses during the period that the Pickering NGS Fisheries Act Authorization is valid.

OPG recognizes that fish impingement and entrainment are important areas of interest to Indigenous Nations and communities. In advance of finalizing the study design and commencing the study in October 2024, OPG shared the fish entrainment study design with the Williams Treaties First Nations Rightsholders for review and comment. For the Nations who submitted comments on the study design, OPG provided responses and adjusted the study design, as appropriate. Following feedback from the Michi Saagiig Nations, OPG continues to provide updates on the study's progress and remains open to facilitating participation on sampling activities. Once the fish entrainment study is completed, OPG will share the results of the study with the Williams Treaties First Nations Rightsholders and any other Indigenous Nations and communities that express an interest in the results.

The Pickering NGS FAA requires that residual impacts from the death of fish (in this case resulting from impingement or entrainment during Pickering NGS operations or SWS phases) are monitored and reported, and that the productivity losses are ultimately counterbalanced through the implementation of an offsetting plan. The Pickering NGS FAA, which was approved in 2018, outlines three distinct offsetting measures to counterbalance fish impingement or

entrainment losses, with the expectation of achieving a net benefit in fisheries productivity occurring over the duration of the Authorization. The Big Island Wetland, located in the Bay of Quinte, is a wetland fish habitat restoration measure and Fish Habitat Bank. The Simcoe Point Wetland is a combination Habitat Restoration and Enhancement measure situated near the mouth of Duffins Creek. The third offset measure is stocking of Atlantic Salmon into Duffins Creek, which is a component of the broader Lake Ontario Atlantic Salmon Restoration Program.

2.9.7 Thermal Plume

The 2022 ERA Report for Pickering NGS concluded that the thermal plume from Pickering NGS is not having an effect on Round Whitefish embryo survival. It is unlikely that there are any effects arising from the thermal plume in the lake for juvenile or adult stages of any fish species.

Based on the embryo survival study completed from December 2018 to April 2019 and from December 2019 to April 2020, the largest relative survival loss during 2018-2019 and during 2019-2020 was found to be 3.8% and 1.5%, respectively. These values are well below the 10% loss threshold that CNSC requires to implement further mitigation measures. The 2018-2019 and 2019-2020 studies supported the 2018 Pickering NGS ERA conclusion that there are no chronic or likely acute adverse effects on Round Whitefish egg survival. These findings have been incorporated into the 2022 Pickering NGS ERA. ECCC accepted that no further monitoring for potential chronic effects on Round Whitefish will be needed for operations up to December 31, 2026. The need for, and scope of, future thermal monitoring of the Pickering NGS discharge will be proposed by OPG in consultation with DFO, ECCC and First Nations Rightsholders.

2.9.8 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Environmental Protection SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

OPG's Environmental Protection policy, programs and implementing procedures will continue to apply to Pickering NGS Units 1 to 4 Decommissioning.

The following general mitigation approaches will be employed throughout the decommissioning process:

- Continued oversight and periodic review of environmental monitoring programs, including quality assurance processes, adequacy assessments, and systematic evaluation of enhancement opportunities
- Preparation of a site-specific project Environmental Management Plan identifying any necessary mitigation measures or monitoring
- Carrying out activities in a manner consistent with requirements of OPG's Environment, Health, and Safety Managed Systems program
- Ongoing engagement with regulatory bodies, Rightsholders and other Indigenous Nations and communities, and stakeholders.

2.9.9 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Environmental Protection SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in

the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

OPG's Environmental Protection policy, programs and implementing procedures will continue to apply to Pickering NGS Units 5 to 8 refurbishment activities. Lessons learned and OPEX from the Darlington NGS Refurbishment project with respect to environmental considerations such as spills and emissions monitoring will be incorporated, as applicable, to Pickering NGS refurbishment planning and execution.

As outlined in Appendix D, a new DWI structure, similar to Darlington NGS, is proposed at Pickering NGS. The rate of impingement and entrainment is expected to be reduced with the planned construction and operation of the DWI. There could also be a decrease in thermal plume temperatures at the Pickering NGS B outfall due to intake of cooler water from the DWI resulting in lower thermal impacts to the environment especially during the summer periods. The DWI also is expected to significantly reduce the amount of algae and sedimentation which historically has impacted Pickering NGS.

In addition to the DWI structure and forebay cutoff wall, as part of the DWI program there are associated site preparation engineering changes which includes bridge installation, road improvements, clearing and grubbing, potential forebay infill, and potential changes to laydown/storage areas. These engineering changes/activities will be completed in accordance with applicable permits and approvals, including from DFO. An environmental management plan will be in place to implement mitigation and control measures during the construction of these engineering changes and activities. Preliminary site investigations included the geotechnical and geophysical studies that were performed in the lake and onshore. These subsurface studies will inform the design of the tunnel, intake, potential infill, cutoff wall, roads, bridge, and laydown areas. These engineering changes will all support construction and logistics associated with the DWI.

2.9.10 Pickering Waste Management Facility

2.9.10.1 Environmental Management System

OPG's Environmental Health and Safety Managed Systems program is described in Section 2.9.1. As described, the identification of significant environmental aspects allows for more focus on areas where there is the potential to have a negative (or positive) impact on the environment.

Performance measures are established to ensure the controls perform as designed and are corrected and/or improved under the EMS framework. For example, spill and compliance targets have been established and tracked during the licence period. Since that time, OPG has consistently met or surpassed these targets. In the last 10 years, there have been no reportable spills and no environmental non-compliances at the PWMF.

2.9.10.2 Environmental Risk Assessment

The 2022 ERA, *Environmental Risk Assessment Report for Pickering Nuclear*, including its overall conclusions for the Pickering NGS and PWMF is described in section 2.9.2.

The expansion of PWMF Phase II area to accommodate additional used fuel storage capacity will result in future changes to the stormwater catchments. Per the requirements of CSA N288.6-12 Clause 11.1 to periodically review changes to the facility, the 2022 ERA has recommended stormwater monitoring be completed in this area after the completion of the PWMF Phase II area.

Predictive Environmental Risk Assessment for the Pickering Component Storage Structure

A PERA was completed for the PCSS. The PCSS will be used for the storage of low and intermediate level waste from the Pickering NGS refurbishment and decommissioning, including components such as steam generators, pressure and calandria tubes, calandria tube inserts, and end fittings. The PCSS PERA includes both a predictive EcoRA and a HHRA.

The PCSS PERA was shared with the Williams Treaties First Nations for review in December 2024. On June 5, 2025, a revised PCSS PERA was submitted to CNSC staff; the PERA was revised to incorporate feedback received through engagement activities with the WTFNs. The PERA concludes that the construction and operation of the PCSS will be protective of human and ecological receptors residing in the vicinity of the Pickering NGS site.

2.9.10.3 Assessment and Monitoring

The PWMF is covered by the Pickering Nuclear Environmental Monitoring Program described in section 2.9.3. Radiological emissions from the PWMF are an extremely small fraction of the overall emissions from the Pickering NGS site. OPG has a comprehensive environmental monitoring program that provides data to confirm that all facilities on the Pickering NGS site are operating in a manner that is protective of human and ecological receptors residing in the surrounding area. Dose to the public from the operation of facilities on the Pickering NGS site (including the PWMF) is less than 1% of the regulatory limit.

Groundwater Monitoring

As part of the Pickering NGS operations, the PWMF is integrated into the overall Pickering NGS groundwater monitoring program described in section 2.9.3.1. The PWMF operations are considered low risk to groundwater given the nature of the above ground dry storage and sealed containment of the used fuel. As a result, no groundwater monitoring is completed specific to the PWMF operations. However, groundwater monitoring is completed in various locations across the Pickering NGS site including some locations near the PWMF storage areas. No impacts to groundwater have been identified as a result of the PWMF operations.

2.9.10.4 Effluent and Emission Control

Airborne Emissions (Radiological)

Under normal operating conditions, no airborne emissions are expected from loaded DSCs during transfer from the Irradiated Fuel Bays (IFBs) to the PWMF. Airborne releases are also unlikely to arise under normal operating conditions during storage of seal welded DSCs. There is a small potential for airborne emissions resulting from DSC processing operations such as welding and vacuum drying. The DSC processing building also has a dedicated active ventilation system with High Efficiency Particulate Air (HEPA) filtration.

Although no significant particulate emissions are expected from the exhaust at the PWMF, it was formerly monitored for confirmation purposes. Since monitoring began, particulate emissions have been confirmed to be negligible, being below or near the minimum detection limit. Based on the monitoring results over the years and in alignment with the monitoring standards, this monitoring was determined to be no longer required. In 2024, CNSC staff accepted OPG's request to discontinue the ventilation stack monitoring. Public notification of this change was provided in the 2023 Environmental Emissions Data reports posted online at www.opg.com and has been communicated to the local Indigenous communities via routine

meetings. All data was reported to the CNSC in the PWMF quarterly and annual compliance reports and are available to the public on the OPG website at www.opg.com.

Figure 30 shows a summary of the radiological airborne emissions from the DSC Processing Building stack until 2024 when the stack monitoring was discontinued. As shown in the graph below, particulate emissions have consistently been well below the DRL and EAL.

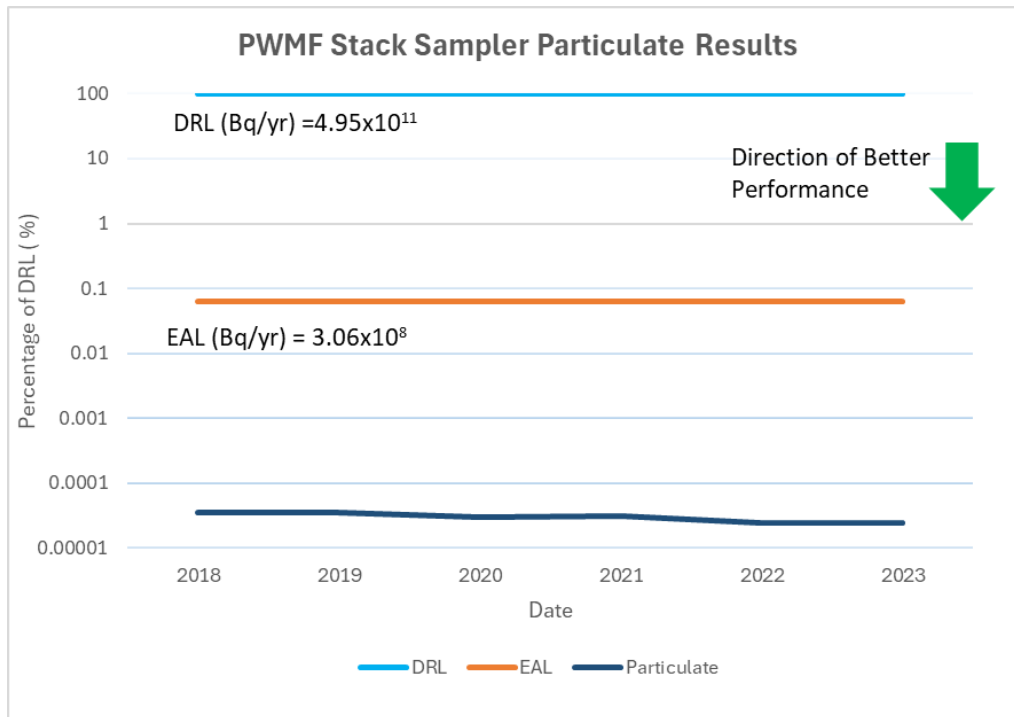


Figure 30. PWMF Airborne Particulates from DSC Processing Building Stack Sampler

Note: Airborne particulate data (Bq/yr) was calculated by multiplying the reported airborne contamination (weekly average) by the number of fiscal weeks per month, then summing the months into an annual total.

Waterborne Emissions (Radiological)

After loading in the station Irradiated Fuel Bays (IFBs), DSCs are fully drained and vacuum-dried, ensuring no liquids are present. Decontamination is performed in the IFBs prior to transfer. Elastomeric seals and shielded transfer plugs remain installed during transfer. Water is collected in the floor drains (e.g., from floor wash water, precipitation such as snow or rainwater that enters the building during DSC transfer and from condensate from the air conditioners). No contamination is expected in the sump water from the DSC operations; however, the sump water is analyzed for tritium and gross beta-gamma activity prior to being transferred to the station's active liquid waste management system to ensure it meets the station's acceptance criteria.

Water is sampled from the Retube Component Storage area stormwater catch basins for gross beta-gamma activity for confirmation purposes. This provides assurance that any radioactive contamination of the stormwater water originating from the storage area is detected; however, no contamination of the stormwater water is expected from the DSMs. In the last 10 years, all the gross beta-gamma sample results were equal to or less than the Minimum Detectable Activity.

Conventional Emissions

Non-radiological (conventional) air emissions may include emissions from welding and DSC paint touch-ups. DSC paint touch-up operations involve minimal paint quantities. Residual paint aerosols from the paint bays are removed through filters before exhausting to the active ventilation system. Due to small quantities, painting methods, and the use of appropriate filtration, no significant emissions of paint materials are expected. Welding fumes from DSC seal-welding operations are additionally exhausted through the High Efficiency Particulate Air filtered active ventilation system. The emissions from the welding operations are also considered insignificant. Consequently, there is no monitoring program required for non-radiological emissions at the PWMF.

Stormwater management at industrial facilities is regulated by the MECP under the *Environmental Protection Act* and the *Ontario Water Resources Act*. Pickering NGS stormwater works are approved under the site ECA No. 7792-DGWK9H for industrial sewage works. The stormwater works are designed, approved and maintained per the ECA process to ensure stormwater is properly managed to prevent erosion, flooding and degradation of receiving water bodies. The PWMF employs oil and grit separators for the treatment of stormwater.

2.9.10.5 Environmental Assessment Follow-up Program

Prior to PWMF expanding to the Phase II site, OPG performed a screening level Environmental Assessment in 2003 in accordance with the *Canadian Environmental Assessment Act* 1992 to provide additional storage capacity of used fuel in DSCs. The scope of the project included construction and operation of DSC SB3 and SB4.

The results of the assessment identified no significant residual adverse environmental effects of the PWMF Phase II project with the proposed mitigation measures in place. In 2004, the Commission concluded that the project, taking into account the appropriate mitigation measures identified in the Screening Report, was not likely to cause significant adverse environmental effects, and approved the Environmental Assessment. The PWMF operating licence was amended in 2005 to include the construction of DSC SB3 and SB4.

As part of the PWMF Phase II project, OPG submitted an Environmental Assessment Follow-up Plan which outlined the monitoring requirements for the project. The Environmental Assessment follow-up plan included monitoring related to the following:

- Stormwater Management,
- Visual Screening of the Buildings from the Waterfront Trail,
- Shoreline Stability, and
- Public Attitude Research Survey.

Environmental Assessment follow-up monitoring reports were provided to the CNSC in 2010 and 2021 following the construction of SB3 and SB4 respectively. Results of the monitoring are summarized below.

Since the Environmental Assessment Follow-up Plan has been completed as required per WFOL Licence Condition 9.2, OPG requests the removal of this Licence Condition in the next licence.

Stormwater Management

The stormwater management systems associated with SB3 and SB4 consist of asphalt surfaces with catch basins, storm sewers, oil and grit separators, and an engineered outfall to the lake. The stormwater management systems are designed to MECP standards. The follow-up monitoring indicates that the constructed stormwater management systems met the intent of the design with no erosion or significant sediment transport evident.

Visual Screening

Trees were originally planted following the construction of SB3 to enhance visual screening of the building from various viewpoints from the Waterfront Trail. Following the construction of SB4, additional trees were planted and measures to enhance growth of existing trees were completed to the east of the PWMF Phase II Area to improve visual screening of SB4 from the Waterfront Trail. Follow-up monitoring of the trees was completed in 2023 and some were noted to require replacing due to damage to the bark from rodents. These trees were subsequently replaced in 2024 with additional trunk protection.

Shoreline Stability

Due to the proximity of the PWMF Phase II Area to the shoreline and the bluff, an erosion hazard assessment was completed to determine the appropriate setback of the buildings from the shoreline and the bluff per Ontario Regulation 166/06 under the *Conservation Authority Act*. The required setback from the bluff is based on the sum of 100 times the average annual recession rate, the stable slope allowance, plus an additional 10 meters landward. SB3 and SB4 were constructed outside of this limit per the regulatory requirements. OPG continues to monitor shoreline periodically in the vicinity of the PWMF Phase II Area.

2.10 Emergency Management and Fire Protection

Pickering NGS has effective nuclear, conventional and fire emergency preparedness and response programs that meets regulatory requirements and related objectives. Emergency preparedness measures and fire protection response capabilities are in place at Pickering NGS to prevent and mitigate the effects of onsite and off-site nuclear and hazardous substances releases, and fire hazards in order to protect workers, the public, and the environment.

2.10.1 Conventional Emergency Preparedness and Response

The *Ontario Power Generation Emergency Management Program* ensures strategies and resources are in place for OPG's facilities that allow OPG to prepare for, respond to, and recover from emergencies that impact its operations or the public.

The objectives of the OPG Emergency Management program are to protect the health and safety of employees, contractors, the public and responders; the environment; OPG and third-party property; OPG's assets; OPG's reputation; and operational continuity.

The OPG Emergency Management program applies the all-hazards approach to facilitate OPG's readiness for potential hazards and incidents that pose a risk to OPG's facilities, including the Five Pillars of Emergency Management: Prevention, Mitigation, Preparedness, Response and Recovery. At OPG, incident management is carried out by several individual programs and initiatives spanning multiple business units.

Security Emergency Preparedness and Response

The Nuclear Security program supports the protection of nuclear assets at OPG. This program ensures security readiness and maximizes response capability to contain, mitigate, and terminate security events while minimizing the adverse impact on plant staff, operations and functions. Details regarding the development and maintenance of OPGs defensive strategy such as tactical deployment plans are classified as OPG Confidential—Security Protected or higher. In addition, the Cyber Security program manages potential cyber security issues affecting physical security at Pickering NGS. OPG also maintains plans for Information Technology Emergency Response which includes preparing, detecting and assessing, containing, eradicating and recovering from cyber incidents. See Section 2.12 for additional information regarding the Nuclear Security and Cyber Security programs.

2.10.2 Nuclear Emergency Preparedness and Response

OPG's Nuclear Emergency Preparedness program is documented in the *Consolidated Nuclear Emergency Plan (CNEP)*. This plan implements the requirements of CNSC REGDOC-2.10.1, *Nuclear Emergency Preparedness and Response, Version 2*, and serves as the basis for the site-specific nuclear emergency preparedness and response arrangements at OPG's nuclear generating stations. It describes concepts, structures, roles and processes to implement and maintain an effective OPG response in the unlikely event of a nuclear emergency that could endanger on-site staff, the public, or the environment, including the framework for OPGs Emergency Response Organization (ERO). The objective of the program is to ensure OPG has adequate provisions for preparedness and response capability to mitigate the effects of accidental releases of radioactive material and ensure the health and safety of persons and the environment. The CNEP also provides a framework for interaction with external authorities and defines how OPG commitments under the Provincial Nuclear Emergency Response Plan (PNERP) are implemented. OPG has been responsive to interest from Indigenous Nations and communities in the conduct of the Nuclear Emergency Preparedness program and continues to take actions to facilitate further engagement on this topic. More detail regarding OPG's engagement with Indigenous Nations and communities on the Emergency Preparedness program is outlined further below in this section.

In the unlikely event of a nuclear emergency at Pickering NGS, OPG would perform the appropriate notifications to the Province, CNSC, and local municipalities in accordance with established procedures and requirements under the PNERP. The ERO takes actions to control and mitigate the emergency on-site and minimize off-site effects. Under the PNERP, the Province takes actions to notify and protect the public, including directing protective actions such as sheltering, potassium iodide ingestion, or evacuation. The local municipalities support the implementation of Provincial directions. The response of OPG and a range of other organizations are integrated to ensure effective emergency measures are in place (Figure 31), and this inter-operability capability is demonstrated successfully during full scale exercises.

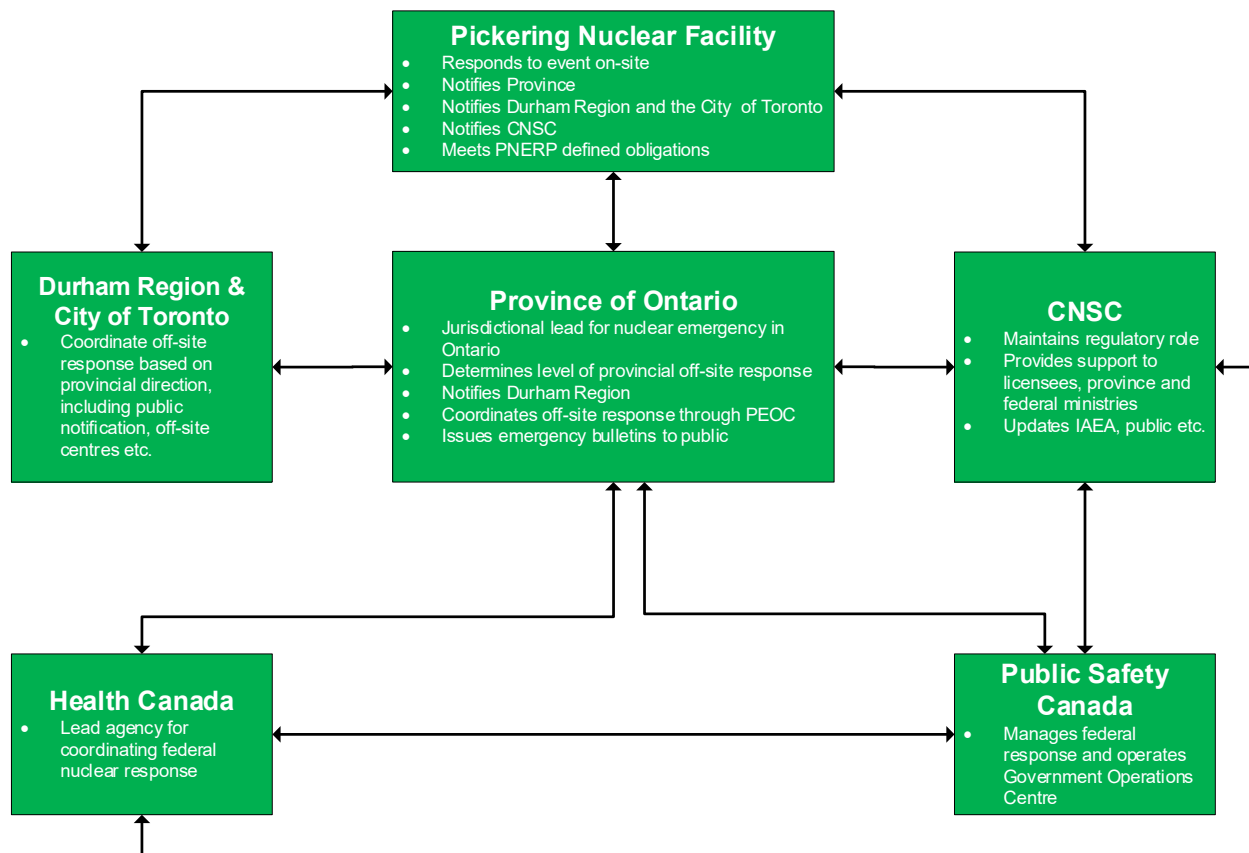


Figure 31. Emergency Response Agency Interactions

The PNERP Master Plan was revised and issued in August 2025. No significant program changes are required; however, OPG will enhance its CNEP and related emergency plans to align with any PNERP changes.

OPG is committed to enhancing and refining its Emergency Preparedness program to ensure compliance with evolving regulatory requirements and industry best practices. OPG is currently in compliance with CNSC REGDOC-2.10.1 Version 2. OPG will conduct a gap analysis and prepare an implementation plan for meeting the requirements of the REGDOC-2.10.1 Version 3 as well as the revised Pickering PNERP Implementing Plan. OPG maintains a robust framework for continuous improvement by incorporating valuable insights and lessons learned from drill and exercise reports. These reports play a pivotal role in identifying areas for enhancement, enabling OPG to continuously strengthen its preparedness, response capabilities, and overall program effectiveness.

Nuclear Emergency Drills and Exercises at OPG

OPG frequently conducts emergency preparedness drills and exercises to ensure the capability to effectively respond to a nuclear emergency is demonstrated and sustained. Station-based radiological and nuclear emergencies are developed to meet the requirements of the CNEP and CNSC REGDOC-2.10.1.

Pickering NGS drills and exercises serve to:

- a) Develop and maintain the skills of the ERO members;
- b) Test the effectiveness of emergency plans, procedures, facilities, equipment, and training; and
- c) Demonstrate the adequacy of plans and the preparedness to respond to events ranging from minor to Severe Accidents.

In September 2023, OPG executed a full-scale nuclear emergency response exercise (Exercise Unified Command) at Pickering NGS which included the participation by a range of external partners at all levels of government. The exercise and scenario were designed to test emergency plan arrangements less commonly demonstrated, including recovery operations. The exercise was successful in achieving its overall purpose of validating the preparedness of OPG and assessing the interoperability with government agencies and local communities to respond to a severe event. Lessons learned from this exercise included:

- Strategies to enhance drill realism, ensuring participants derive maximum benefit from the exercise.
- Enhancements to the methodology for designing extended duration exercise scenarios and managing the associated complexities.
- Enhancements in guidance to staff during event recovery phase.
- Improvements in processes, equipment, and training.

In October 2025, OPG conducted Exercise Unified Command at Darlington NGS. This exercise provided additional insights into the execution and demonstration of complex response activities under exercise conditions. Following the exercise, OPG implemented targeted fleetwide improvements in three areas:

- *Equipment readiness:* OPG confirmed availability and operational readiness of EME assets and strengthened alignment between equipment configuration and deployment expectations.
- *Procedures and guidance:* OPG refined deployment and operating guidance for key response capabilities to improve clarity, sequencing, and usability during execution. OPG also strengthened expectations for exercise “extent of play” to support consistent demonstration.
- *People proficiency and governance:* OPG enhanced learning activities for responders and strengthened drill governance to increase the frequency and consistency of demonstrating response capabilities specific to EME within routine nuclear emergency preparedness drills.

These improvements increased the regularity and quality of demonstrating key response capabilities. They improved alignment between equipment, procedures, and trained personnel, and strengthened the ability to validate readiness through repeatable performance.

OPG continues to validate integrated, multi-organization response objectives through its full-scale exercise program, supported by ongoing training, routine drills, and capability-focused demonstrations. As a core element of OPG's continuous improvement approach, lessons learned and improvements identified at one site are systematically applied across the fleet, so Pickering and Darlington both benefit from shared experience, consistent standards, and

strengthened execution. By leveraging common emergency response processes across Pickering and Darlington, this approach supports sustained confidence in emergency preparedness across the full range of operating and transition conditions.

Equipment Important to Emergency Response

Equipment Important to Emergency Response (EITER) includes the procedures, SSCs, as well as essential tools and equipment necessary to implement the CNEP. EITER procedures ensure maintenance is prioritized and contingency actions are taken when EITER designated equipment is taken out of service or becomes unavailable. EITER ensures OPG has the capability to implement the CNEP through the readiness and availability of the EITER equipment, facilities, or through enacting compensatory measures or use of designated alternate facilities where the primary means may be unavailable. EITER requirements are integrated into the work management process for planned maintenance activities.

In 2020, OPG received recognition for the strength of the EITER program during an external international review because of its innovative practices for tracking, managing, and maintaining this equipment.

Potassium Iodide (KI) Pills

Ingestion of KI is one protective action that may be directed by Provincial authorities in the unlikely event of a nuclear emergency. OPG continues to provide the Regional Municipality of Durham and the City of Toronto with the necessary resources and support to pre-distribute KI within the 10 km Detailed Planning Zone (DPZ), to meet the requirements of CNSC REGDOC-2.10.1 and the PNERP. Pre-distribution ensures that KI is available quickly for residents and businesses within 10 km of Pickering NGS. The KI pill inventory for the pre-distribution program is maintained separately from the emergency inventory that is maintained by the Province of Ontario. KI tablets pre-distributed within the DPZ are available at schools, childcare centres, health care facilities and municipal services. OPG, in partnership with Durham Region and the City of Toronto, offers eligible residents and businesses within the IPZ the option to order KI pills online at no cost. In the unlikely event of a nuclear emergency, additional supplies of KI are available at Reception Centres, Emergency Workers Centres, and for the Ingestion Planning Zone (IPZ).

In 2026, OPG (in partnership with Durham Region and City of Toronto) will distribute a new supply of KI pills to homes and businesses within the 10 km DPZ, replacing KI pills distributed in 2015 that are expected to expire in 2027. Residents and businesses within 10–50 km may request replacement KI pills, as needed, through the established distribution program.

The Prepare to Be Safe website (preparetobesafe.ca) serves as a platform for KI pill Frequently Asked Questions (FAQs) and provides a means for businesses and residents within 50 km of Pickering NGS to request KI pills. Website information is translated into the most common languages spoken within 10 km (based on census data). New households and businesses in the 10 km DPZ are identified by Canada Post and sent KI pills with supporting information included. Public awareness campaigns are conducted several times each year to raise awareness of KI availability, focused on the public residing within the 10 km DPZ, but extending into the IPZ, through various media (e.g., news releases, print advertisements, social media, and digital display boards). Durham Region has produced videos to raise general awareness about KI, one of which focused on the availability of KI within the 50 km IPZ. This distribution is part of routine preparedness and does not reflect a change in the risk of a nuclear emergency.

KI distribution statistics — to date:

- Approximately 4,800,000 KI pills have been distributed within the 0–50 km ingestion planning zone since 2015 through the preparetobesafe.ca distribution program.
- KI pill distribution within 0–50 km averages approximately 250,000 pills per year.
- Distribution is predominantly to residential addresses (≈98%), with ≈2% distributed to businesses.
- The Province of Ontario maintains an additional stock of approximately 6,000,000 KI pills for emergency distribution, in addition to inventories held at Reception Centres and Emergency Worker Centres.

OPG is committed to building long-term mutually beneficial working relationships and information sharing with other utilities, as well as organizations responsible for public health and emergency management coordination proximate to our operations. OPG has actively participated in the Potassium Iodide Working Group (KIWG) throughout its mandate, supporting collaborative improvements to KI distribution and public awareness. As the KIWG nears the completion of its objectives and its future structure is under consideration by its member organizations, OPG remains committed to ongoing collaboration with public health authorities, emergency management partners, and Indigenous Nations and communities on all matters related to KI distribution and emergency preparedness. OPG will continue to support and engage with stakeholders to ensure the highest standards of public safety are maintained.

Engagement with Indigenous Nations and Communities

OPG has received interest from Indigenous Nations and communities to better understand OPG's Emergency Management program and continues in productive two-way dialogue with the Nations to share information, build relationships, and to further understand how they would like to be engaged.

In 2024, Emergency Management staff attended Framework Meetings with each of the Michi Saagiig First Nations to provide programmatic updates, and an overview of OPG's emergency response exercises, drills and programs. As part of the discussion, OPG learned more about the Nations' interest in future engagement opportunities in emergency response exercises and drills. To support this interest, OPG invited the Michi Saagiig Nations to observe a full day event, the Exercise Unified Command (ExUC) in October 2025. Representatives from all four Michi Saagiig Nations attended this event and additional meetings for further engagement will continue throughout 2026, including plans to facilitate Michi Saagiig First Nation participation in future exercises and drills.

In May 2023 and June 2024, OPG Emergency Management team was invited to participate in a Métis Nation of Ontario community open house where various emergency preparedness, transportation, and waste topics were discussed with attendees.

Public Engagement

OPG Enterprise Emergency Management staff participate in various annual public engagement opportunities where nuclear emergency planning, preparedness and response are discussed. A variety of platforms are used to engage and inform the public on this topic, including in-person events (and public information centres), printed products (newsletters, fact sheets), website information, and various traditional and social media strategies.

Presentations on OPG Emergency Management are made every year to each to the Pickering Community Advisory Council and the Durham Nuclear Health Committee. In these meetings, overview of Ontario's nuclear emergency response framework, OPG emergency preparedness structure, and key program updates are presented as well as addressing various points of interest and questions. During OPG's annual open house events occurring since 2023, emergency management information was made available to all attendees.

Between 2024-2025, more than five separate public engagement events were attended by OPG's Emergency Management team where several emergency management areas of interest were discussed, and questions were answered. These events were well attended and generated productive discussion on OPG's programs.

Land Use

OPG monitors land use policies and activities in proximity to OPG nuclear facilities. Enterprise Emergency Management personnel support this activity, when required, to ensure planned activities have no adverse impact on the implementation of nuclear emergency plans.

Emergency Response Organization Performance

OPG has put a large focus on developing and sustaining a culture of innovation, resulting in several impactful initiatives being implemented successfully through annual Excellence Plans. To promote and sustain ERO performance through the pandemic, OPG implemented a remote drill evaluation solution to facilitate the continued execution of ERO drills in-person, at a time when the majority of industry had moved to conducting tabletop style drills. This solution has been recognized as an industry leading initiative and has been benchmarked externally by domestic and international partners. Although OPG's program has returned to in-person drill evaluation since the end of the COVID-19 pandemic, this innovative evaluation process remains available in case it is needed in the future.

As part of a program excellence initiative, a new ERO performance summary process and tool were implemented in 2023 to provide a new picture of overall ERO performance, including breakdowns of ERO responders across the sites, facilities, teams, and individual ERO roles. This change improved how ERO performance is measured, tracked, and reported to provide data-driven insights into performance strengths and areas requiring improvement. In one example, this new process identified a need that was fulfilled by one-to-one targeted training for specific initial responders to increase their proficiency in their ERO role. This change improved response time to external agencies and increased responder confidence. OPG intends to sustain and continually improve this ERO performance focus.

Public Address System

The Pickering NGS Public Address system provides immediate notification and messaging to staff working on site of important information, including emergency conditions and associated actions. This includes emergency tones and verbal messaging indicating different types of emergencies and required actions of staff.

Public Alerting

In the unlikely event of an emergency where the Province initiates protective actions under the PNERP, the need to shelter, evacuate or take other actions is communicated to the public as follows:

- *Sirens:* Mounted on poles, sirens emit a single tone alarm that can be heard outdoors. These sirens are located within 3 km of the Pickering NGS site.
- *Alert Ready:* Canada's National Public Alerting System provides public alerts through radio, television, and on LTE connected and compatible wireless devices (i.e., cellular phones).
- *Telephone Dialing System:* An automated telephone dialing system will deliver a recorded emergency message through landline home and business phone numbers within 10 km of the Pickering NGS site.
- *Radio, Television, Social Media:* Local radio and television stations, and social media, will broadcast information on public health, safety, and welfare. Instructions on what to do in the event of a nuclear emergency will be provided.

OPG provides resources and support to the Regional Municipality of Durham who owns, operates, and routinely tests the public alerting system including testing the sirens each fall and spring.

Alert Ready officially launched in March 2015; at which time it distributed alerts solely through broadcasters. In April 2018, wireless providers were also required to implement the system and started distributing alerts via smartphones. This system is in regular use by response agencies for a variety of public interest issues.

OPG is aware that Indigenous Nations and communities have ongoing interest regarding the notifications required under the PNERP and are engaged in discussions with the Province on this topic.

Evacuation Time Estimates

OPG updates the Pickering Evacuation Time Estimates (ETE) at least every 5 years, as required by CNSC REGDOC-2.10.1. The most recent ETE, issued in March 2023, uses 2021 census data and includes detailed projections of population growth and infrastructure changes out to 2028. This approach ensures the ETE remains robust and forward-looking, not simply a reflection of past conditions. The ETE evaluates evacuation times for all emergency planning zones defined in the Provincial Nuclear Emergency Response Plan (PNERP), using a wide range of scenarios, such as different times of day, weather, road closures, and special events, to ensure realism and thoroughness. This scenario-based approach provides conservative, decision-quality planning inputs to support offsite protective action decision-making across a broad range of emergency conditions, including severe accident scenarios. The next federal census will take place in 2026, after which OPG will update the ETE accordingly to reflect the post-refurbishment operations of the Pickering NGS site. The complete ETE, including all scenarios, assumptions, and inputs, is made publicly available on opg.com to support transparency and public confidence.

Off-Site Support

In 2022, OPG and EMO endorsed a new 5-year agreement to support EMO in the planning, maintenance, and execution of the PNERP. This new agreement supports the Province who provide staff with expertise in nuclear and radiological science, hazard identification and risk assessment, emergency planning, drills, and exercises, maintenance of 24/7/365 nuclear emergency response capability, and nuclear education and emergency preparedness materials.

A 10-year Nuclear Emergency Mutual Aid Agreement between Canada's four major nuclear operators (OPG, Bruce Power, Canadian Nuclear Laboratories and New Brunswick Power) was renewed in December 2022 which outlines emergency support that may be provided, and the processes involved in the unlikely event that a nuclear operator suffers a major emergency and requires mutual aid assistance.

OPG provides Monitoring and Decontamination capability at Emergency Worker Centres and Reception Centres. Enterprise Emergency Management maintains equipment inventories at these designated offsite locations for use by OPGs ERO, with the support of the local facility staff. OPG is continuously working with community partners and external stakeholders to improve off-site support.

OPG and its partners have conducted a wide range of drills to test this capability in recent years. In February 2022 an exercise was conducted at Orono Arena as an Emergency Workers Centre, in October 2024 at York University as a Reception Centre, and in October 2025 at Iroquois Park as an Emergency Workers Centre. During these exercises, the OPG Monitoring and Decontamination Unit was activated and processed members of the public or emergency workers and their vehicles, and participation of community partners was present. Lessons learned from these exercises have been incorporated into OPG, City of Toronto, and Durham Region processes and procedures.

OPG continues to collaborate with its off-site partners to conduct off-site centre drill and exercises to drive improvements to emergency plans and operations and to improve familiarization of local nuclear emergency planners.

2.10.3 Fire Emergency Preparedness and Response

OPG's comprehensive Fire Protection program consists of two elements: the Fire Protection programs group, which provides programmatic oversight for regulatory compliance, and the Fire Protection Operations group (Emergency Response Team), which provides fire emergency response at Pickering NGS. OPG's Fire Protection program and its elements are based on the requirements of CSA N293-12 (R2017)³, *Fire protection for nuclear power plants*. OPG has processes in place to ensure that all reasonable measures are taken to prevent fires, and to promptly detect and suppress any fires that may occur at the plant. Oversight of the inspection, testing, and maintenance of fire protection systems is in place to ensure they operate as designed during the life of the systems.

Furthermore, OPG maintains and updates the station's Annual Plant Condition Inspection (APCI) Report, Fire Hazard Assessment (FHA) Report, Fire Safe Shutdown Analysis (FSSA) Report and the Code Compliance Review (CRR) Report, to demonstrate regulatory compliance to the requirements of CSA N293 as stipulated in the LCH for Pickering NGS.

The 2025 APCI for Pickering NGS was completed by an independent, qualified third-party vendor. The vendor reported that there was sufficient evidence to conclude that OPG's Fire Protection program was being followed and effectively maintained to ensure compliance with the applicable requirements of CSA N293-12 (R2017), NFCC-2015, and NBCC-2015.

³ Application of N293-23, "Fire Protection of Nuclear Power plants" will follow the implementation plan process as part of this PROL renewal.

A CCR completed in 2024 verified that the as-built conditions of the station complied with the applicable requirements of CSA N293-12 (R2017), NBCC-2015, NFCC-2015, as well as, applicable codes and standards referenced therein.

Pickering NGS's Fire Protection Assessments, which consist of the FHA and FSSA were re-affirmed in 2022 and submitted to CNSC staff. The analysis concluded that Pickering NGS has effective design, construction, fire protection features and operational controls to mitigate the fire hazards present and maintain the fire, life and nuclear safety goals defined in CSA N293.

Emergency Response Team

OPG maintains an on-site, 24/7 Emergency Response Team (ERT) for manual fire suppression operations at the Pickering NGS site. The Pickering NGS ERT consists of Emergency Response Maintainers (ERMs), Shift Emergency Response Managers (SERMs) and day-based staff. Individual ERMs hold the same basic qualifications as professional firefighters at a municipal fire department. The ERT as a group and the ERMs as individuals also meet the requirements of internationally recognized NFPA 600, *Standard on Facility Fire Brigades*, and NFPA 1081, *Standard for Facility Fire Brigade Member Professional Qualifications* respectively. As a result, many of the ERMs act in volunteer positions with the nearby municipalities and are well recognized for their extensive training and knowledge of conventional and industrial firefighting.

OPG and the City of Pickering Fire Services (PFS) have a Memorandum of Understanding (MOU), to structure the mutual aid agreement and financial support between OPG and PFS. As part of this MOU, PFS will respond to all fire emergencies at the Pickering NGS site and provide assistance as needed.

The Pickering NGS ERT participates in multiple drills to demonstrate the ERT's training and technical capabilities in scenarios ranging from site fire response, contaminated casualty and hospitalization, Emergency Mitigating Equipment (EME) deployment and live fire drills at the Wesleyville Fire and Rescue Academy. Drills conducted in 2025 were successful in demonstrating the Pickering NGS ERT's ability to respond to realistic scenarios that may occur at the Pickering NGS site.

OPG's Wesleyville facility provides on-site training to Pickering NGS ERT, including fire response, medical response, and other specialized training such as hazardous materials response and high-angle rescue. Wesleyville has also supplemented traditional emergency response training by facilitating aerial drone courses for OPG Emergency Services, municipal fire, police and transit. Through joint training and inter-operability drills at Wesleyville with local municipal fire departments, OPG continually strengthens relationships and collaboration with these off-site partners.

As part of its regular equipment upgrade initiative, Pickering NGS ERT has acquired new Self-Contained Breathing Apparatus (SCBA) Air-Pak X3 for firefighting. The purchase of new SCBA ensures that the ERMs are provided with new tools for their firefighting needs. The new Air-Pak X3s are also the same equipment used by the City of Pickering's Fire Services Department, which allows for compatibility, interchangeability and flexibility during a joint Pickering NGS ERT and PFS response.

In the past four years, Pickering NGS ERT has been incorporating aerial drones from the OPG Security and Emergency Services Aerial Support Unit (ASU) into its training. The aerial drones are used during training to film fire training evolutions and exercises for enhanced evaluation

and feedback, as well as reconnaissance and surveillance tools in a variety of scenarios to minimize fire and radiation exposures to firefighters at the scene.

The OPG ASU has been working with local fire and police for cross training, as well as, supporting public safety events in the surrounding towns. The ASU has been on standby and has participated in several mutual aid calls for search and rescue and public safety related responses from Peterborough Police, Port Hope Fire and Police, Clarington Fire and Durham Regional Police.

2.10.4 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Emergency Management and Fire Protection SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

Emergency Preparedness and Response

Validated adjustments have been made to the Minimum Shift Complement and Pickering NGS Units 1 to 4 Main Control Room staffing. Emergency preparedness response procedures have been transitioned to the Pickering NGS Units 5 to 8 Shift Manager. The remaining ERO structure, including the Emergency Operations Centre, remain unchanged, as it serves as a central function to the Pickering NGS.

Nuclear Emergency Drills and Exercises

ERO drills for Pickering NGS will continue to meet the drill and exercise requirements in the Consolidated Nuclear Emergency Plan.

Fire Protection

Existing monitoring, inspection, and maintenance activities will continue during the SWS period. A system or portions of the system in the abandoned state do not require any special considerations except for routine operator rounds for general surveillance as described in the SWS Plan.

The Fire Protection Assessment documents are made up of Code Compliance Review (CCR), Fire Hazard Assessment (FHA) and Fire Safety Shutdown Analysis (FSSA) and will be maintained during SWS. These documents are required to confirm the fire protection requirements based on facility end-state configuration, including hazard levels, staffing, and fire response strategies. During SWS, these documents will be reviewed and revised as required by CSA N293.

Design engineering changes will be completed during SWS for new fire detection and alarm equipment where new detection is required based on the results of the SWS FHA and CCR. Similarly, existing equipment will be removed from service if it is no longer required based on the results of the SWS FHA and CCR.

2.10.5 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Emergency Management and Fire Protection SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Emergency Preparedness and Response

OPG's Nuclear Emergency Preparedness program is being maintained during the refurbishment period, though the types of nuclear emergency scenarios possible during this period will be significantly reduced. OPG will ensure that personnel, programs and processes for emergency preparedness are integrated into refurbishment activities, and capabilities to respond to the events possible during this period will be sustained. This will include contractors following the same site emergency procedures as OPG staff.

For the refurbishment project, the *Fire Protection* program is being followed. During refurbishment, OPG will:

- Prepare fire protection strategies.
- Provide sufficient resources to response to first aid, firefighting, rescue and hazmat incidents in refurbishment units and operating units.
- Provide support for the FHA and FSSA for the islanding areas and refurbishment units.
- Act as Controlling Authority (CA) and fire protection Subject Matter Expert (SME) for Combustible Material Safety Permits (CMSPs).
 - The CA term is defined as the person who is evaluating Combustible Material Safety permits and working with Subject Matter Expert (SME) reviewers and permit owners to approve or reject the Combustible Material Safety permit request.
- Act as Ignition Source Permit issuer.

Lessons learned from the Darlington NGS Refurbishment are actively being integrated into the planning for the Pickering Refurbishment. Fire Protection is proactively establishing a robust support team to address the anticipated increase in vendor partners, combustible materials, and hot-work activities in the field. Comprehensive oversight by Fire Protection is being implemented in preparation for refurbishment activities through thorough reviews of engineering changes, emergency response planning, and storage area assessments. These measures are designed to ensure the safety of personnel, property, and the environment by minimizing the risk of fire-related incidents.

2.10.6 Pickering Waste Management Facility

2.10.6.1 Emergency Preparedness Program

The purpose of the Consolidated Nuclear Emergency Plan (CNEP), as described in Section 2.10.2, is to outline the essential program elements, objectives, roles, and responsibilities necessary for OPG to effectively respond to nuclear emergencies. The primary goal of this plan is to safeguard the public, employees, and the environment in the event of a nuclear emergency.

While potential scenarios at the PWMF do not present a radiological hazard to the public and, therefore, would not necessitate protective actions as outlined in the Provincial Nuclear Emergency Response Plan, there may still be a risk to on-site personnel or the environment. In such cases, the procedures outlined in the CNEP would be implemented to manage the situation, particularly if a station emergency is declared or if support from the Emergency Response Organization is required.

PWMF on-site staff participate in regular, site-wide emergency drills, which include assembly and accounting, as well as site evacuation of non-essential personnel. Procedures are specifically defined for both the Phase I building (protected area) and the Phase II building (outside the protected area) of the OPG site. During these drills, ERO staff are required to demonstrate their ability to complete accounting procedures and to execute various ERO activities, including:

- Implementing the station's emergency response plan and procedures,
- Mobilizing the Emergency Response Organization and associated facilities,
- Developing and executing a mitigation strategy to reduce the consequences of accidents,
- Conducting Full Site Assembly and Accounting of all personnel within the Protected Area (PA),
- Formulating and implementing protective actions for plant personnel.

Additionally, full site evacuation drills for all non-essential staff are held every five years, testing the ability to evacuate and relocate on-site personnel. PWMF staff are required to participate in these comprehensive drills.

Emergency response for Radioactive Materials Transportation is discussed in Section 2.14.

2.10.6.2 Fire Protection Program

The purpose of the Fire Protection program, as described in Section 2.10.3, is to define the key program elements, objectives, and roles and responsibilities, with the overall goal to minimize the risks and consequences of fire to OPG nuclear facilities.

The fire protection provisions for PWMF are currently required to conform to the following:

- CSA N393-13 (Reaffirmed 2018), *Fire protection for facilities that process, handle or store nuclear substances*
- NRC NBCC (2015)
- NRC NFCC (2015)

In 2023, OPG conducted code-over-code reviews which resulted in implementation plans and actions to ensure PWMF will be in compliance with the latest codes and standards, which were submitted to CNSC staff. As communicated to CNSC staff on the implementation plans, PWMF is compliant with NBCC 2020, NFCC 2020 and CSA N393-22 effective December 19, 2025.

During the current licence period:

- Annual Fire drills were performed in accordance with the CSA N393 and NFCC, with satisfactory findings from these drills.
- Third-party reviews, analysis and audits have been completed confirming compliance with CSA N393 requirements.
- OPG issued its Fire Impairment Manual, which describes how OPG manages impairments for NSS facilities, including PWMF.
- OPG issued its NSS Combustible Material Safety Instruction, to ensure that all transient combustible materials are minimized in NSS facilities, including PWMF.

These activities are described in more detail in the subsections below.

Governance

PWMF's facility specific Fire Protection program requirements have been incorporated into OPG nuclear's Fire Protection program to ensure a consistent approach to fire protection across all the nuclear sites. NSS fire protection procedures and other elements derive their authority from the OPG nuclear Fire Protection program. NSS governance has been reviewed to ensure effective alignment with OPG nuclear's Fire Protection program. A comprehensive program ensures adequate fire protection by minimizing both the probability of occurrence and the consequences of fire at the facilities. Fire Protection governance are frequently reviewed to maintain the alignment of NSS, including PWMF, with OPG nuclear.

Engineering Change Control

All new structures and existing design engineering changes are reviewed for fire protection impact through the ECC process.

Fire Safety Plan

The PWMF Fire Safety Plan provides direction with respect to fire prevention, fire protection, emergency procedures, training and drills. The Fire Safety Plan is reviewed and revised accordingly on an annual basis to ensure it reflects current field conditions and practices. The Fire Safety Plan at PWMF meets the requirements of the National Research Council of Canada (NRC) National Fire Code of Canada (NFCC).

Inspection, Testing, Maintenance

During the current licence period, in accordance with the PWMF operating licence, the inspection, testing and maintenance of the fire detection and suppression systems was performed at the required frequency, as stipulated in the NFCC (2015). The inspection and testing were performed by OPG and reviewed by a third party tri-annually, to confirm the PWMF fire systems have been operated, inspected, tested, and maintained in accordance with the NRC NFCC (2015) and the standards listed therein.

The independent third-party report indicated that PWMF is in compliance with the CSA N393-13 (Reaffirmed 2018), and NFCC (2015) requirements. Findings from these reviews have been addressed via corrective actions.

A new requirement of NFCC (2015) is to perform fire dampers testing every 4 years; the testing has been completed to achieve compliance with the new requirement.

Fire Drills

During the current licence period, fire drills were performed at PWMF in accordance with the CSA N393-13 (Reaffirmed 2018) and NFCC (2015). Findings from drills have been satisfactory with no major findings. The full scale fire drills were performed with the participation of the municipal fire department.

Analysis, Assessments, Reviews, Audits

To maintain the compliance of PWMF with CSA N393, the following required third-party reviews, analysis and audits have been completed within the intervals stipulated in CSA N393:

- Fire Hazard Assessment.

- Code Compliance Review.
- Fire Protection Program Audit, including Inspection, Testing and Maintenance (ITM) of fire protection systems.
- Annual Facility Condition Inspection.
- Fire Response Needs Analysis.

The results of the compliance reviews have been submitted to the CNSC as required by the PWMF operating licence and CSA N393. The analysis, assessment and audit reports have confirmed the compliance of PWMF with the requirements of CSA N393.

Fire Protection Response

An *MoU* between the City of Pickering Fire Services (PFS) and OPG applies to the provision of fire protection services, including coordinated emergency response. In the event of an on-site incident, PFS will be called for assistance if needed.

The initial response for extinguishing fires in the PWMF Phase II, the facility's portion within its own protected area, rests with the PFS, with support from the Pickering NGS Emergency Response Team.

The initial response for the PWMF portion inside the Pickering NGS protected area (Phase I) rests with Pickering NGS Emergency Response Team with support from PFS. Pickering Fire Services is familiar with PWMF, participating with the facility's annual fire drills at PWMF.

PWMF Fire Impairment Manual

During the current PWMF licence period, OPG has issued its NSS Fire Impairment Manual, which describes how OPG manages impairments for OPG's NSS facilities, including PWMF. This manual provides resource information to guide trained staff who are directly involved with planned and unplanned impairment to the fire protection system in evaluating, establishing, planning, controlling and executing outages of fire protection systems. The manual also provides detailed compensatory measure information for impaired fire systems.

Waste Combustible Material Safety Program

OPG has issued its Waste Combustible Material Safety Instruction to ensure that all transient combustible materials are minimized, properly assessed, analyzed, and authorized before being placed in the waste management facilities, including PWMF. Combustible materials, combustible equipment, and ignition sources, other than that forming part of the approved facilities design that is located outside of designed storage areas, shall be eliminated. When elimination is not practical, combustibles shall be minimized, controlled, analyzed, and located in accordance with this combustible material safety instruction.

Planned Activities

The following activities and improvements are planned for the PWMF:

- *Fire Protection - Detection System:*
 - Continue to perform inspections, testing, and maintenance of the fire detection system as per the current preventive maintenance schedule.
 - Install new equipment to improve the performance of PWMF SB3 booster panels.

- Replace the existing (obsolete) fire panel at PWMF Processing Building with new fire panel.
- *Fire Protection - Suppression System:*
 - Continue to perform inspection, testing, and maintenance as required by the applicable codes and standards.
 - Inspect PWMF Fire Protection Standpipe System for the presence of foreign organic and inorganic material using Ultrasonic Testing (UT) method (frequency every 5 years).
- *New Structures:*
 - New construction structures within PWMF will comply with CSA N393-22, NBCC 2020, NFCC 2020, and applicable fire Codes and Standards. The new structure's Fire Hazard Assessment report, Code Compliance Review report, Fire Response Needs analysis report and the results of the Third-Party Review, will be added to PWMF Fire Hazard Assessment report, Code Compliance Review report and Fire Response Needs Analysis report during the next review/update cycle of these reports, as stipulated in CSA N393.

2.11 Waste Management

OPG has a mature and effective waste management program that ensures adequate provisions are in place to limit the generation of radioactive and non-radioactive wastes and if created, control/manage its handling, storage, and disposal. The waste management program ensures the safety of workers and the public and facilitates continuous improvement in environmental performance in support of OPG's Environmental Policy.

The *Environment Health and Safety Managed Systems* program describes how OPG's EMS meets the requirements of the ISO 14001, *Environmental Management Systems* standard, including waste management activities. OPG is subject to federal and provincial waste management regulations which include general waste management practices, transportation of dangerous goods, Polychlorinated Biphenyl (PCB) management, ODS management, and CNSC requirements for nuclear facilities.

The *Nuclear Waste Management* program is a mature and effective program applicable to all OPG nuclear. The objective of this program is to ensure adequate provisions are in place to limit the production of radioactive waste and to control its handling, storage, and disposal. Activities are performed in accordance with licensing basis standards and governing documents that prescribe controls and responsibilities to ensure the activities are carried out in a safe and effective manner by qualified personnel. The program implements the requirements of CNSC REGDOC-2.11.1 *Waste Management*, CSA N292.0-19 *General principles for the management of radioactive waste and irradiated fuel*, CSA N292.2-13 *Interim dry storage of irradiated fuel* and Update No. 1 (2015) and CSA N292.3-14, *Management of low and intermediate level radioactive waste*.

Transportation of radioactive waste material is managed by the *Radioactive Material Transportation* program. This program ensures safe, compliant and efficient transportation of radioactive material shipped from the site to licensed locations.

All waste handling and management activities are conducted in a manner that meets the requirements of OPG's RP program. Waste streams are handled and processed in a manner that ensures the safety of employees, the public, and the environment, while applying best practices to reduce and effectively segregate the generated waste. Additionally, OPG's RP program ensures the safe transfer of radioactive materials on site.

2.11.1 Waste Management Practices

Pickering NGS's waste management program provides direction on waste handling and disposal processes and ensures proper planning, segregation, handling and disposal of Low and Intermediate Level Waste (L&ILW). OPG's *Segregation and Handling of Radioactive Waste* procedure provides direction to workers on the segregation and handling of potentially radioactive solid and liquid waste resulting from operation and maintenance activities.

Waste is generated at Pickering NGS from daily operations and maintenance activities as well as during planned and unplanned outages. Over the next licence period, waste will also be generated from decommissioning of Pickering NGS Units 1 and 4 and the refurbishment of Pickering NGS Units 5 to 8.

Storage of waste, including radioactive LLW and ILW, at Pickering NGS is transient and limited to the timeframe required to characterize, package and send the waste for processing, interim storage or off-site disposal.

2.11.2 Waste Characterization

Waste generated at Pickering NGS is categorized as either radioactive waste or inactive (non-radioactive) waste depending on the radiological zone of its origin and based on radiological surveys and analysis. Radioactive waste is further categorized as LLW, ILW, or High-Level Waste (HLW), to meet the Waste Acceptance Criteria (WAC) for the waste receiving facilities. Inactive (non-radioactive) waste is further segregated as conventional waste or hazardous chemical waste. For gaseous wastes (i.e. emissions), refer to Section 2.9.4.

To further segregate and reduce active waste volumes, LLW is sorted into three categories: incinerable; compactable; and, non-processible LLW. ILW largely consists of resins, filters and used reactor core components. HLW comprises used nuclear fuel that has been withdrawn from the nuclear reactors following irradiation.

The *Nuclear Waste Characterization* procedure documents the requirements for the characterization of L&ILW and has recently been updated to comply with the requirements of CSA N292.8-21, *Characterization of radioactive waste and irradiated fuel*, including guidance on preparing a waste characterization plan. The *Routine, Legacy and Stored Low and Intermediate Level Waste Characterization Plan* provides further detail on the characterization for routine L&ILW generated at Pickering NGS and has also been revised to comply with CSA N292.8. For the non-routine radioactive waste generated at Pickering NGS, waste characterization plans will be generated. As communicated to CNSC staff on the implementation plans, OPG is compliant with CSA N292.8-21 effective December 19, 2025.

CANDU used fuel has historically been characterized and documented to support development of safe handling and storage requirements. This information with an assessment basis is captured in the PWMF safety report and meets the intent of CSA N292.8-21.

Radioactive Solid Waste

The refurbishment and decommissioning projects for Pickering NGS will produce increased conventional and radioactive waste volumes resulting in an increased demand for radioactive waste management services and radioactive material transportation services. Most decommissioning work during this licence period will generate inactive waste.

During the 2024 to 2040 timeframe, changes will be required with respect to OPG's waste management infrastructure due to the diverse needs of these overlapping and continuing projects. To further enhance and support the safe and effective management of waste volumes, OPG is currently investigating plans to potentially expand existing waste handling areas within Pickering NGS.

Given each project bundle has a different and direct effect on the volume of L&ILW generated, improvements to waste management capabilities will correspond with each project's distinct timelines as required. This will ensure ongoing innovative, effective, and timely waste management planning and support the overall continued success of Pickering NGS and PWMF. Recognizing the significance of radioactive waste management and the importance of waste segregation/diversion techniques that are currently being utilized will aid in achieving the effectiveness and efficiencies and ensure that plans not only incorporate these strengths but also expand them to accommodate the additional work and waste generation.

Annual L&ILW generation varies year to year and is influenced by station operating and maintenance activities, including the scope and type of planned work/outage activities executed in a given year. Figure 32 shows the annual waste volumes since 2018. The lower volumes observed in 2024 and 2025 are attributed to a combination of reduced outage work compared to prior years and improved waste segregation/diversion practices. To better manage volumes and reduce LLW requiring processing and disposal, OPG Pickering implemented a Sort and Segregation program in late 2023 to improve waste characterization and diversion of eligible compactable and incinerable material to the conventional waste stream, where criteria are met. The program has demonstrated measurable reductions in the volume of LLW requiring radioactive waste management, and in 2025 Pickering achieved its first year of net reduction in LLW. In 2024 and 2025, Pickering reduced more than 10% of the total volume (254.42 m³ and 180.51 m³ respectively) of compactable and incinerable low level radioactive waste where criteria were met. These efforts yield a reduced environmental footprint and support OPG's overall waste strategy and the waste hierarchy of Prevention, Minimization, Reuse, Recycling, Treating and Disposal.

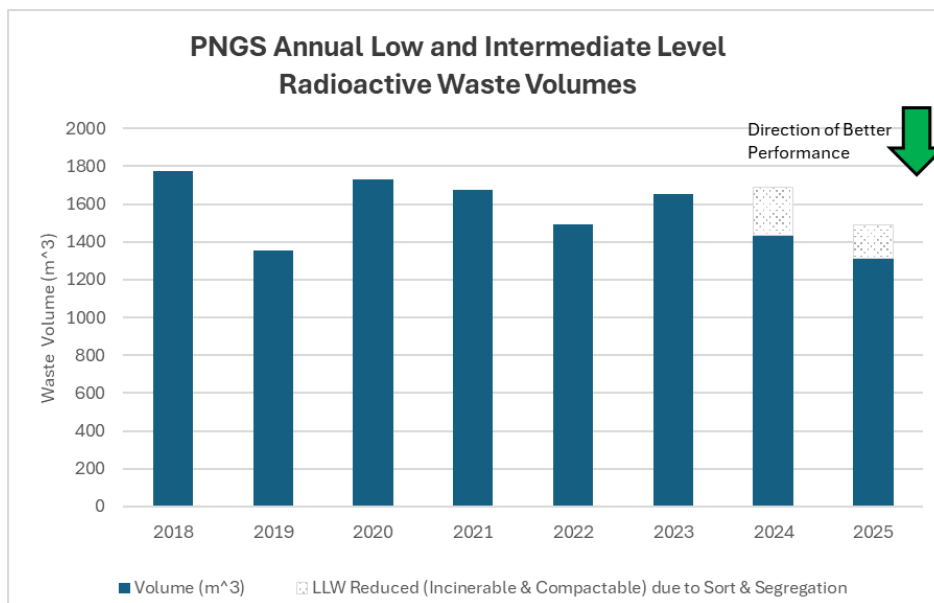


Figure 32. Pickering NGS Low and Intermediate Level Radioactive Waste

High Level Waste

Each year, approximately 30,000 used fuel bundles from the Pickering NGS are safely transferred from the IFBs into DSCs and stored at the PWMF. This secure and carefully managed process ensures full traceability — Pickering NGS can account for every fuel bundle ever used in the station's history, representing over 100 reactor operating years of nuclear energy generation.

At the end of 2025, more than 1,400 DSCs were safely housed across four storage buildings at the PWMF. The current PWMF licence also authorizes OPG to expand storage capacity by constructing two additional storage buildings at the Phase II site.

DSC SB5 is currently under construction, with a planned design capacity of up to 1,410 DSCs. This building is scheduled to be available for service in 2027, thereby reinforcing OPG's commitment to the safe stewardship of used nuclear fuel.

Conventional Solid Waste

Once "Likely Clean" solid waste collected from within the station and PWMF have been confirmed not to be contaminated, the material is routed to the conventional waste stream and taken to designated conventional waste handling areas where it is packaged and sent for off-site disposal. Conventional solid waste is also volume-reduced where possible to minimize its environmental impact and any materials that can be recycled are segregated for that purpose. Recyclable material collected and processed at Pickering NGS includes wood, cans, cardboard, paper, paper towels, plastic, asphalt, concrete, compost, metal, and glass.

Hazardous Chemical Waste

Hazardous waste generated at Pickering NGS includes chemicals and liquids such as cleaning agents, grease, oil, waste fuels, acids, batteries, and PCB light ballasts, and may include asbestos. The liquid and chemical wastes are generated as a result of operations, use of equipment and systems, maintenance, and outage activities. Additionally, some systems that

will be drained as part of stabilization and decommissioning activities could contain liquid and chemical waste.

The volume of chemical drums on site is tracked and reported monthly and compared to established targets to ensure liquid waste volumes are maintained at a low manageable level and that the waste is disposed as required by Ontario Regulation 347 requirements.

2.11.3 Waste Minimization

Waste minimization is a shared responsibility amongst all OPG employees implemented through the concept of “Reduce, Reuse, Recycle”. Waste minimization and segregation are an integral part of work planning processes.

Pickering NGS’s waste minimization goals are two-fold: to minimize the volume of waste generated overall and to reduce the quantity of radioactive waste which is generated. The main initiatives that contribute to radioactive waste minimization are:

- Washable personal protective equipment: personal protective equipment worn inside the station is collected, washed and decontaminated by a licensed contractor for re-use.
- *The “Likely Clean” program*: segregates waste generated inside the PA. “Likely Clean” waste cans are placed next to “Active Waste” cans and waste generated in Zone 3 areas that is believed to be uncontaminated is placed in the Likely Clean receptacles. Likely Clean waste is surveyed and, if confirmed free of contamination, is disposed of as conventional waste.
- *“Active Metal” bins*: allows for the segregation of active metal (non-processible waste) from other radioactive waste (incinerable and compactible). When active metal waste is mixed with incinerable and compactible waste the entire volume of waste is categorized as non-processible waste. Therefore, the segregation of active metal waste helps reduce non-processible radioactive waste.

OPG tracks LLW diversion metrics on a quarterly basis. A total of 85.9% of LLW was diverted in 2024, with washable Personal Protective Equipment (PPE) contributing to 22% of the total waste diverted.

Waste handlers separate the solid waste into conventional, radioactive, and hazardous waste streams and where possible, conduct additional sorting and segregation of LLW to further minimize LLW volumes. To reduce radioactive waste, plastic, wood and cardboard packaging is removed from items entering the station, thus reducing the risk of the packaging from becoming contaminated LLW.

Site-wide communications on waste reduction expectations continue to improve behaviours and drive performance in waste reduction initiatives. Work groups are held accountable for waste reduction strategies and implement them in daily activities and work tasks.

2.11.4 Decommissioning Plans

The *Decommissioning* program, describes the requirements and processes to safely and cost effectively decommission OPG owned nuclear facilities and provide assurance that decommissioning work will be performed in accordance with the applicable regulatory requirements and Codes and Standards.

In accordance with the requirements of CSA standard N294-19, *Decommissioning of facilities containing nuclear substances*, CNSC regulatory documents REGDOC-2.11.2, *Decommissioning* and REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities*, OPG has prepared the following decommissioning plans for the Pickering NGS site:

- The DDPs, *PNGS-A Detailed Decommissioning Plan Volume 0 – Program Overview*, *PNGS-A Detailed Decommissioning Plan Volume 1 – Out-Buildings*, and *PNGS-A Detailed Decommissioning Plan Volume 2 – Non-Nuclear Component Removal*. These DDP Volumes were submitted to CNSC staff in December 2024 and have been accepted. Within five years from the submission of the DDPs, the DDPs (Volume 0, Volume 1, Volume 2 and any active volume) will be reviewed and updated as per regulatory requirements.
- The PDP, *PNGS-B Preliminary Decommissioning Plan* was submitted to CNSC staff in March 2025 and has been issued. Within five years from the submission of the PDP, the PDP will be reviewed and updated as per regulatory requirements. This document supersedes the *Pickering Nuclear Site Preliminary Decommissioning Plan*.
- The PDP *PNGS Site Overarching Document* was submitted to the CNSC in March 2025 and has been issued. The PDP will be reviewed and updated as per REGDOC 2.11.2 requirements. This document supersedes the *Pickering Nuclear Site Preliminary Decommissioning Plan*.
- The PDP *Preliminary Decommissioning Plan – Pickering Waste Management Facility* will be submitted to the CNSC in 2027. The revision of the PDP will include the expansion of PWMF Used Fuel Dry SB5 and PCSS. The requirements of REGDOC 2.11.2, CSA N294-19, as well as any relevant domestic and international experience obtained in the previous five years will be incorporated into the revision. Five years from the submission of the PDP, the PDP will be reviewed and updated as per regulatory requirements.

The DDP and PDPs describe the activities that will be required to decommission Pickering site and restore the site for other uses. The DDP and PDPs demonstrate that decommissioning is feasible with existing technologies, and it provides the schedule as well as the basis for estimating the cost of decommissioning. On June 26, 2025, CNSC staff accepted the DDP for the removal of non-nuclear SSCs. OPG has and will continue to provide opportunities for engagement with the Williams Treaties First Nation Rightsholders on decommissioning activities, including the DDP. The Michi Saagiig of the Williams Treaties First Nations have worked with a third party to undertake a technical review and provide comments on the DDP that OPG has dispositioned. Throughout OPG's regular engagement tables, the Michi Saagiig Nations have expressed interest in facility end-states, waste storage and transportation and the regulatory framework governing OPG's decommissioning activities, amongst other topics. OPG is committed to continued engagement on the DDP and decommissioning activities at the Pickering site.

On an ongoing basis, OPG reviews key factors such as relevant domestic and international experience, best practices from industry, technology advancements, input from engagement with Indigenous Nations and local stakeholders and incorporates it into the DDP and PDPs through the periodic update cycle.

OPG plans to focus decommissioning efforts in Pickering NGS Units 1 to 4, through the licence period, on conventional, likely clean systems and structures. Waste generated from

decommissioning activities during this period is expected to be comprised largely of conventional solid waste. A small volume of LLW may be generated from decommissioning activities during the licence period. All decommissioning waste will be managed in accordance with existing programs and governance as described above.

2.11.5 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Waste Management SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

Waste management during Pickering NGS Units 1 to 4 Decommissioning will be conducted in accordance with the DDP and the existing waste management program and governance. OPG has produced waste volume estimates to ensure adequate resources are in place to sort, package, transport, store, and/or dispose of all waste. Program reviews will be performed to determine whether updates are required to address hazards or for risk reduction. Should this demonstrate potential changes in any of the programs identified in this SCA, they will be reflected in subsequent revisions of the relevant documents. CNSC notification of changes to program documents will take place as required by the LCH.

2.11.6 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Waste Management SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

Waste management during the refurbishment of Pickering NGS Units 5 to 8 will be conducted in accordance with existing waste management programs and governance. These program documents will control the handling, storage, and disposal of both conventional and radioactive waste. OPG has produced waste volume estimates to ensure adequate resources are in place to sort, package, transport, store, and/or dispose of all waste. As refurbishment approaches, program reviews will be performed to determine whether updates are required to address hazards or for risk reduction. Should this demonstrate potential changes in any of the programs identified in this SCA, they will be reflected in subsequent revisions of the relevant documents. CNSC notification of changes to program documents will take place as required by the LCH. The *Program Management Plan – Pickering NGS Radioactive Waste Management*, has been created to support radioactive waste management during Units 5 to 8 Refurbishment.

During the refurbishment of Units 5 to 8, each reactor will be “retubed”, i.e., the fuel channels and calandria tubes will be removed and replaced and the feeders and feeder cabinets will be removed and replaced. The waste that will be produced is referred to as “retube waste”. Containers are required to safely manage this waste. Waste will be segregated and volume reduced (if applicable) based on the geometries and radioactivity of the different types of retube wastes.

Low Level Waste Containers will be used for most LLW generated (e.g. feeder piping, feeder cabinets, position assembly hardware, outboard parts of end fittings, miscellaneous Active LLW, etc.) except the steam generators. Once ready, these LLW containers will be transferred or shipped from the Pickering NGS to the PCSS, Western Waste Management Facility (WWMF) or an equivalent licensed facility that can accept LLW. Currently, the steam generators will not be

volume reduced and will be stored intact at the PCSS. It is currently estimated that 16,762 m³ of LLW will be generated during refurbishment.

Different containers will be used for the ILW, these containers are referred to as Retube Waste Containers (RWCs). It is expected that two types of RWCs will be required. The first type will be used to manage the inboard parts of end fittings. The second type of RWC will be used to manage combined pressure tubes and calandria tubes or calandria tube inserts. Other containers will be used for any miscellaneous active ILW which could include feeder pipe hot spots, cutting tool shavings and highly contaminated tooling. It is currently estimated that 1,600 m³ of ILW will be generated during refurbishment.

During removal activities, OPG will volume reduce extracted reactor components and load the ILW containers with applicable waste inside the station. An on-site transfer will then be completed of each container from the station to the PCSS. Each RWC will be stored in the PCSS for a nominal period of 30 years. This storage time is required to allow radioactive decay to reduce the hazards of the waste and for a final repository to be sited and built.

Prior to the start of refurbishment, OPG is implementing actions to ensure that the IFBs will be ready from a heat removal and space standpoint prior to receiving a unit's full core discharge of fuel, in accordance with CNSC REGDOC-2.5.2, *Design of Reactor Facilities: Nuclear Power Plants*.

Other non-active waste classified as "Likely Clean" can be put into bins that are provided and managed by OPG. This may also include miscellaneous mechanical and electrical equipment (such as pumps, valves, wiring, etc.).

The Pickering Waste Organization benchmarked the Darlington NGS Refurbishment Project to better forecast the waste that will be generated during Pickering NGS Units 5 to 8 Refurbishment. It was also important to consider unique factors affecting Pickering NGS Units 5 to 8 Refurbishment, specifically that Pickering will also generate waste from stabilization, decommissioning and station operations at the same time. As a result, the waste estimations for Pickering are expected to be greater than those for Darlington NGS Refurbishment, and additional waste processing footprint is required for the anticipated increase in waste generation. There is a planned expansion of the current Waste Operations to scale the existing activities for the anticipated increase in waste volumes, creating space for accounting, sorting and segregation of Refurbishment LLW.

2.11.7 Pickering Waste Management Facility

2.11.7.1 Waste Management Program

OPG's Nuclear Waste Management program is described in Section 2.11 and establishes the overall program for PWMF operations.

Waste receptacles are located throughout the PWMF for likely clean and active waste. Minimal radioactive waste is generated from activities conducted at the PWMF. LLW generated by PWMF typically is restricted to floor sweepings that have a potential to contain contamination from preparing and welding DSCs. Annual volumes amount to less than one drum and are sent to Pickering NGS for segregation as necessary and eventual transportation to the WWMF for processing and/or interim storage. PWMF does not generate intermediate or high level waste.

The volume of low level radioactive waste produced at PWMF will remain minimal during the next licence period with an expected slight increase proportional to the number of DSCs processed.

Interim Storage of Radioactive Waste

After radioactive waste has been processed at Pickering NGS, OPG's NSS is responsible for safely managing the waste on an interim basis until permanent disposal solutions are made available.

The OPG procedure *Waste Acceptance Criteria for Low and Intermediate Level Radioactive Waste* defines the acceptance criteria for LLW and ILW which is stored at the WWMF, including waste generated from operations at Pickering NGS. Once received at the WWMF, the L&ILW is further volume reduced and stored on an interim basis. The existing LLW in storage buildings at WWMF is further reduced at the Western Clean-Energy Sorting and Recycling, where waste is sorted and segregated to reduce the LLW volume and optimize the use of waste storage space.

The PCSS is required for storage of L&ILW at PWMF that will be generated by Pickering NGS. This additional interim storage capacity, intended for radioactive component waste and material, will be required to support the refurbishment of Pickering NGS Units 5 through 8 and decommissioning activities. L&ILW from the reactor core components include but not limited to steam generators, feeder pipes and fuel channels.

In August 2024, the Commission amended the PWMF operating licence to allow OPG to process and store up to 100 DSCs at a time containing used fuel that has been cooled for a minimum of 6 years. After a minimum of 6-years of storage in the Pickering NGS IFB, used fuel is loaded into DSCs and transferred to PWMF for processing and storage. OPG procedure *Eastern Waste Acceptance Criteria for Used Fuel Dry Storage Containers*, defines the criteria for the acceptance of a DSC which will be processed and stored at PWMF on an interim basis.

The waste management program incorporates the fundamental safety principles as applied to nuclear waste. That is, the systems are designed and operated to assure subcriticality, control radiation exposure, assure heat removal, assure containment and allow retrievability on an ongoing basis. During the next licence period, dry storage of spent nuclear fuel will continue to be managed as per the existing waste management program.

Long-Term Disposal of Radioactive Waste

OPG remains committed to the safe and permanent disposal of nuclear waste.

The NWMO, in accordance with the federal *Nuclear 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 for used fuel is expected to be in-service in the mid-2040s. On November 28, 2024, the NWMO announced the selection of the Wabigoon Lake Ojibway Nation and Township of Ignace as the host communities for the future site for Canada's deep geological repository for used nuclear fuel. After extensive technical study and community engagement, the NWMO selected a site that is safe and where the host communities have demonstrated that they understand the project and support making it part of their community. This process was guided by the NWMO's commitment to Reconciliation, based on co-creating a shared future, built on rights, equity and well-being for Indigenous peoples.

Additionally, under the Federal Government's Integrated Strategy for Radioactive Waste (ISRW), the NWMO is also responsible for the long-term disposal of ILW. As per the ISRW, ILW is to be disposed in a deep geological repository with an expected in-service date by 2050.

As outlined in the NWMO's ISRW, waste owners, including OPG, are responsible for the disposal of LLW. OPG's approach to finding disposal solutions includes two-way information sharing and engagement with Indigenous communities and community stakeholders. Before starting outreach, OPG has acted on feedback from Indigenous Nations who have requested greater information about the energy sector to make informed decisions about activities in their territories. Since 2024, OPG has offered an energy educational resource, *Generation for Generations*, to help empower communities to make informed decisions as they set their own path toward a clean energy future. This program is showcased at energy events, used to support Indigenous engagement activities, and provides as a self directed educational resource for Indigenous Nations and communities to learn more about Ontario's electricity sector. As per the ISRW, LLW is to be disposed of in near surface disposal facilities with implementation by waste generators and waste owners. In alignment with NRCAN's Policy for Radioactive Waste Management and Decommissioning, by 2050 key elements of disposal infrastructure are to be in place and planning for remaining facilities will be underway.

As OPG's waste strategy for permanent disposal continues to evolve, OPG will continue to engage with Rightsholders and other Indigenous Nations, communities and stakeholders, and seek amendments to the associated licences as required.

2.11.7.2 Decommissioning Plan

The Decommissioning program and the decommissioning plan for PWMF are described in Section 2.11.4.

2.12 Security

The objective of the *Nuclear Security* program is to ensure the safe and secure operation of the Pickering NGS by supporting the protection of nuclear assets in accordance with regulatory requirements and OPG policies.

Through the use of equipment, personnel and procedures, OPG Nuclear Security ensures tactical readiness and maximizes response capability to prevent, contain, mitigate and terminate security events while minimizing the adverse impact on plant staff, operations and functions.

The Security and Emergency Services organization within OPG has accountability and responsibility for the effective management of security risk based on OPG risk tolerance, the Design Basis Threat (DBT) and required compliance with CNSC regulations and regulatory documents. The Nuclear Security program meets the expectations of the *Nuclear Management System*, by establishing, implementing, maintaining and improving a nuclear security management system with a focus on OPG high security sites that encompasses all licensing activities. This includes but is not limited to Security Threat Identification and Risk Assessments, which are performed annually to identify credible threats to a specific site or facility. OPG is required to take any credible threats identified in a Threat Risk Assessment (TRA) into account in the design of the physical protection system.

The TRA program is a strategic process for the evaluation of physical security in accordance with *Nuclear Security Regulations* (NSR) Section 7.5. The implementing instructions of the

program contain the tactical directions to implement during abnormal operations and/or emergency situations to ensure continual compliance within the NSRs as a whole. The security program is based on credible risks and vulnerabilities, and as such, and in accordance with the *Nuclear Security Regulations*, has identified vital areas at Pickering NGS and implemented physical protection measures, including access control, and measures designed to delay unauthorized access considering the DBT and any other credible threat identified by the TRA. The OPG Nuclear Security Operations at Pickering NGS has continued to ensure uncompromised safety and security of employees, the public and the environment. The need to improve security performance is recognized and OPG is ensuring security is held to the same high standards and intrusive oversight as all other organizations at OPG that impact nuclear safety.

OPG Nuclear Security has progressed towards a more proactive approach to identifying program improvements that is evident in the implementation of a Security Excellence Plan that has established a Security Excellence Meeting with the pillars of Our People, Our Performance and Our Future. The Excellence Meeting process is a strategic model that has been proven to drive continuous improvement at the OPG station level.

OPG corporate oversight has moved the Security program from a Tier 3 level program to a Tier 1 level program with OPG's managed system. This shift from Tier 3 to Tier 1 resulted in heightened management of our Security program, generating a comprehensive and enhanced oversight body, including but not limited to a fleetwide functional peer team which reviews performance and trends regularly. Security performance and results are reviewed and challenged at the Nuclear Executive Committee on a regular frequency to continually drive performance. In support of OPG's safety culture, Security continues to work toward improved performance in all elements of the Security program through a critical lens using effective and established managed processes, in addition to new initiatives.

OPG holds forums such as the quarterly Security Director's meeting and the Nuclear Security Advisor Group which includes security representatives from all Nuclear High Security Sites in Canada and CNSC staff. The group is focused on ensuring nuclear security programs in Canada continue to meet future requirements, through the sharing of operating experience and the promotion of best security practices. OPG Security has also formed a Compliance Audit and Governance group, dedicated to unbiased, risk-based assessments of the Security Program. Through these internal self-assessments, OPG can monitor performance and trend worker behaviour indicators, gather KPI data for analysis and proactively identify latent organizational or process-based gaps more effectively.

In accordance with the *Nuclear Security Regulations*, OPG Nuclear Security conducts a large-scale security exercise through a Performance Testing program audit at Pickering NGS every 2-years. The exercise tests and evaluates the integrated response capabilities of the Nuclear Security armed and unarmed elements against adversaries equipped within the DBT. This exercise is highly dynamic and realistic, incorporating laser systems to enhance realism. The CNSC staff observe and audit these exercises. OPG Security conducts a detailed after-action audit of the results, which is provided to the CNSC. The exercise feedback is used in the development of the training objectives for each subsequent year. Pickering NGS conducted their last exercise on March 12, 2026. The 2026 exercise effectively demonstrated an updated tactical response. Each preceding training session was strategically designed to enhance the skills and capabilities of our officers, continuously raising the standard of performance within the team. OPG Nuclear Security has been operating with an onsite armed response force since January 18, 2010, and maintains a program in place to provide ongoing training for Armed

Nuclear Security Officers (ANSO) (also referred to as the Nuclear Response Force) and unarmed Nuclear Security Officers (NSO).

The Security Training organization structure has been realigned to report into the Nuclear Training Organization, which enables the incorporation of lessons learned and best practices from across OPG's departments and will support overall alignment. In accordance with the *Nuclear Security Regulations* and the Security program, Security drills are routinely conducted to proactively assess and strengthen our physical protection systems, including tactical deployment plans, under realistic conditions. These exercises not only ensure regulatory compliance, but also provide valuable opportunities for continuous improvement in our security measures. OPG Security also maintains an ongoing Memorandum of Understanding (MOU) with the Durham Region Police Service (DRPS) for offsite tactical response support. OPG Security will continue to operate at a high standard and meet the CNSC licensing requirements throughout the life of the Pickering NGS.

Cycle 1 and Cycle 2 Security Excellence Meeting (SEM) initiatives for the 2025 excellence plan have been successfully executed. OPG Security has developed and will be executing the 2026 Security Excellence Plan. Overall, the process demonstrates strong progress and ongoing commitment to meeting all regulatory and operational expectations.

- Pickering NGS is in the process of upgrading its security systems. The Entry Control System upgrade has been completed, and the Security Monitoring System project upgrades were completed in Q3 2025.
- Integrate the fundamental principles of human performance with emphasis on procedural adherence, enabling the organization to proactively identify potential risks, enhance safety measures, and continually improve performance.
- Transform the organizational culture by strengthening organizational capabilities, enhancing workforce engagement, and developing skills essential for future growth and operational effectiveness.
- Improve the operational reliability of all security equipment (cameras, alarms, and access control systems, etc.) by conducting regular maintenance, developing, maintaining, and monitoring a lifecycle management program, and establishing a monthly performance tracking system.
- Ensure all strategic initiatives undergo a systematic implementation process, supported by well-structured business cases, basis documentation, and decisions supported through data mining.
- Strengthening international collaboration to ensure alignment with global nuclear security standards, excellence in physical, electronic, and procedural security, strategy, exercise program, self-assessment, tactical effectiveness, and technology/innovation.
- Mandating that technological innovation is applied to business outcomes and is a core capability of the team to build a sustainable culture of continuous improvement.

2.12.1 Facilities and Equipment

The OPG Security program ensures the possession, deployment and operation of required facilities and equipment at Pickering NGS complies with the *Nuclear Security Regulations*, and CNSC REGDOC-2.12.1, *High-Security Facilities, Volume II: Criteria for Nuclear Security Systems*.

The Pickering NGS Site Security Report describes in detail the physical security measures and systems and the security organization in place to ensure security of Pickering NGS employees, the public and the environment in accordance with the regulatory requirements. Changes to security systems are documented in the Site Security Report, as well as the Quarterly Security Report per CNSC REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, and are required to be submitted to the CNSC.

Personnel

Entry to the protected area at Pickering NGS requires all personnel to be searched for weapons and explosive substances at the Main Security Building and Auxiliary Security Building, in accordance with the *Nuclear Security Regulations*. The Pickering NGS search facilities are equipped with dedicated equipment for conducting security searches that meet CNSC REGDOC-2.12.1 Volume II requirements. OPG has implemented an upgrade to all personnel proximity cards, replacing outdated cards with enhanced, more secure technology. Following successful completion of security screening, personnel must present their proximity card to activate the revolving door and enter the protected area. The card contains the individual's security clearance status and biometric identifiers, which are required for unescorted access to the protected area.

Vehicles

All vehicles entering the protected area are searched for weapons, explosive substances and unauthorized persons in accordance with the *Nuclear Security Regulations* as well as contraband and prohibited items. All vehicles, upon entrance and exit from the PA are surveyed for Category I and II nuclear material using the Vehicle Radiation Monitor. Pickering NGS has physical protection measures against forced land vehicle penetration of the protected area. The measures are compliant with CNSC REGDOC-2.12.1 Volume II.

Powerhouse Doors

All exterior doors of the Pickering NGS powerhouse are hardened and secured with a robust lock system. Vital Area (VA) doors are hardened and secured with a robust lock system and access controls. All protected area exit points are monitored with portal monitors for the detection of Category I, II or III nuclear material to prevent theft of material. To enhance awareness with powerhouse door requirements and expectations, new signage has been installed on all powerhouse security doors, as well as a requirement for all employees to complete a specific CBT, to reinforce the expectations of door use per security governance. Additionally, installation of door alarms on PHD is underway.

Material Security

Searches are conducted on all packages and equipment entering the protected area for weapons, contraband and explosive substances.

Sealed sources and nuclear fuel are protected, stored and managed in compliance with CNSC REGDOC-2.12.3, *Security of Nuclear Substances: Sealed Sources and Category I, II and III Nuclear Material, Version 2.1* and in accordance with the *Nuclear Security Regulations*.

Physical Protection System

The Pickering NGS protected area is surrounded by a security fence equipped with devices intended to detect any attempt at unauthorized intrusion into the protected area, and to detect any tampering or component failures that could cause the system to malfunction. The system is

always monitored by Nuclear Security officers in the Central Alarm Station. Alarms within the protected area are responded to by armed Nuclear Security Officers. Pickering NGS also has physical protection measures against forced land vehicle penetration of the protected area. OPG employs Defence-in-Depth principles to the physical security protection system which is designed to deter, prevent, detect, assess, delay and respond.

Improvements include several strategic initiatives aimed at implementing innovation and technology opportunities. These include the implementation of life cycle management programs ensuring equipment reliability by maintaining an effective maintenance and training program to will ensure the safe and reliable operation of security equipment.

Other improvements include a Security Excellence plan focused on initiatives for technology and infrastructure.

On-site and off-site communication

In accordance with the *Nuclear Security Regulations*, OPG Nuclear Security has a primary communications system which is interoperable with Durham Region Police Service (DRPS) as the primary offsite responder. Redundant secondary communication systems are available to ensure lines of communication to the field and beyond can be established.

There are several initiatives underway to enhance security systems at Pickering NGS including hardware updates, upgrades to the Central Alarm System (CAS), and integration of the Entry Control System.

2.12.2 Response Arrangements

OPG has a Memorandum of Understanding (MOU) with the DRPS to provide off-site armed response force support to the Pickering NGS pursuant to the *Nuclear Security Regulations*.

OPG Nuclear Security has a tactical response plan for Pickering NGS that sets out clear expectations on how to maintain the security of the site and to ensure an effective response to security events including the unauthorized removal of nuclear or radioactive material or to the sabotage of nuclear facilities, as required by the *Nuclear Security Regulations* and CNSC REGDOC-2.12.1, *High Security Facilities, Volume I: Nuclear Response Force, Version 2*. The tactical plan implements the primary objective of Nuclear Security to make an effective intervention considering the CNSC DBT and any other credible threat identified by the TRA to the protected area. DRPS provide support to this tactical plan.

2.12.3 Security Practices

The OPG Nuclear Security organization has accountabilities and responsibilities for the delivery of security services to effectively manage security risks based on OPG risk tolerance levels, the DBT and required assurance of compliance with CNSC regulations.

Frontline Pickering NGS Security personnel consist of two roles, NSOs and ANSOs. NSOs perform all security functions for Pickering NGS primarily personnel, bulk material and vehicle searching, surveillance and patrolling, while ANSOs provide on-site armed support capable of dealing with situations outlined in the DBT in addition to core NSO duties. A defensive strategy is followed along with a tactical plan as required by the *Nuclear Security Regulations* and CNSC REGDOC-2.12.1 Volume I.

The OPG Security clearance process ensures personnel requiring access to OPG business units, locations, or access to OPG Confidential, OPG Confidential Exclusive or Security

Protected information do not pose a risk to the facilities, its employees, or company assets. Personnel, including OPG employees and contractors who require unescorted access to the Pickering NGS protected area, must comply with the applicable requirements of *Nuclear Security Regulations*. This process is governed by OPG's *Clearance Process* and OPG's, *Guide to Security Clearance*, and is in compliance with CNSC REGDOC-2.12.2, *Site Access Security Clearance*. A proximity card is given to each approved applicant, and the proximity card and biometric scans permit entry to and exit from the protected area, as per the *Nuclear Security Regulations*. Upon exit from the protected area, in accordance with the *Nuclear Security Regulations*, all personnel and vehicles are scanned for Category I, II, or III nuclear substances. Prescribed information is controlled and released only on a 'need to know' basis to those who possess the appropriate security clearance.

The trait of Vigilance was added to OPG's Nuclear Safety and Security Culture framework. OPG upholds vigilance as a key component of its defense-in-depth security strategy through initiatives such as OPG's Supervisory Awareness program, Continuous Behavioural Observation program. The program ensures all supervisors possess the necessary skills and knowledge to identify behaviours that may pose a risk to the health and safety of employees, the plant and the public. Since 2023, OPG has been performing an annual vigilance campaign focused on a variety of topics. The vigilance campaign was designed to monitor and influence station staff's awareness and behaviours in relation to potential security risks. This primarily involves the issuance of communications, facilitation of Dynamic Learning Activities involving station staff, targeted enhancements to existing practices, and distributions to promote the Nuclear Safety and Security Culture Trait of vigilance to staff.

2.12.4 Drills and Exercises

The OPG Security program ensures the Nuclear Security Response Force conducts effective interventions, based on the Design Basis Threat (DBT) and any other credible threats identified through threat and risk assessments within the protected area. The objective is to prevent sabotage of the nuclear facilities or the sabotage and theft of Category I, II, or III nuclear materials.

To achieve this objective, the Nuclear Response Force is equipped with gear prescribed by CNSC REGDOC-2.12.2 Volume I, which includes tactical equipment, both lethal and less lethal options, and tactical personal protection equipment. A yearly maintenance program is in place to ensure firearms are maintained and armored to manufacturer specifications.

NSOs and ANSOs are required to qualify in specific training program elements and must requalify within established requalification periods as per CNSC REGDOC-2.2.4, *Fitness for Duty, Volume III: Nuclear Security Officer Medical, Physical, and Psychological Fitness*, and REGDOC-2.12.1, Volume I. The *Nuclear Security Training and Qualification Description* establishes the training requirements for NSOs and ANSOs, including initial and subsequent requalification training requirements. The position of a Nuclear Security Training Officer is specifically used to implement and manage programs that support and adhere to nuclear security regulatory requirements, ensuring that employees meet qualifications and are recertified as necessary.

OPG deploys a Security Training Team consisting of Tactical Trainers and Training Technicians who are responsible for developing and utilizing various training methods aimed at enhancing the competence and confidence of Security Officers. Additionally, Security Supervisors utilize on-crew trainers to ensure proficiency in specific aspects of officer's duties as well as conducting monthly drills and crew practice sessions to evaluate proficiency in specific aspects

of officer's duties. A dedicated team has been established to oversee the drills and exercises component of the program. This team is responsible for coordinating monthly drills and crew practice sessions at the Pickering site, with the objectives of validating security practices and proficiency, ensuring regulatory compliance, and identifying opportunities for security enhancements. The team systematically documents, evaluates, and archives the outcomes of these activities, and utilizes the findings to inform and refine future security training objectives.

2.12.5 Cyber Security

OPG has established an enterprise-wide *Cyber Security* program to establish and maintain processes, procedures and controls to ensure OPG meets or exceeds regulatory requirements for cyber security, specifically CSA N290.7-14, *Cyber Security for Nuclear Power Plants and Small Reactor Facilities* standard. Moreover, OPG has implemented a Nuclear Cyber Security procedure, which identifies systems that are Cyber Essential Assets (CEA) and the requirements to protect them from internal and external cyber threats, up to and including the design basis threat. This program is under the purview of OPG's Nuclear Cyber Security section, which operates under the Corporate & Technology Services organization. These documents are used to identify systems at Pickering NGS/PWMF that are Cyber Essential Assets, establish controls to protect them from threats, and secure the confidentiality, availability and integrity of prescribed and/or sensitive Pickering NGS/PWMF information. The Cyber Security program is under the authority of OPG's Corporate and Technology Service organization.

The cyber security program objectives address the following elements:

- *Defensive strategy and security architecture:* The *Defensive Cyber Security Architecture Standard* (DCSA) specifies the requirements for establishing a DCSA that is specifically tailored to the needs of OPG nuclear facilities including Pickering NGS. DCSA focuses on the arrangement of zones to establish defence-in-depth, and specifies the requirements for boundary protection, secure communications and interconnections between zones, and common security control requirements that provide for protection across the facility.
- *Policies and procedures:* OPG's *Cyber Security Policy* requires OPG to establish and maintain a management system that reduces cyber risk, protects critical information and operational technology assets in accordance with internationally recognized cyber security standards while, at a minimum, maintaining compliance to regulatory and legal requirements. The policy supports the respective program, nuclear specific procedure and lower-level documents tailored to address specific clauses of CSA N290.7-14.
- *Asset identification and classification:* Procedures define instructions for the identification of Cyber Assets and Cyber Essential Assets per the definitions defined by CSA N290.7-14. Further, these assets are classified and prioritized using a graded approach for applicable cyber security controls commensurate to their significance and susceptibility.
- *Security Controls:* OPG makes use of a graded approach to establish the necessary cyber security controls to protect Cyber Essential Assets.
- *Roles and responsibilities:* Roles and responsibilities for staff to meet program, process and lower-level document expectations are well defined in OPG procedures.
- *Awareness and Training:* Qualifications and trainings are documented in OPG's *Training Plan*. System Owners confirm that all cyber security activities performed on systems that

they are responsible for are completed by competent individuals with the necessary qualifications.

- *Cyber Asset Configuration Management and Life Cycle Approach:* Applicable change control processes ensure Cyber Essential Asset configuration management and life cycle management follows CSA N290.7-14. OPG employs a Third Party Risk Management process to assess the cyber security posture of vendors.
- *Coordination with other programs:* Processes are compliant with CSA N286-12, *Management system requirements for nuclear facilities*, and interface with other nuclear processes to provide the necessary elements of a comprehensive cyber security program in OPG Nuclear.
- *Incident response, reporting and recovery plan:* OPG's *Nuclear Cyber Security Incident Response Plan* provides guidance to cyber security incidents that potentially impact Nuclear Operational Technology digital assets supporting OPG nuclear facilities.
- *Program review and maintenance:* OPG's Nuclear Cyber Security process emphasizes program review through monthly program performance updates, annual Fleetview reports, continuous improvement through annual self-assessments, operating experience lessons, corrective actions, and updates to relevant CSA standards and CNSC regulations and REGDOCs. Furthermore, the process integrates lessons learned from cyber security incidents, audits, as well as supplemental drills or exercises.

Cyber security related updates have been made to the ECC process, employee training, and various maintenance and engineering instructions, guides, procedures and standards in addition to OPG's corporate cyber security policy.

OPG continues to maintain compliance with CSA N290.7-14, *Cyber security for nuclear power plants and small reactor facilities* and pursues continuous improvement initiatives to enhance our cyber security posture. This includes work efforts towards meeting the requirements identified in CSA N290.7-21, *Cyber security for nuclear facilities*, along with cyber security best practices.

2.12.6 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Security SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

OPG's *Nuclear Security* program will be followed during Decommissioning.

When fuel is removed from the Pickering NGS Units 1 and 4 IFBs into DSCs and heavy water is processed, there may be engineering changes to the Protected Area boundary to reflect the changed security requirements. Specifically, the delineation between the operational station (Pickering NGS Units 5 to 8) and the Decommissioning zone (Pickering NGS Units 1 to 4) will be established through the implementation of the Pickering AB Gate, which serves as a combination of physical and administrative barriers. While the AB gate will establish a physical delineation between the operational station and the decommissioning zone, there are currently no anticipated changes or impacts to the protected area boundary, access controls and/or security measures.

Once the AB Gate is established, all existing systems required for the continuing operation of Pickering NGS Units 5 to 8 will be fully contained on the eastern (operational) side of the gate. This includes all equipment, supply piping, cables, control systems, etc. Any new equipment supporting Pickering NGS Units 5 to 8 operations that needs to be installed west of the Service Wing wall will require prior discussion and concurrence with both the Safe Storage and Decommissioning teams to ensure coordination and security compliance.

As per the current *Nuclear Security Regulations*, only Category I, II, and III nuclear materials are required to be within a PA. Other nuclear materials on site will have security requirements that may be prescribed in future revisions of the 2.12 series of CNSC REGDOCs. OPG will apply security measures commensurate with those requirements as they are established, ensuring that all materials are secured appropriately based on their classification and associated risks.

2.12.7 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Security SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

OPG's Nuclear Security program will be followed during refurbishment.

To support the large numbers of contractors on site during refurbishment activities, an upgrade to both the Main Security Building and Auxiliary Security Building is scheduled in order to expand the search area to accommodate an increase in refurbishment staff upon entry and exit. Using OPEX from Pickering A Restart project, the gate on the west side of the station will be utilized for key material and equipment movements. To support Refurbishment and decommissioning activities, there will be a large influx of vehicles and material entering the Protected area. To support this, a new west sally port will be utilized. The expansion of the Main Security Building, Auxiliary Security Building and development of the vehicle entry portal, are being designed to meet all the requirements of the *Nuclear Security Regulations*. Furthermore, Lessons Learned from Darlington NGS OPEX is actively incorporated into Pickering Refurbishment planning. Security has hired support specific for refurbishment and has completed several turnovers with DNGS Security Refurbishment SPOC. Turnovers included searching at vendor facilities, enhanced sally port protocols, resourcing requirements and scheduling and planning. All turnover has been incorporated into the planning process and continues to be monitored and addressed through the Pickering Security Change Management Plan.

The proposed DWI project will require moving the south PA boundary fence at Dike Road east of the intake channel to accommodate expanding Dike Road and providing the minimum required space for the construction Island. A new PA boundary fence meeting the requirements of the NSR will be built and is planned to be commissioned prior to the removal of existing boundary security measures.

Security staffing requirements will increase over the next few years to meet the needs of the station and refurbishment work that will be conducted at Pickering NGS. An access authorization process is followed to ensure personnel and contractors requiring access to Pickering NGS or access to OPG Confidential, OPG Confidential Exclusive or Security Protected information, do not pose a risk to the facility, its employees or company assets.

2.12.8 Pickering Waste Management Facility

OPG has implemented and maintains a Nuclear Security program and Cyber Security program. PWMF's security program and cyber security program are defined by the programs as described in 2.12.1 and 2.12.6.

PWMF Phase I is contained within the Pickering NGS protected area and as such the security program with respect to that site is described in documentation relating to the Pickering NGS. PWMF Phase II is contained within a separate protected area located on the Pickering NGS controlled area site. The security provisions described in this section relate to both phases of the PWMF unless stated otherwise.

OPG's Nuclear Security program ensures the security of the PWMF's assets through physical and administrative security measures utilizing equipment, personnel, and procedures. The security program at the sites has continued to evolve to meet industry best practices and all regulatory requirements.

The security program includes the following:

- Security measures for PWMF are evaluated against annual OPG threat and risk assessments to ensure credible threats are mitigated.
- Training programs are in place to enhance and sustain improved performance of OPG's Security Divisions.
- A comprehensive drill program is in place as a means of validating security practices, ensuring regulatory compliance, and identifying areas for improvement in security operations. CNSC evaluated force on force exercises, conducted at the nuclear generation sites, which provide performance testing of the nuclear security program. Lessons learned through OPG security drills and exercises are applied to enhance the program at PWMF.
- OPG continues to participate in an Inter-Utility Security Working Group, which includes representation from all nuclear power operators in Canada. This group provides benchmarking opportunities to ensure that the program meets industry standards.
- OPG conducts regular meetings with CNSC staff to ensure that evolving security requirements are understood. Interface meetings between NSS Waste Facility Management, Security Management and key staff are held on a quarterly basis.
- Security requirements in accordance with the *Nuclear Security Regulations* are in effect at OPG's High Security Sites, including the PWMF.

Planned Activities

OPG is currently constructing DSC SB5 in PWMF Phase II, with an anticipated in-service date in 2027. It will be located to the east of SB4, and the protected area will be expanded to accommodate the new structure. Construction plans include consideration for:

- Expansion of the protected area boundary to enclose the footprint of the new SB5 for used fuel in the PWMF Phase II. The construction of a new security kiosk (the civil portion only) and a new vehicle denial barrier will also occur under this project.
- Using leading technology for perimeter intrusion detection and assessment.

- Construction of temporary protected area barriers which will be placed into service at PWMF to separate the operating facility from the area where construction is occurring. These temporary protected area barriers will be placed into service during construction and remain in place until the conclusion of the construction.
- Both permanent and temporary protected area barriers will be constructed to meet the requirements of the Nuclear Security Regulations and CNSC REGDOC-2.12.1 Volume I and Volume II.

Prior to these construction activities, OPG will submit the proposed security arrangements and measures for SB5, new vehicle denial barrier and new security entrance (i.e. Security Kiosk) as upgrading security infrastructure for the existing PWMF Phase II Storage Buildings in the Security Report Annex and obtain acceptance from the CNSC. This is planned for submission in Q2 2026.

Furthermore, planned upgrades to Phase II include:

- PWMF integration into a Pickering site entry control system upgrade,
- Updates to the Pickering site security monitoring room infrastructure,
- Replacing existing intrusion detection and assessment systems with devices utilizing leading technology.

To provide the minimum required space for the tunnel boring machine launch shaft pad construction and operation to enable the proposed DWI project, the following two engineering changes are required:

1. The relocation of DSMs from the PWMF Phase I RCS area (southeast corner of the station protected area) to Phase II licensed storage area in PWMF. CNSC staff concurrence was obtained to utilize certain gates as an alternate entrance for ingress and egress of DSMs and large construction equipment to support the relocation of DSMs. In February 2026, the relocation of all DSMs was completed.
2. The existing Pickering NGS PA boundary fence, which provides the PA boundary fence for PWMF Phase I, will be relocated following the ECC process.

The PWMF Site Security Report will be updated to include the DSMs in the Phase II site.

2.13 Safeguards and Non-Proliferation

Safeguards and Non-Proliferation refers to an international system of monitoring and verifying nuclear material and specified nuclear activities, administered in Canada by the CNSC and verified by the IAEA, to deter the diversion of nuclear material from legitimate peaceful activities. This system facilitates the IAEA to evaluate compliance with its obligations pursuant to its international safeguards agreements.

Canada has entered into a Safeguards Agreement and an Additional Protocol (hereafter referred to as “safeguards agreements”) with the IAEA pursuant to its obligations under the *Treaty on the Non-Proliferation of Nuclear Weapons* (INFCIRC/140). The international *Treaty on the Non-Proliferation of Nuclear Weapons* is the cornerstone of Canada’s efforts to promote its objectives of international disarmament, non-proliferation, and the peaceful use of nuclear

energy. More specifically, Canada maintains obligations under the following Canada-IAEA safeguards agreements:

- *Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons INFCIRC/164; and,*
- *Protocol Additional to the Agreement Between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons INFCIRC/164/Add.1.*

For Nuclear Power Plants in Canada, the non-proliferation program is limited to the tracking and reporting of foreign obligations and origins of nuclear material as per CNSC regulatory document REGDOC-2.13.1, *Safeguards and Nuclear Material Accountancy*. The Additional Protocol contains further requirements for the provision of information and access, including the obligation to allow access to some locations on 24 hours' notice, and the obligation to provide information on and access to certain nuclear manufacturers and researchers, neither of which need to involve nuclear material.

Pickering NGS and Pickering Waste Management Facility have an effective Safeguards and Non-Proliferation program that ensures compliance with Canada's safeguard agreements with the IAEA, the *General Nuclear Safety and Control Regulations* and other measures arising from the Treaty on the Non-Proliferation of nuclear weapons. This program consists of, in the following hierarchy:

- OPG's *Safeguards and Nuclear Material Accountancy* program is designed to establish, maintain, and verify compliance with Safeguards and Nuclear Material Accountancy requirements, ensuring all necessary measures are taken to facilitate Canada's compliance with international safeguards agreements and any other measures arising from the Treaty on the Non-Proliferation of Nuclear Weapons.
- The *Safeguards and Nuclear Material Accountancy Implementation* procedure provides further direction to ensure OPG complies with its licence conditions, the *Nuclear Safety and Control Act*, the *General Nuclear Safety and Control Regulations*, and any other related *Regulations* in support of Canada's safeguards and nuclear material accountancy agreements.
- The *OPG Safeguards and Nuclear Material Accountancy Requirements* procedure captures specific requirements for the establishment and maintenance of the Safeguards program at OPG nuclear; this procedure closely follows and where possible, exceeds the CNSC regulatory document, REGDOC-2.13.1, *Safeguards and Nuclear Material Accountancy*.

Throughout the current licence period, the OPG Safeguards program was successful in meeting all international Safeguards and Non-Proliferation agreements. Over the current licence period (since 2018), Pickering NGS has taken all necessary actions to ensure satisfactory results and lessons learned are addressed from inspections performed by the IAEA. Pickering NGS has fully supported the IAEA requests, including nuclear material accountancy and control, access and assistance to the IAEA, operational and design information, support for Safeguards equipment, and containment and surveillance. In addition, the Pickering NGS safeguards program is internally evaluated each year through self-assessments to ensure the continued health of the program, the program remains in compliance with regulatory requirements, and a working level structure is in place to ensure success in meeting OPG obligations.

2.13.1 Nuclear Material Accountancy and Control

Nuclear material accountancy involves activities that establish and report the quantities of nuclear material present within defined areas, as well as the changes in those quantities within defined time periods. This includes nuclear material measurement, record keeping, preparation and submission of accounting reports, and verification of accounting information.

All units of nuclear material have a unique identifier which is tracked and accounted for. For all non-exempted nuclear material, Pickering NGS has Material Balance Areas (MBAs), where the inventory of nuclear material can be categorized, tracked, and measured. Any movements from one MBA to another are promptly reported to the CNSC and IAEA. Nuclear material movements within the same MBA are also tracked internally to ensure precise status. Inventory changes are input into Nuclear Material Accountancy software by staff qualified to move nuclear material. This software supports tracking and report generation. Reports of inventory status are submitted to the CNSC and IAEA as required by CNSC REGDOC-2.13.1.

Pickering NGS utilizes an electronic system to help track deadlines associated with CNSC/IAEA Safeguards requirements to ensure submissions are made on time in accordance with CNSC REGDOC-2.13.1. This system also supports historical traceability by documenting when submissions were made, in addition to record keeping of submitted files.

Pickering NGS in accordance with the *Safeguards and Nuclear Material Accountancy* program discloses to the CNSC, the IAEA, or an IAEA inspector, any records required to be kept or any reports required to be made under a safeguards agreement. OPG meets all reporting requirements established by the *General Nuclear Safety and Control Regulations*, Section 31.

All communications with the CNSC and IAEA which contain sensitive information, such as nuclear material accounting, is performed using only secure means. To ensure timely communication and report submissions, procedures are kept in alignment with CNSC REGDOC-2.13.1 requirements and relevant staff are trained on these procedures to be aware of reporting requirements and timelines. Between 2018 to 2024, Pickering NGS submitted an average of 130 Safeguards Nuclear Material Accountancy submissions per year to the CNSC and IAEA.

2.13.2 Access and Assistance to the IAEA

The IAEA may require access to a given site for a variety of purposes pursuant to the Canada-IAEA safeguards agreements. Pickering NGS will grant prompt access to all locations within the licence to the IAEA and CNSC inspector(s), or to person(s) acting on behalf of the IAEA/CNSC, where such access is required to carry out an activity pursuant to a safeguards agreement. Site procedures are written to allow access for inspection at all operating hours. Initial access to areas for inspection will be attained within two hours of the IAEA arriving onsite provided it is safe to do so. The IAEA has the right to request complementary access to any location in Canada with at least 24 hours' notice, or two hours' notice, if the IAEA is already present at a facility or location outside the facility, on the same site, for an inspection or Design information Verification.

IAEA and CNSC inspectors regularly perform site visits to review the status of monitoring equipment, accessible nuclear material inventory, submitted records, station design, procedures, and worker practices. Site visits are also required to perform maintenance of IAEA surveillance equipment, for example the successfully completed IAEA replacement of Core

Discharge Monitors with significant support from OPG. These inspections and maintenance prevent gaps in nuclear material safeguarding provisions.

Existing procedures have been in place for some time and have been reviewed against the safeguards agreements and Canadian regulations to ensure compliance; they have also been tested through many years of use at the Pickering NGS site. During site visits, there are opportunities to share concerns and potential improvements to existing processes to make the OPG safeguards program, access and assistance more effective.

2.13.3 Operational and Design Information

There are three primary reports provided by Pickering NGS to the CNSC and IAEA to capture relevant design and operational information required by CNSC REGDOC-2.13.1. The reports are Design Information Questionnaire (DIQ), Operational Program, and Additional Protocol.

Through Pickering NGS's internal routine electronic tracking (typically yearly), the DIQ is reviewed for any changes; any identified changes are included in a revision to the DIQ and it is resubmitted to the CNSC and IAEA. In addition, the Pickering NGS safeguards specialist maintains awareness of potential site developments that may necessitate updates and resubmission of the DIQ at any time. The OPG *Engineering Change Control* program also requires design changes to be reviewed for potential impact to Safeguards in the early planning phase (for additional information on OPG's ECC program see Sections 2.1.5 and 2.5.1). Design changes flagged for potential impacts to Safeguards are discussed with the Pickering NGS safeguards specialist and reported to the CNSC and IAEA for alignment prior to implementation. Direct communications from the design change team allows for detailed and applicable information to be gathered for accurate reporting. Moreover, OPG's design change process requires rigorous documentation to capture all details that would be needed for Safeguards. Relevant information as confirmed through documentation and discussion with the design change team, IAEA and CNSC (where applicable) is then included in the DIQ update.

To further ensure the accuracy of the submitted DIQ and the site-specific safeguards measures, the IAEA also performs routine Design Information Verifications (DIVs). During a DIV, the IAEA performs in person inspections of the provided DIQ information to verify it is accurate and sufficient to make decisions on the safeguard measures.

The Operational Program is submitted annually as per CNSC REGDOC-2.13.1. Typically, quarterly updates are also provided to deliver confirmation of no change or identify any changes.

Much like the DIQ preparation, the Pickering NGS safeguards specialist maintains awareness of site operating plans that may necessitate revision and resubmission of the Operational Program at any time. The Pickering NGS safeguards specialist gathers the required information from site contacts most applicable to the information; this ensures accurate information is provided from the source.

OPG submits the Additional Protocol annually which assists the CNSC and IAEA in reviewing the site Safeguards approach, looking for gaps, or future areas of increased concern, to address.

In addition to the above three reports, Pickering NGS maintains communication with the CNSC and IAEA Safeguards divisions. Operational activities that could not be foreseen, such as sudden power loss, that may affect Safeguards are promptly reported to the CNSC and IAEA. Furthermore, OPG supports industry peer team meetings, benchmarking of other nuclear

generating stations, and routine trilateral meetings with the IAEA and CNSC to discuss the Safeguards program, process improvements, emerging trends etc. These are excellent environments to learn from each other and identify areas for improvement in the overall safeguards program.

OPG strives to be transparent with the CNSC and IAEA to ensure alignment and facilitate the objectives of the Safeguards and Non-Proliferation agreements.

2.13.4 Safeguards Equipment, Containment, and Surveillance

There are several IAEA Safeguards equipment installed at Pickering NGS to allow remote monitoring of necessary nuclear material movements within the station; for instance, cameras and radiation monitors which are strategically placed at critical transfer locations. Pickering NGS supports this equipment by providing the required services and operating safeguards equipment as specified by the IAEA; such services include power supplies, lighting, internet connections, etc. The installed equipment provides the IAEA with continuous detailed data of nuclear material movements. The IAEA uses the information to compare against Pickering NGS's nuclear material accountancy reports to ensure all nuclear material movements are accounted for and used for legitimate purposes in accordance with the non-proliferation treaty.

IAEA equipment is labelled and sealed to deter interference, damage, or tampering. Site procedures and staff training clearly detail that tampering or disruption of IAEA surveillance equipment must be immediately reported to the CNSC.

Additional critical support parameters, such as the minimum required ambient lighting for IAEA cameras or a specified range of ambient temperature for IAEA computers, have requirements captured in site procedures and training, and OPG reinforces expectations to perform all due diligence to satisfy these bounds.

During the current licence period, there were four events reportable to the CNSC related to temporary loss of power to Safeguards equipment or late submission of an inventory change document. In each case there was no risk to the public and immediate action was taken to restore power to the safeguards equipment or submit the inventory change document. Where practical, recurrence control actions were implemented following the event.

Besides the reported events, there were no observations of adverse equipment support identified by the IAEA. Such observations can be made by IAEA remote monitoring of equipment, site inspections and maintenance. Visual inspections of accessible Pickering NGS IAEA equipment were performed at least once per year since 2017 by both OPG and IAEA. In all cases inspections met requirements.

2.13.5 Import and Export

The scope of the non-proliferation program at Pickering NGS is limited to the tracking and reporting of foreign obligations and origins of nuclear material. Import and export of controlled nuclear substances, equipment and information as identified in the *Nuclear Non-proliferation Import and Export Control Regulations*, is not currently permitted under the Pickering NGS site licence and any application is made in accordance with applicable regulations.

2.13.6 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Safeguards SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general

SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

The existing safeguards arrangements for used fuel will continue until modified or terminated by agreement with the CNSC. All Pickering NGS Units 1 to 4 safeguards equipment, including power supplies to the IAEA equipment and bay lighting, will be maintained until IAEA concurrence that they are no longer required, after the AIFB and IFB-A are empty of fuel.

The process for inspecting and removing damaged and defective fuel will incorporate operational experience from Hydro Quebec's Gentilly 2 facility (see Section 1.2.2.1 for details). Trained, experienced operations staff will perform this work, implementing measures to identify, mitigate, and monitor radiological hazards.

The sorting, segregation, and conditioning of damaged and defective fuel is expected to commence in approximately 2030. OPG will follow existing Nuclear Management Systems to implement any changes required for these activities.

2.13.7 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Safeguards SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

The Safeguard program, equipment, containment, and surveillance will remain in place during the refurbishment period.

Pickering NGS will meet all safeguard requirements including, routine and advance notifications and declarations to the IAEA on refurbishment outage dates and details related to defueling, initial core loading, and maintenance work which may impact with the functionality of safeguards equipment, as well as, tracking and reporting on non-fuel nuclear materials.

2.13.8 Pickering Waste Management Facility

The PWMF follows the OPG Nuclear Safeguards program as described in Section 2.13.

The safeguards program includes the following elements:

- A communication protocol between the IAEA, CNSC and OPG.
- Obligations to meet applicable regulatory requirements and the requirements of safeguards agreements.
- Reporting to meet applicable regulatory requirements and the requirements of safeguards agreements.

OPG nuclear management stays current with the IAEA's safeguards requirements and is committed to meeting OPG's safeguards obligations in an efficient and timely manner. As of February 2007, in accordance with the IAEA requirements, OPG has adopted the integrated safeguards protocol. Under the integrated safeguards protocol, all safeguards' commitments were met at the PWMF for the current licence period.

From 2018 to 2025 there were three events reportable to the CNSC at the PWMF related to damaged Safeguards seals. In each case, there was no risk to the public and immediate action

was taken to resolve the condition and replace the seals. Where practical, recurrence control actions were implemented following the event.

PWMF also performs annual Safeguards self-assessments to ensure adherence to the Safeguards program. As a result of the self-assessments, improvements have been made in the areas of communication with the IAEA, and planning and support for IAEA's activities, including Unannounced Inspections and Physical Inventory Verification, through a revision to the *IAEA Safeguards* operating procedure.

PWMF has met all safeguards conditions in its operating licence, and the terms of the agreement between Canada and the IAEA pursuant to the Treaty on Non-proliferation of Nuclear Weapons. The PWMF staff have fully co-operated with the IAEA and facilitated the achievement of IAEA safeguards goals. All reports and information necessary for safeguards implementation and compliance continue to be provided on a timely basis. No compliance issues have been identified by IAEA or CNSC staff.

The following subsections describe aspects of the Safeguards program at PWMF.

IAEA Fuel Verification Program

The IAEA Fuel Verification program includes material accounting, the IAEA monthly remote monitoring report, and the use of surveillance equipment such as cameras, portable verification equipment, and containment equipment.

PWMF's compliance with the Fuel Verification program is met through the following ongoing activities:

- Complying with the Safeguards Agreement and the Additional Protocol.
- Providing services and assistance for IAEA staff tasks and equipment operation.
- Disclosing any records to the IAEA upon request.
- Not interfering in any way with Safeguards equipment, samples or seals
- Making no changes to operations, equipment or procedures that would affect Safeguards implementation without prior written CNSC approval.
- Preparing and submitting nuclear inventory reports as per CNSC REGDOC-2.13.1, *Safeguards and Nuclear Material Accountancy*.

Physical Inventory Taking and Verification

PWMF staff completes an annual physical inventory taking as part of licence conditions pursuant to the implementation of safeguards by the IAEA. This is a snapshot of the fuel physical inventory at the time of the PIT.

Canadian facilities are selected at random by the IAEA for a physical inventory verification that follows the physical inventory taking. If a facility is not chosen for a physical inventory verification, then CNSC safeguards staff may perform limited confirmation activities following the annual physical inventory taking process. The IAEA completed a physical inventory verification at PWMF in May 2025.

These IAEA inspections are often attended by CNSC staff to review the facility's support for IAEA inspectors, including escorts and equipment, the provision of accountancy information and supporting documents, the facility compliance with safeguards licence conditions relevant to the

inspection activity, and the IAEA's adherence to its rights and obligations relevant to the inspection.

Laser Mapping Container Verification System

In 2021, the PWMF and IAEA completed full inventory scanning for DSCs in storage at the PWMF. All new containers with full height welds will now only have the Cobra Seal (Figure 33) applied, and Laser Mapping Container Verification (LMCV) completed negating the requirement for the metallic seals.

The LMCV system (Figure 34), designed by the IAEA, is a digital weld identification scanner created to verify and uniquely identify DSC in-situ, a powerful tool for acquiring and verifying the “weld fingerprint” of the DSC.



Figure 33. DSC in Storage showing IAEA Cobra Seals



Figure 34. LMCV System

At end of 2025, there has been more than 1,400 on-site transfer of loaded DSCs to the PWMF. There is one DSC (#3310) in storage with a 5/8" weld height which passed visual and Phased Array Ultrasonic Testing (PAUT) inspection acceptance criteria and met the existing design and safety margin. The LMCV tool used for fingerprinting the lid weld was not performed by IAEA on this DSC, rather it has dual Cobra and metal seals. OPG has since decided to forgo the 5/8" weld initiative, and thus DSCs will be full height welded.

NSS Design is currently in the detailed engineering phase of a DSC design change as described in Section 2.5.7. This change, named MKIII, involves revision of the lid weld groove from an asymmetrical groove to a symmetrical V-groove. The changes are likely to impact the LMCV tooling. OPG will work with the CNSC and the IAEA as per the requirements in the LCH and the established processes to implement DSC design changes.

Planned Activities

OPG is working to implement the equipment-based approach as proposed and developed by the IAEA with consultation with the CNSC, and other Multi-Unit CANDU stations in Canada.

The equipment-based approach in the PWMF will involve:

- Installation of Mobile Unit Neutron Detectors on the DSC Transporter
- Installation of a surveillance camera on the DSC Transporter
- Installation of equipment within the PWMF to support the charging of the MUND and surveillance cameras on the DSC Transporter.
- Change in laydown period within the Pickering NGS during loading operations.

Minor updates are also planned to the Safeguards and Nuclear Material Accountancy program to clarify requirements.

2.14 Packaging and Transport

Pickering NGS has an effective packaging and transport program that meets or exceeds all applicable regulatory requirements and related objectives. Packaging and transport of nuclear substances are routinely conducted safely.

The program document, *Radioactive Material Transportation* (RMT), establishes the program and necessary controls for safe, regulatory compliant and efficient transportation of radioactive material at OPG. The RMT program establishes procedures for the handling, packaging, shipment, and receipt of radioactive materials. Under the RMT program, the *Radioactive Material Transportation Emergency Response Plan* addresses emergency response to transportation accidents involving radioactive material, which meets the requirements of Transport Canada. The RMT program and its associated procedures fully comply with the CNSC and IAEA requirements for a management system.

2.14.1 Packaging and Transport Program

The objective of the RMT program is to ensure that shipments of radioactive material for which OPG is the consignor are prepared and offered for transport in a manner that is compliant with the *Transportation of Dangerous Goods Regulations* (TDG) and the *Packaging and Transport of Nuclear Substances Regulations, 2015* (PTNSR). The RMT program also establishes the necessary controls for safe and compliant transportation and handling aspects of radioactive material within OPG's control where OPG is the consignee or when OPG Class 7 carriers are used. This is done to ensure the safety of workers, the public, and the environment.

As per the *Radioactive Shipments* program and procedure, OPG ensures that radioactive shipments are characterized, classified, packed, shipped, and received in accordance with approved procedures and applicable *Regulations*.

OPG ensures that staff who handle (i.e., load, unload, receive, classify or ship) radioactive material in preparation for transport must be adequately trained or under the direct supervision of someone who is. Within OPG, evidence that an employee is adequately trained for their function is demonstrated by holding a valid Class 7 Certificate of Training as per the TDG regulations. All Type A or Type B radioactive shipments and shipments requiring a Licence to Transport are supported by a RMT Transportation Officer.

During the current licence period, all radioactive material shipments to and from the Pickering NGS site were safely transported.

Radioactive Materials Transportation Emergency Response Plan

The *Radioactive Materials Transportation Emergency Response Plan* identifies the OPG responsibilities and the concepts to enable effective response to a transportation incident involving an OPG shipment of radioactive material. This plan also identifies the liaison and potential interface with external ERO. This plan applies to off-site shipments only. On-site incidents are addressed through the site ERO implementing instructions.

A Pickering NGS Transportation Emergency Response Plan (TERP) exercise was conducted to demonstrate the ability of qualified personnel to respond to an off-site radioactive waste transportation emergency per Transport Canada regulations. This is covered under OPG's Emergency Response Assistance Plan (ERAP) for the transportation of dangerous goods and is a requirement under federal law.

This exercise combined the efforts from OPG and external agencies including the designated external contractor, Ministry of Environment Spills Action Centre, Transport Canada (CANUTEC), and the Clarington Fire Department. There were no significant findings, and all drill objectives were met. Minor observations were identified to improve future response, including revising response area maps. As a matter of continuous improvement, the use of drone technology will continue to be reviewed for TERP response to improve response capabilities and personnel safety.

2.14.2 Package Design and Maintenance

OPG controls the design of its radioactive materials packaging and performs maintenance on the packaging to ensure compliance with the PTNSR.

Each OPG radioactive materials transportation packaging (with the exception of one-time use packaging) is subject to an annual maintenance outage. Packaging maintenance is performed in a dedicated facility at the Western Waste Management Facility.

Each packaging is maintained in accordance with a packaging-specific procedure. The containment system of each Type B or Type A packaging is tested to ensure its effectiveness.

Engineering changes to OPG's existing radioactive materials transportation packaging are a rare occurrence due to the maturity of the designs. All packaging has been maintained in good condition without any reduction in safety or operability.

An improved version of the OPG Trillium Transportation Package, designated as Trillium TP-03, will be added to the OPG fleet in 2025 to increase the fleet's capacity to transport spent ion exchange resins and ILW from the Pickering, Darlington and Bruce Power stations. The design of the Trillium TP-03 was developed in accordance with OPG's *Design Management* and *Engineering Change Control* programs.

2.14.3 Registration for Use

Users of Type B packages must register with CNSC and acknowledge that they have the necessary instructions to properly prepare the package for shipment. OPG's process for use of packages of certified design is specified in the *Radioactive Materials Transportation Records* procedure.

Currently OPG is a registered user for 11 different package designs. These packages include OPG's ILW and tritiated heavy water transportation packages.

2.14.4 Pickering NGS Units 1 to 4 Decommissioning

This section provides additional information regarding the Packaging and Transport SCA with respect to Units 1 to 4 decommissioning. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional decommissioning-related details are needed.

The decommissioning of Pickering NGS Units 1 to 4 will follow the *Radioactive Material Transportation* program and *Radioactive Materials Transportation Emergency Response Plan*.

Management of Operational Waste in Fuel Bays

There are operational wastes present in the fuel bays, such as adjusters, shield plugs, and other components, which will be removed during the SWS phase as detailed in the SWS plan. New containers capable of being loaded underwater are being developed. These containers will allow for the safe handling and removal of intermediate level waste from the IFBs beginning during the requested licence period. A dedicated transportation package is being designed to support the movement of these containers for future permanent disposal. All developments, including the container designs and transportation methods, will adhere to existing governance frameworks.

Handling of Defective Fuel

Loose or defective fuel elements require additional measures and considerations before they can be loaded into DSCs. As part of the overall conditioning approach (refer to Section 1.2.2.1), defective fuel may be placed into fuel cans to provide a containment configuration suitable for interim on-site storage. Safety assessments will be completed to define the inspection criteria needed to establish the conditioning requirements for this high-level waste prior to DSC loading.

2.14.5 Pickering NGS Units 5 to 8 Refurbishment

This section provides additional information regarding the Packaging and Transport SCA with respect to Units 5 to 8 refurbishment. It is intended to supplement the information provided in the general SCA discussion above and therefore only addresses those specific areas where additional refurbishment-related details are needed.

The refurbishment of Pickering NGS Units 5 to 8 will follow the RMT program W-PROG-WM-0002, *Radioactive Material Transportation*, and N-STD-RA-0036, *Radioactive Materials Transportation Emergency Response Plan*.

OPEX from other refurbishment programs indicates that a limited volume of new ILW, such as magnetite, may be generated. This waste can be shipped in the same manner as is currently used for spent resin.

2.14.6 Pickering Waste Management Facility

The packaging and transport program at the PWMF is defined by the RMT program as described in Section 2.14.

Under the PWMF operating licence, used fuel in DSCs is transferred on-site from the Pickering NGS IFBs to the PWMF. The *Packaging and Transport of Nuclear Substances Regulations* do

not apply to the on-site transfer of used fuel in DSCs between the Pickering NGS and the PWSMF. Nonetheless, in the absence of any specific regulations for on-site packaging and transport, OPG provides an equivalent degree of safety to workers, the general public and the environment as would be applied for off-site transportation. As described in Section 2.11, the on-site DSC transfers and storage complies with CSA N292.0-19 and N292.2-13 and is controlled through the *Radiation Protection* program.

The on-site transfer of used fuel in DSCs from the Pickering NGS to the PWSMF is conducted on designated transfer routes in accordance to OPG's procedures. At the end of 2025, more than 1,400 on-site transfers of loaded DSCs have been completed without incident at the PWSMF.

The on-site transfer of low and intermediate level refurbishment and decommissioning waste from Pickering NGS to the PCSS and the relocation of Dry Storage Modules will adhere to existing programs.

A photograph of a male worker in a yellow protective suit and orange hard hat, standing in a nuclear facility. He is wearing safety glasses and has his hands clasped in front of him. The background shows industrial equipment and a blue wall. The image is overlaid with a blue geometric pattern consisting of overlapping circles and a grid of triangles.

3.0

Facility-Specific Information

3.0 Facility Specific Information

3.1 Cobalt-60

Pickering NGS currently provides a consistent supply of Cobalt-60 (Co-60), an important radioisotope with a wide range of industrial and food processing applications that provides broad societal benefits. Through the continued operation of Pickering NGS Units 5 to 8, there's a potential opportunity for Pickering to contribute to the continued supply of this critical isotope, if needed.

Co-60 production has been an important part of the Canadian nuclear industry since its inception, and Pickering NGS currently plays a large role through production in Units 6, 7 and 8. Pickering NGS currently provides as much as 20% of the world's Co-60 supply. Co-60 produced at Pickering NGS is predominantly used to sterilize medical equipment including swabs, gloves and implants. Approximately 30% of the world's single-use medical devices are sterilized using Co-60. Food products are also treated with gamma irradiation from Co-60 to rid them of harmful bacteria and insects, providing safety and security for the global supply chain.

Pickering NGS Units 6, 7 and 8 are fitted with adjuster elements (cobalt rods) consisting of a number of bundles strung end to end. Each bundle is comprised of several targets containing cobalt slugs. The cobalt adjuster element is irradiated during unit operation, harvested during planned unit outages and transported to a third party licensed facility offsite, where it is commercialized for market. Co-60 is transported in accordance with the *Transportation of Dangerous Goods Regulations* and *Packaging and Transport of Nuclear Substances Regulations*.

In 2024 and 2025, Pickering NGS completed two Co-60 harvests during the planned maintenance outage on Unit 7 and Unit 6, respectively. In the current licence period, there is one remaining planned Pickering Co-60 harvest on Unit 8 in 2026. Cobalt-60 is then planned to be harvested from Units 6, 7 and 8 post shutdown in 2026.

Following refurbishment, and pending favourable technical, operational, and economic reviews, Pickering NGS Units 6, 7 and 8 may continue Co-60 production.

The background image shows a large industrial facility, likely a steel mill or manufacturing plant. In the foreground, a woman wearing an orange hard hat and a light blue cable-knit sweater is looking towards the right. In the background, a man wearing a white hard hat and a green shirt is standing near a large piece of machinery. The machinery has a vertical plate with letters Q, R, S, T, U, V, and W. The scene is filled with industrial structures, pipes, and machinery, creating a sense of a busy manufacturing environment.

4.0

Additional Matters of Regulatory Interest

4.0 Additional Matters of Regulatory Interest

4.1 Financial Guarantees, Nuclear Liability Insurance, and Cost Recovery

Financial Guarantees

The objective of OPG's financial guarantee is to ensure that sufficient funds are estimated, collected, and administered for the management of liabilities associated with operating, refurbishing and decommissioning of all its nuclear facilities. The PWMF is also included within this consolidated financial guarantee scope.

In addition to the decommissioning program, OPG's Financial Guarantee also covers financial provisions for the long-term management (storage, retrieval, transportation, and eventual disposal) of all operational, refurbishment, and decommissioning wastes (Used Fuel, Low Level Waste, and Intermediate Level Waste).

OPG's financial guarantee is prepared and maintained on a 5-year cycle in accordance with the requirements set out in CSA Standard N294, *Decommissioning of facilities containing nuclear substances* and CNSC regulatory document, REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities*. OPG also provides an annual financial guarantee report to the CNSC detailing the status of the guarantee including the amounts accumulated in segregated funds and the value of the Provincial guarantee (when required). The report compares the amount of the liabilities and the financial resources available to discharge the obligations.

The financial guarantee provisions for Pickering NGS and PMWF demonstrate that the current level of funding is adequate for decommissioning the station and returning the site to an end state agreed with the regulators. CNSC access to these funds is provided by the CNSC Financial Security and Ontario Nuclear Funds Agreement Access Agreement between the CNSC, OPG and the Province of Ontario, and, as required, the Provincial Guarantee Agreement between the CNSC and the Province of Ontario. In December 2022, the Commission accepted OPG's proposed 2023-2027 consolidated financial guarantee as documented in Record of Decision DEC 22-H104.

OPG will continue to provide annual Financial Guarantee reports to the CNSC detailing the status of the guarantee, including the amounts accumulated in segregated funds.

Nuclear Liability Insurance

OPG is required, under the *Nuclear Liability and Compensation Act* (NLCA), to maintain financial security in an amount equal to \$1 billion for its Pickering Nuclear Generating Station in 2025.

Cost Recovery

Pursuant to the *CNSC Cost Recovery Fees Regulations*, the CNSC prepares a Regulatory Activity Plan for Class I Nuclear Facilities and calculates an estimated annual fee payable for that fiscal year using the estimated full cost of the plan. OPG pays the CNSC's fees on a quarterly basis upon receipt of invoices. OPG will continue to make timely payment as required.

A photograph of a nuclear power plant at sunset. The sky is filled with soft, orange and yellow clouds. The plant's structures, including large containment domes and a tall chimney, are silhouetted against the bright sky. In the foreground, a body of water reflects the warm light from the setting sun. The image is overlaid with a semi-transparent blue circular graphic on the left side and a light blue geometric pattern at the bottom.

5.0

References

5.0 References

1. OPG Letter, P. Seguin, K. Aggarwal and L. Ceccato to C. Salmon, “Renewal Application for Pickering Nuclear Generating Station Power Reactor Operating Licence and Pickering Waste Facility Operating Licence”, June 27, 2025, e-Doc 7542953, CD# P-CORR-00531-23980.
2. OPG Letter, K. Aggarwal to C. Salmon, “Pickering Waste Management Facility - Application for Waste Facility Operating Licence WFOL-W4-350.00/2028 Amendment to Construct and Operate the Pickering Component Storage Structure”, May 31, 2024, e-Doc 7293912, CD# 92896-CORR-00531-01544.
3. OPG Report, “Predictive Environmental Risk Assessment for Pickering Refurbishment, Decommissioning, and Continued Operations”, P-REP-07701-00014 R000.
4. Attachments 1 to 4 of OPG Letter, P. Seguin to R. Richardson, “Pickering NGS, Units 1 to 4 – Submission of the Detailed Decommissioning Plan and Storage with Surveillance Plan”, December 9, 2024, e-Doc 7423802, CD# NA44-CORR-00531-37304.

Appendix A: Definitions and Commonly Used Acronyms

Definitions

Component Coding

Components important to safety and reliability are coded to ensure that where those components can no longer reliably perform their function, the repair is executed with priority. These components receive coding as either Corrective Critical (CC), Corrective Non-Critical (CN), Deficient Critical (DC), or Deficient Non-Critical (DN), depending on component criticality as it relates to nuclear safety.

Corrective maintenance classifications:

- CC – to be performed on critical components (criticality 1).
- CN – to be performed on non-critical components (criticality 2 or 3).

Deficient maintenance (deficient equipment that is still operating) classifications:

- DC – to be performed on critical components (criticality 1).
- DN – to be performed on non-critical components (criticality 2 or 3).

Criticality Categories

Criticality 1 Reactor Safety Criteria:

- Components in an OSR system that is also a SIS whose failure results in a System Unavailability impairment condition, or
- Components credited in the Probabilistic Safety Assessment that satisfies the condition that the Risk Achievement Worth > 2 and Fussell-Vesely > 0.005

Criticality 2 Reactor Safety Criteria:

- Components in an OSR system that is also a SIS whose failure results in a Total Loss of Redundancy impairment condition, or
- Component in an OSR system that is also a SIS system whose failure results in a Partial Loss of Redundancy impairment condition. or
- Component in an OSR system that is also a non SIS system whose failure results in a system unavailability impairment condition.

Criticality 3 Reactor Safety Criteria:

- Components in an OSR system that is also a non-SIS whose failure results in a Loss of Redundancy impairment condition. or
- Components not covered by any of the above that are included in any credited Safety Related System test or Surveillance Rounds credited in the PSA.

Defence-in-depth is a safety concept that aims to prevent and mitigate accidents through 5 independent levels of defence, applied to all nuclear power plants in Canada. The levels are as follows:

Level 1: Prevention of abnormal operation and failures;

Level 2: Control of abnormal operation and detection of failures;

Level 3: Control of accidents within the design basis;

Level 4: Control of severe plant conditions, including prevention of accident progression and mitigation of the consequences of SAs;

Level 5: Mitigation of radiological consequences of significant releases of radioactive materials.

Defueled: All fuel is removed from the Calandria

Dewatered: All heavy water has been drained from the Primary Heat Transport and the Moderator systems. These systems have been flushed and dried.

Acronyms

ACR	Annual Compliance Report
ACU	Air-Conditioning Unit
ADL	Administrative Dose Limit
AF	Accident Frequency
AFS	Available for Service
AIA	Authorized Inspection Agency
AIFB	Auxiliary Irradiated Fuel Bay
AIM	Abnormal Incident Manual
AIR	All Injury Rate
ALARA	As Low As Reasonably Achievable
AMP	Aging Management Plan
ANO	Authorized Nuclear Operator
ANSO	Armed Nuclear Security Officer
AOO	Anticipated Operational Occurrence
APCI	Annual Plant Condition Inspection
ARRR	Annual Risk and Reliability Report
ASME	American Society of Mechanical Engineers
ASR	Accident Severity Rate
ASTGMS	Automated Source Term Gamma Monitoring System
ASU	Aerial Support Unit
BDBA	Beyond Design Basis Accident
CA	Controlling Authority
CANDU	CANadian Deuterium Uranium
CAS	Central Alarm System
CC	Corrective Critical
CCI	Chemistry Compliance Index
CCoE	Construction Center of Excellence
CCR	Code Compliance Report
CCTV	Closed-Circuit Tele-vision

CI	Chemistry Index
CN	Corrective Non-Critical
CDR	Conceptual Design Report
CEO	Chief Executive Officer
CMSP	Combustible Material Safety Permit
CNSC	Canadian Nuclear Safety Commission
CofA	Certificate of Authorization
COG	CANDU Owners Group
COMS	Constructability, Operability, Maintainability, and Safety
CRE	Collective Radiation Exposures
CRO	Control Room Operator
CRSS	Control Room Shift Supervisor
CSA	Canadian Standards Association
CSFI	Counterfeit, Fraudulent and Suspect Items
CSI	CANDU Safety Issue
CSP	Critical Safety Parameter
CT	Calandria Tube
CTEP	Coaching to Enhance Performance
CWEST	Circumferential WEt Scrape Tool
DBA	Design Basis Accident
DBE	Design Basis Earthquake
DBT	Design Basis Threat
DC	Deficient Critical
DDP	Detailed Decommissioning Plan
DEC	Darlington Energy Complex
DEFDR	Department Event Free Day Reset
DFO	Department of Fisheries and Oceans Canada
DIRP	Discovery Issue Resolution Process
DIQ	Design Information Questionnaire
DIV	Design Information Verification
DLA	Dynamic Learning Activity(ies)
DN	Deficient Non-Critical
DNHWMBWA	Darlington Heavy Water Management Building West Annex
DNWM	Decommissioning and Nuclear Waste Management
DMS	Dose Management System
DOM	Director of Operations and Maintenance
DPZ	Detailed Planning Zone
DRL	Derived Release Limit

DRPS	Durham Region Police Service
DSA	Deterministic Safety Analysis
DSC	Dry Storage Container
DCSA	Defensive Cyber Security Architecture
DSM	Dry Storage Module
DWI	Deep Water Intake
EAL	Environmental Action Level
ECA	Environmental Compliance Approval
ECC	Engineering Change Control
ECCC	Environment, Climate Change Canada
ECI	Emergency Coolant injection
ECO	End of Commercial Operation
EcoRA	Ecological Risk Assessment
ECL	Exposure Control Level
ED&I	Equity Diversity & Inclusion
EEM	Enterprise Emergency Management
ETER	Equipment Important To Emergency Response
EM	Emergency Management
EMC	Electromagnetic Compatibility
EME	Emergency Mitigating Equipment
EMEG	Emergency Mitigating Equipment Guideline
EMI	Electromagnetic Interference
EMO	Emergency Management Ontario
EMP	Environmental Monitoring Program
EMS	Environmental Management System
EOC	Emergency Operating Centre
EOP	Emergency Operating Procedure
EPRI	Electric Power Research Institute
EPC	Engineer Procure and Construct
EPD	Electronic Personal Dosimeter
EPI	Equipment Performance Index
EPS	Emergency Power System
EQ	Environmental Qualification
EQP	Equipment Performance Index
ER	Equipment Reliability
ERA	Environmental Risk Assessment
ERAP	Emergency Response Assistance Plan
ERI	Equipment Reliability Index

ERO	Emergency Response Organization
ERT	Emergency Response Team
ESA	Emergency Shift Assistant
ESDR	End State Determination Report
ESL	Equipment Status Log
ESM	Equipment Status Monitoring
ESP	Environmental Stewardship Pickering
eSWP	electronic Safe Work Plan
ETE	Evacuation Time Estimate
EV	Electric Vehicle
EWE	Extreme Weather Event
EWS	Emergency Water Supply
FAA	Fisheries Act Authorization
FAF	Flow Assisted Fueling
FAGM	Fixed Area Gamma Meter
FAQ	Frequently Asked Question
FARE	Flow Assisted Ram Extension
FC	Fuel Channel
FDAS	Fire Detection and Alarm System
FDS	Fish Diversion System
FFAA	Fueling Facility Auxiliary Area
FHA	Fire Hazard Assessment
FHER	Fuel Handling Equipment Reliability
FLM	First Line Manager
FME	Foreign Material Exclusion
FPA	Fire Protection Assessment
FPP	Fire Protection Program
FSA	Fire Safety Assessment
FSSA	Fire Safe Shutdown Analysis
GAR	Global Assessment Report
GCC	Gradual Climate Change
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GIE	Global Innovation Effectiveness
GOSP	Governance, Oversight, Support and Perform
GSS	Guaranteed Shutdown State
HECA	High Efficiency Carbon Absorber
HEPA	High Efficiency Particulate Absorber
HFE	Human Factors Engineering

HHRA	Human Health Risk Assessment
HLW	High-Level Waste
HoW	Hours of Work
HP	High Pressure
HPECI	High-Pressure Emergency Coolant Injection
HPM	Health Physics Manager
HSMS	Health and Safety Managed Systems
HT	Heat Transport
HTS	Heat Transport System
HTS-AMS	Heat Transport System Aging Management Strategy
Hu	Human Performance
IAEA	International Atomic Energy Agency
IAM	Integrated Aging Management
IEC	International Electrotechnical Commission
IEP	Indigenous Engagement Plan
IFB	Irradiated Fuel Bay
IIP	Integrated Implementation Plan
IKS	Indigenous Knowledge Study
ILW	Intermediate-Level Waste
INPO	Institute of Nuclear Power Operators
ION	Indigenous Opportunities Network
IPZ	Ingestion Planning Zone
IRIS	Industry Reporting and Information System
IRS	Internal Responsibility System
ISRW	Integrated Strategy for Radioactive Waste
ISAR	Industrial Safety Accident Rate
ISB	Integrated Station Brief
ISO	International Organization for Standardization
ISP	Ignition Source Permit
ISR	Integrated Safety Review
IUC	Instrument Uncertainty Calculation
JHSC	Joint Health and Safety Committee
JITT	Just-in-Time Training
KI	Potassium Iodide
KPI	Key Performance Indicator
KIWG	Potassium Iodide Working Group
LBLOCA	Large Break Loss of Coolant Accident
LCH	Licence Conditions Handbook

LCMP	Life Cycle Management Plan
L&ILW	Low and Intermediate Level Waste
LISS	Liquid Injection Shutdown System
LLW	Low-Level Waste
LMCV	Laser Mapping Container Verification
LOCA	Loss of Coolant Accident
LP	Low- Pressure
LPSW	Low Pressure Service Water
LRF	Large Release Frequency
LTB	Lid-to-Base
LTI	Lost Time Injury
LWPRB	Local Work Protection Review Board
MBA	Material Balance Areas
MCCP	Minimum Complement Compliance Program
MCQ	Multiple Choice Question
MCR	Main Control Room
M&D	Monitoring & Diagnostics
MDR	Modification Design Requirement
MECP	Ministry of the Environment, Conservation and Parks
MIV	Mispositioning Index Value
MoU	Memorandum of Understanding
MRPH	Maximum Reasonable Potential for Harm
NBCC	National Building Code of Canada
NDE	Non-Destructive Examination
NEW	Nuclear Energy Worker
NFCC	National Fire Code of Canada
NGS	Nuclear Generating Station
NIEP	Nuclear Industry Evaluation Program
NLCA	Nuclear Liability and Compensation Act
NMS	Nuclear Management System
NPP	Nuclear Power Plant
NSA	Nuclear Safety Analysis
NSCA	Nuclear Safety and Control Act
NSO	Nuclear Security Officer
NSR	Nuclear Security Regulations
NSS	Nuclear Sustainability Services
NSRB	Nuclear Safety and Review Board
NSSCMP	Nuclear Safety and Security Culture Monitoring Panel

Nuflash	Nuclear fuel location and storage history
NWMO	Nuclear Waste Management Organization
O&C	Observation & Coaching
ODS	Ozone-Depleting Substances
OHSA	Occupational Health and Safety Act
ONEE	Other Natural External Event
OPEX	Operating Experience
OPG	Ontario Power Generation
OP&P	Operating Policies and Principles
OSL	Operator Shift Log
OSR	Operational Safety Requirement
OSST	Off-Site Survey Teams
OTO	Order to Operate
PA	Protected Area
PAUT	Phased Array Ultrasonic Testing
PB	Pressure Boundary
PCB	PolyChlorinated Biphenyl
PCSS	Pickering Component Storage Structure
PDS	Plant Damage State
PdM	Predictive Maintenance
PDP	Preliminary Decommissioning Plan
PE	Planning Envelope
PEA	Predictive Effects Assessment
PEOC	Provincial Emergency Operations Centre
PERA	Predictive Environmental Risk Assessment
PFS	Pickering Fire Services
PFU	Predicted Future Unavailability
PHC	Plant Health Committee
PgMP	Program Management Plan
PHT	Primary Heat Transport
PI	Performance Improvement
PIE	Postulated Initiating Event
PIP	Periodic Inspection Program
PMP	Project Management Plan
PNERP	Provincial Nuclear Emergency Response Plan
PNGS	Pickering Nuclear Generating Station
PM	Preventative Maintenance
PMMR	Preventative Maintenance Modification Request

PMT	Post-Maintenance Test
PMRB	Preventative Maintenance Review Board
PPE	Personal Protective Equipment
PSR3	Most Recent Pickering Periodic Safety Review
PRD	Pressure Relief Duct
PQO	Panel Qualified Operator
PROL	Power Reactor Operating Licence
PSA	Probabilistic Safety Assessment
PSC	Plant Status Control
PSR	Periodic Safety Review
PSRB	Program Scope Review Board
PT	Pressure Tube
PTNSR	Packaging and Transport of Nuclear Substances Regulations
PWMF	Pickering Waste Management Facility
QA	Quality Assurance
QSP	Quality of Safe Practices
RAP	Reconciliation Action Plan
RCCB	Refurbishment Change Control Board
RCS	Retube Component Storage
RCSA	Retube Component Storage Area
R&D	Research and Development
REP	Radiological Exposure Permit
RHP	Responsible Health Physicist
RMI	Reactivity Management Index
RMT	Radioactive Material Transport
ROR	Regulatory Oversight Report
RP	Radiation Protection
RPPE	Radiation Personal Protective Equipment
RRS	Reactor Regulating System
RTS	Return To Service
RWC	Retube Waste Container
RWI	Restricted Work Injury
SA	Severe Accident
SAA	Severe Accident Analysis
SAMG	Severe Accident Management Guideline
SAP	Stabilization Activity Plan
SAT	Systematic Approach to Training
SB	Storage Building

SCA	Safety and Control Area
SCBA	Self-Contained Breathing Apparatus
SCDF	Severe Core Damage Frequency
SCFF	Seismically-induced Containment Failure Frequency
SCL	Safety Classification and Learning
SCR	Station Condition Record
SDS	ShutDown System
SEFDR	Site Event Free Day Reset
SERM	Shift Emergency Response Manager
SG	Steam Generator
SHT	System Health Team
SIIR	Serious Injury Incidence Rate
SIO	Safety Improvement Opportunity
SIS	System Important to Safety
S&L	Safety and Licensing
SM	Shift Manager
SMA	Seismic Margin Assessment
SMC	Site Management Centre
SME	Subject Matter Expert
SMR	Small Modular Reactor
SOE	Safe Operating Envelope
SOSN	Southern Ontario Seismic Network
SOT	Staying on Top
SOW	Scope of Work
SpA	Specific Area
SPI	Safety Performance Indicator
SRE	System Responsible Engineer
SSC	Structure, System and Component
STEM	Science, Technology, Engineering, and Mathematics
SWS	Storage with Surveillance
TCR	Temporary Change Record
TCSCA	Timely Completion of Safety Corrective Action
TERP	Transportation Emergency Response Plan
TDG	Transportation of Dangerous Goods
TIMS	Training Information Management System
TLD	Thermoluminescent Dosimeter
TOE	Technical Operability Evaluation
TPAR	Technical Procedure Action Request

TPI	Trending, Prevention and Intervention process
TRA	Threat Risk Assessment
TRIF	Total Recordable Injury Frequency
TSSA	Technical Standards and Safety Authority
TWL	Trend Watch List
UECC	Unit Emergency Control Centre
UFDS	Used Fuel Dry Storage
UPS	Uninterruptible Power Supply
UT	Ultrasonic Testing
VB	Vacuum Building
VoT	Validation of Trend
WBC	Whole Body Count
WFOL	Waste Facility Operating Licence
WHC	Wildlife Habitat Council
WHMIS	Workplace Hazardous Materials Information System
WO	Work Order
WPPI	Work Protection Performance Index
WTFN	Williams Treaties First Nations
WMF	Waste Management Facility
WMP	Waste Management Plan
WWMF	Western Waste Management Facility

Appendix B: Requests to the Commission and Activities to be licensed

Requests to the Commission:

3. Renewal of the Pickering NGS PROL and PWMF WFOL, authorizing OPG to carry out the activities listed in Appendix C of Reference 1 for a 10-year term from January 1, 2027 to December 31, 2036;
4. Consolidation of the PROL and WFOL into a single operating licence;
5. Authorization to operate Units 5 to 8 following refurbishment;
6. The inclusion of licensed activities pertaining to Units 1 to 4 decommissioning (in accordance with the CNSC staff accepted Detailed Decommissioning Plans), up to and not beyond the removal of outbuildings and non-nuclear components;
7. Removal of WFOL Licence Condition 9.2;
8. Authorization to expand the capacity of PWMF Storage Building 5 to 1,410 Dry Storage Containers from 1,200 Dry Storage Containers; and
9. The authorization for deviation from REGDOC-2.2.3, *Personnel Certification, Volume III: Certification of Reactor Facility Workers, Version 2*, Subsection 20.5.4, *Work under supervision* during the licence period before return to service of the first unit.

The information below is provided to satisfy the requirements of Section 3(1)(b) of the General Nuclear Safety and Control Regulations.

Activities to be Licensed:

The application for renewal of PROL 48.04/2028 contains information for the activities to be licensed. These activities include those currently licensed in PROL 48.04/2028 and WFOL-W4-350.02/2028:

- i. operate the Pickering Nuclear Generating Station Units 5 to 8 (hereinafter “the nuclear facility”) and the Pickering Waste Management Facility (“the waste storage facility”) at a site located in the City of Pickering, in the Regional Municipality of Durham, in the Province of Ontario;
- ii. decommission the Pickering Nuclear Generating Station Units 1 to 4 located at the site described in (i); possess, transfer, use, package, manage and store the nuclear substances that are required for, associated with, or arise from the activities described in (i) and (ii);
- iii. import and export the nuclear substances, except controlled nuclear substances, that are required for, associated with, or arise from the activities described in (i) and (ii);
- iv. possess, transfer, produce, package, manage, and store Cobalt-60;
- v. possess, transfer, manage and store heavy water from other nuclear facilities;
- vi. transport Category II nuclear materials that are associated with the activities described in (i) and (ii) by road vehicle on the site of the Pickering Nuclear Generating Station;

- vii. possess, transfer, export, package, manage and store nuclear substances, except controlled nuclear substances, from the Western Waste Management Facility;
- viii. possess and use prescribed equipment and prescribed information that are required for, associated with, or arise from the activities described in (i), (ii), (iii), (vii) and (xi);
- ix. possess, use, manage and store enriched uranium as required for fission chambers for the Pickering Nuclear Generating Station Units 1 and 4 Shutdown System Enhancement, including spares; and
- x. carry out the site preparation, construction, or construction modifications at the onsite waste storage facility associated with the authorized low & intermediate-level waste storage building, and authorized additional used fuel processing and storage buildings, when on completion will result in a total of no more than 1 low & intermediate-level waste storage building, 1 dry storage container processing building, and 6 used fuel dry storage buildings.

Appendix C: Periodic Safety Review & Safety Factor Reviews Summary

Periodic Safety Review

A Periodic Safety Review (PSR) is a systematic and comprehensive evaluation of the design, condition, and operation of the plant against modern codes and standards. It is a safety reassessment, performed periodically (typically at 10-year intervals), and used to assess the cumulative effects of plant aging and plant changes, operating experience, technical developments, and siting aspects. A PSR includes an assessment of plant design and operation against applicable current safety standards and operating practices and has the objective of ensuring a continued high level of safety throughout the plant's operating lifetime.

The flowchart in Figure 35 depicts the PSR process.

The PSR3 builds upon previous safety assessments: the Pickering Integrated Safety Review (ISR), the Pickering PSR2 and PSR2-B, the Darlington ISR, and the Darlington PSR (for programmatic components applicable to Pickering NGS). The most recent Pickering safety reassessment, PSR2-B, concluded that the current plant design, operation, processes and management system will ensure continued safe operation of Pickering NGS Units 5 to 8 to the end of December 2026. The PSR3 is being executed from the perspective of Units 5 to 8 being refurbished for an additional 30-plus years of operating life.

In accordance with CNSC REGDOC-2.3.3, the PSR3 is being conducted in four phases:

1. Preparation of the Basis Document;
2. Conduct of Safety Factor reviews and identification of Gaps and Strengths;
3. Analysis of the gaps and identification of potential safety enhancements for Pickering NGS in the Global Assessment Report; and
4. Preparation of a plan for the implementation of safety enhancements (Integrated Implementation Plan).

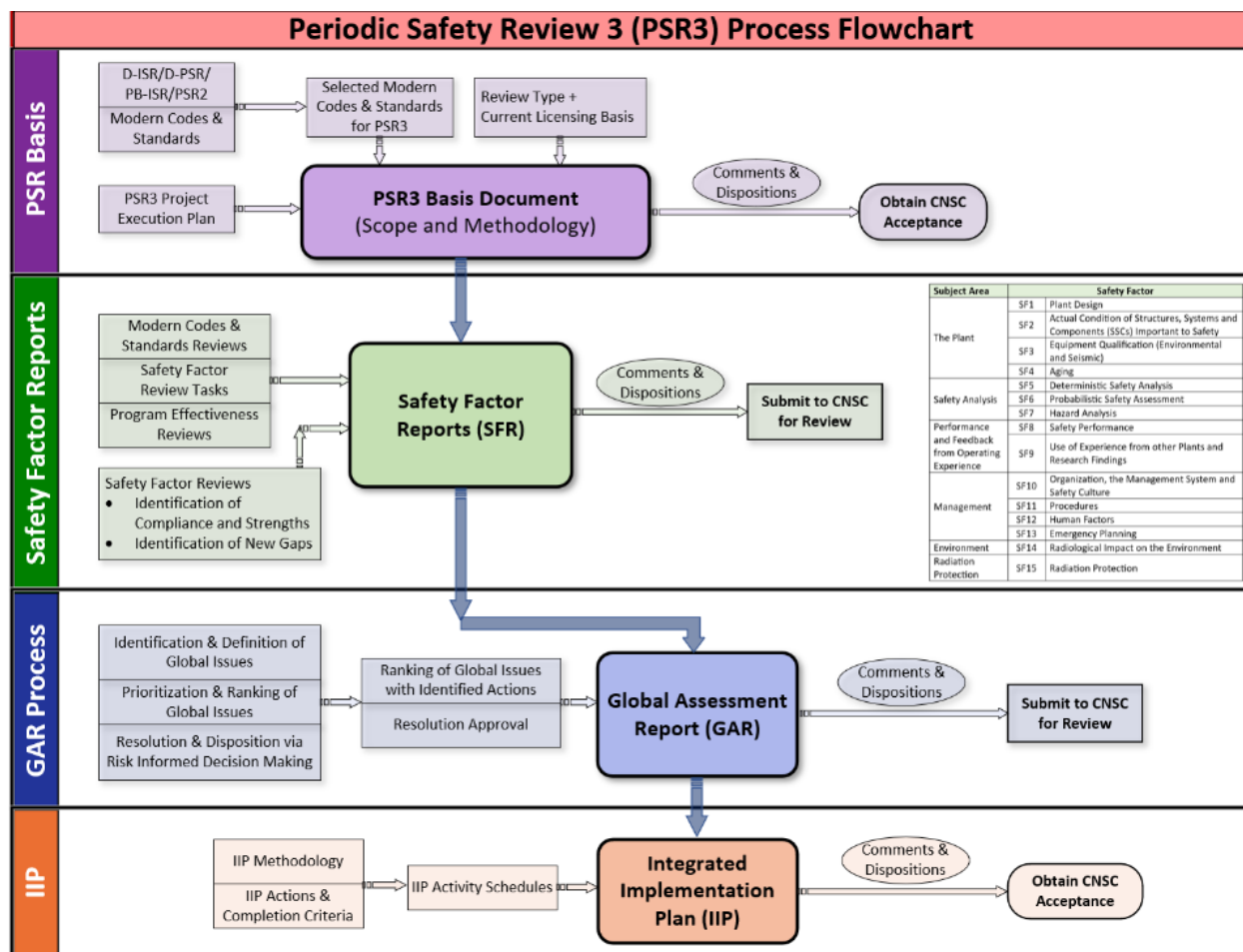


Figure 35. Periodic Safety Review 3 Process Flowchart

PSR3 Basis Document

The PSR3 Basis Document defines the scope and methodology for the conduct of the PSR3 and addresses:

- The current licensing basis for Pickering NGS
- The proposed operating strategy of the facility
- The scope of the PSR (i.e., Safety Factors to be reviewed; Laws, Regulations, Codes and Standards to be reviewed; and the SSC list)
- The methodology for conducting the PSR
- Major milestones
- The project management and quality management processes to be followed

OPG followed a systematic process to establish the safety significant SSCs for the PSR3 assessment basis with a focus on the Pickering Systems Important to Safety (SIS) and the Safe Operating Envelope (SOE) systems. The only SSCs from Units 1 and 4 included in the PSR3 scope are those supporting the continued safe operation of Units 5 to 8. The Pickering PSR3

Basis Document, P-REP-03680-00054 *Pickering NGS Periodic Safety Review 3 (PSR3) Basis Document*, was accepted by CNSC staff in May 2024.

In addition to identifying the lessons-learned from previous OPG fleet PSRs, the PSR3 Basis Document also describes the Expert Panel which provides the mechanism for applicable external industry OPEX to be expertly applied in the Pickering PSR3. The Expert Panel is discussed further in Item (h) under the Global Assessment section below.

Safety Factor Reviews

Safety Factor reviews cover all aspects important to the safe operation of a nuclear power plant. The Safety Factors addressed in PSR3 are shown in Table 14 below.

Table 14. PSR3 Safety Factors Addressed

Subject Area	Safety Factor	
The Plant	1	Plant Design
	2	Actual Condition of Structures, Systems and Components Important to Safety
	3	Equipment Qualification (environmental and seismic)
	4	Aging
Safety Analysis	5	Deterministic Safety Analysis
	6	Probabilistic Safety Assessment
	7	Hazard Analysis
Performance and Feedback from Operating Experience	8	Safety Performance
	9	Use of Experience from other Plants and Research Findings
Management	10	Organization, the Management System and Safety Culture
	11	Procedures
	12	Human Factors
	13	Emergency Planning
Environment	14	Radiological Impact on the Environment
Radiation	15	Radiation Protection

The Safety Factors include the review of:

- OPG programs and procedures listed in the Licence Condition Handbook (LCH);
- Previous regulatory commitments, actions, etc.;
- Regulatory Action Items, Continued Operation Plan;
- Previously identified PSR2, Pickering ISR, Darlington ISR and Darlington PSR gaps;
- Assessments and reviews performed since the PSR2, Pickering ISR, Darlington ISR and Darlington PSR documents were completed;

- Audits and other self-assessments.

The results of the reviews are summarized in Safety Factor Reports which have been submitted to CNSC staff. A summary of the Safety Factor reviews is provided in the following subsection.

Global Assessment

The objective of the Global Assessment is to provide an overall assessment of the safety of the plant, and to ensure the plant will continue to achieve present and future safety objectives.

This assessment takes into account:

- the safety enhancements identified in the Global Assessment (plant and process changes),
- strengths and residual Global Issues/Acceptable Deviations that impact on aggregate effects of the results, and
- consideration of existing planned safety enhancements and recent overall station safety performance.

The Global Assessment process consists of the following elements:

- Identification and consolidation of Gaps and Strengths from the Safety Factor Reports:* The strengths and gaps from the 15 safety factor reports will be consolidated and grouped by topic area to support the Global Assessment.
- Development of Global Issues:* The consolidation of Gaps into Global Issues will provide a means to assemble Gaps of a common nature, facilitating the assessment of safety impact and identifying and assessing practical and effective resolutions. The Global Issues will be tabularized, tracking sources of the issues, to facilitate further review and assessment.
- Assessment of the interfaces between various Safety Factors and aggregate impact of Global Issues:* With the assembly of Global Issues and Strengths, the aggregate impact of the Global Issues will be assessed. Through this process, the interaction between issues will be identified. New Global Issues may be identified as part of this consolidation review. This will support the prioritization and ranking of Global Issues as described below.
- Prioritization of Global Issues and Gaps:* PSR3 Global Issues and associated gaps will be prioritized with respect to their importance to Nuclear Safety to determine the Safety Significance level associated with each Global Issue. This will support the resolution evaluation method and the outcome of the resolution process. This methodology is consistent with OPG's prioritization processes used in previous ISRs, PSRs, and industry practice. The Safety Significance level will consider deterministic and probabilistic safety analysis impact, as appropriate. Probability levels selected for delineation between categories are based on significance, as applied in previous ISRs and PSRs. These values account for overall safety impact and align, where appropriate, with requirements and limits in relevant safety standards.
- Development of Resolutions/Dispositions of Global Issues and Gaps:* Resolution options will be developed and assessed using risk-informed decision-making techniques. The development of the resolution will utilize the following strategy:
 - In assessing potential dispositions, defence-in-depth elements will be considered.

- In developing the resolutions, consideration of overall safety significance will guide the resolution process.
- For global issue resolution, the process will be:
 - Evaluate the Global Issue to understand safety basis and intent of the requirement.
 - Consider possible options for resolution/mitigation. Consider safety significance and defence-in-depth elements.
 - Evaluate options with respect to effectiveness, cost, schedule, and practicality. For potential plant changes, this may require an evaluation of the safety impact, both deterministic and probabilistic. If it is not practicable to fully resolve a global issue, other mitigation options will be considered for enhancements.
 - Evaluate the practicality of a proposed resolution in terms of cost, resources, schedule, and consideration in relation to the overall safety impact.
 - Propose recommended resolution/mitigation.
 - Document the decision-making process.
- Items of high or medium impact on nuclear safety will require a more in-depth analysis to fully understand the issue and potential impact, and to develop the proposed recommended resolution/mitigation.
- Items of very low impact on nuclear safety will generally be deemed as Acceptable Deviations within the context of PSR3 (with the rationale provided), and while these items will not be tracked beyond the Global Assessment, they will be shared with the accountable organizations for consideration as potential enhancement initiatives for their future work program planning purposes. This will allow the organizations to prioritize the initiatives as part of their integrated programs to ensure the focus is on the right overall priorities.
- A similar treatment will be applied for items of low impact on nuclear safety for which a practicable solution is not readily evident.
- Proposed resolutions will be categorized as i) Programmatic (changes to procedures and programs), ii) Engineering (plant changes or maintenance), or iii) Analytical (e.g., safety or hazard analysis), to facilitate binning of potential work. In some cases, the proposed resolutions may entail work from more than one of these categories.
- In some cases, the development of resolutions/dispositions to the Global Issues will be part of an ongoing or planned OPG or industry initiative. Alternatively, the resolution and development of options may require more detailed analysis and assessment, extending beyond the timelines for submission of PSR3. In these instances, the status of the initiative and plans will be included in the disposition. The work will be included in the Global Assessment to facilitate continued tracking.
- Previous Global Assessment resolutions for the same Global Issue/Gap will be considered in the review.

- If, in the assessment, it is determined that a Global Issue/Gap has been closed, due to work performed in the interim or for other reasons, the rationale will be documented, and the Global Issue / Gap will be resolved and closed.
 - An alternate process / resolution may be utilized for a particular Global Issue/Gap.
- f) *Assessment of Defence-in-Depth and aggregate impact of Acceptable Deviations:* An important element of the development of proposed recommendations will be to assess the overall defence-in-depth and aggregate impact of the residual Global Issues/Acceptable Deviations. After evaluating a range of resolutions for Global Issues, and determining a recommended resolution to be selected, the impact on defence-in-depth, considering both deterministic and probabilistic elements, will be evaluated to assess the aggregate impact on overall safety. It may be necessary to refine the proposed resolutions based on the results of this review. This overall assessment will be an important element in supporting the enhancement plans and the planned operational strategy over the period of PSR3. For each of the five levels of defence listed below, the defence-in-depth assessment will consider the overall plant as well as the identified strengths, acceptable deviations, and the proposed resolutions to the global issues listed in the global assessment.
- Level 1: Prevention of abnormal operation and failures;
 - Level 2: Control of abnormal operation and detection of failures;
 - Level 3: Control of accidents within the design basis;
 - Level 4: Control of severe plant conditions, including prevention of accident progression and mitigation of the consequences of severe accidents;
 - Level 5: Mitigation of radiological consequences of significant releases of radioactive materials.
- g) *Ranking Global Issues:* All Global Issues whose resolution involves identified actions will be ranked. The ranking process will consider factors such as the priority previously determined, the contribution to defence-in-depth, the source of the issue and the degree of non-compliance with the PSR3 Assessment Basis. The ranking process will also account for the extent of impact on multiple safety factors or areas. The Global Issue resolution actions and ranking will be confirmed by OPG subject matter experts.
- h) *Third Party/Expert Panel and OPG Senior Management review of proposed Resolution Statements:* The results of the Global Assessment will be reviewed by a panel of industry experts independent of the Global Assessment Team. The enhancements identified in the PSR3 Global Assessment, with their priority and safety basis, will then be presented to OPG senior management for approval. This review will ensure alignment with the resolutions proposed, their basis and context, and will be the means to obtain concurrence that the proposed enhancements are practicable and effective. This will also allow the senior leadership team to consider potential realignment of overall priorities based on the insights from PSR3.
- i) *Assessment of overall acceptability of operation of the plant over the period considered in PSR3:* As a final step in the assessment process, the team will assess the overall acceptability of operation of the plant over the period considered in PSR3. This will entail a review of the results of the Safety Factor reviews, a consideration of enhancements planned (both newly identified in PSR3 and from other station plans), and a consideration of plant performance and initiatives underway.

- j) *Preparation of the Global Assessment Report:* The Global Assessment Report (GAR) will present the results, assess the overall defence-in-depth of the plant, and document the conclusions, corrective actions, and enhancements to be considered. The GAR includes a ranked list of the global issues with identified actions, with rationale for the ranking using an established decision support methodology. Residual global issues and acceptable deviations are noted in the GAR, summarizing the assessed aggregate impact on safe operations. The Global Assessment Report will include a statement of OPG's assessment of the overall acceptability of operation of the plant.

Integrated Implementation Plan

The proposed enhancements resulting from the Global Assessment will be documented in the Integrated Implementation Plan (IIP). The GAR Resolution Statements will be turned into Resolution Actions with supporting IIP Actions.

The IIP will include a schedule that is established to manage the completion of the resolution actions, and the supporting IIP Actions, with baseline target completion dates, progress reporting requirements, and risk management plan for the period of the PSR3. The IIP will include a tabularized listing of the safety enhancement initiatives, their assigned owners, and their planned implementation date. The IIP will be developed based on the lessons learned from the completion and close out of previous IIP items in the OPG fleet, to ensure alignment with already established procedures, and to benefit from the process efficiency improvements. The IIP will be submitted to the CNSC staff for acceptance as per the requirements of CNSC REGDOC-2.3.3.

Per the protocol with the CNSC for the conduct of PSR3, the target submission dates for the PSR3 major milestones are as follows:

Table 15. PSR3 Target Submission Dates to the CNSC

Activity	Target Submission Dates
PSR3 Basis Document	March 5, 2024 (COMPLETE)
Safety Factor Reports	May 19, 2025 (COMPLETE)
Global Assessment Report	August 8, 2026
Integrated Implementation Plan	August 31, 2027

Safety Factor Reviews Summary

Safety Factor 1 – Plant Design

The objective of Safety Factor 1 is to determine the adequacy of the design and its documentation in an assessment against current national and international standards and practices.

The review of Safety Factor 1 confirmed the plant design at Pickering NGS is thoroughly documented, supported by effective management programs, and is compliant with applicable standards, requirements, and practices.

Safety Factor 2 – Actual Condition of SSCs Important to Safety

The objective of Safety Factor 2 is to determine the actual condition of SSCs important to safety and whether it is adequate for them to meet their design requirements. Additionally, the review should confirm that the condition of SSCs is properly documented.

The review of Safety Factor 2 through comprehensive assessments of the actual condition of SSCs important to safety confirmed that SSCs meet their design requirements, and their condition is properly documented.

Safety Factor 3 – Equipment Qualification (Environmental and Seismic)

The objective of Safety Factor 3 is to determine whether equipment important to safety is qualified to perform its designated safety function throughout its installed service life.

The review of Safety Factor 3 through comprehensive assessments confirmed that requirements for both environmental and seismic qualification of equipment are established, maintained, and documented for all relevant operational states and accident conditions.

Safety Factor 4 - Aging

The objective of Safety Factor 4 is to determine whether aging in a NPP is being effectively managed so that required safety functions are maintained, and whether an effective Aging Management Program is in place for future plant operation.

The review of Safety Factor 4 confirmed implementation of effective aging management programs and procedures, including the overall Integrated Aging Management (IAM) Program, which manages aging effects for future operation of Pickering NGS.

Safety Factor 5 – Deterministic Safety Analysis

The objective of Safety Factor 5 is to determine to what extent the existing DSA remains valid when the following aspects have been taken into account: actual plant design; actual condition of SSCs and their predicted state at the end of the period covered by PSR3; current deterministic methods; and current safety standards and knowledge. In addition, the review should also identify any weaknesses relating to the application of the defence-in-depth concept.

The review of Safety Factor 5 through comprehensive assessments confirmed the adequacy of DSA documentation and processes, compliance with current regulatory requirements, standards, and practices, design basis for SSCs important to safety, and utilization of a systematic and disciplined approach to identify, prioritize, and address any safety analysis related issues.

Safety Factor 6 – Probabilistic Safety Assessment

The objective of Safety Factor 6 is to determine to what extent the existing PSA remains valid as a representative model of the plant when the following aspects have been taken into account: changes in the design and operation of the plant; new technical information, current methods; and new operational data.

The review of Safety Factor 6 through comprehensive assessments confirmed the adequacy of the PSA through changes in plant design and operation, as well as incorporating new information, methods, and data, and utilization of a systematic and disciplined approach to identify, prioritize, and address any safety analysis related issues.

Safety Factor 7 – Hazard Analysis

The objective of Safety Factor 7 is to determine the adequacy of protection of the NPP against internal and external hazards with account taken of the actual plant design, actual site characteristics, the actual condition of SSCs and their predicted state at the end of the period covered by the PSR, and current analytical methods, safety standards, and knowledge.

The review of Safety Factor 7 through comprehensive analysis confirmed that hazard analyses incorporate plant design and condition of SSCs important to safety, the adequacy of these analyses for robust protection against internal and external hazards, and incorporation of current analytical methods, safety standards, and knowledge.

Safety Factor 8 – Safety Performance

The objective of Safety Factor 8 is to determine the safety performance of the NPP and its trends from records of operating experience.

The review of Safety Factor 8 included comprehensive assessments of operating experience, safety related events, and records of the unavailability of safety systems, radiation doses, and the generation of radioactive waste and discharges of radioactive effluents. This information is fed back into safety performance to determine and allow for continuous improvement at Pickering NGS.

Safety Factor 9 – Use of Experience from Other NPPs and Research Findings

The objective of Safety Factor 9 is to determine whether there is adequate feedback of safety experience from other NPPs and of the findings of research.

The review of Safety Factor 9 included comprehensive assessments of OPG's extensive OPEX program, which sends and receives relevant OPEX to and from other plants, as well as the process for assessing the significance of OPEX and incorporating lessons learned to improve safety performance at Pickering NGS. In addition, OPG's research findings and technology developments are used to introduce reasonable and practicable safety improvements at the plant or within the operating organization.

Safety Factor 10 – Organization, Management System, and Safety Culture

The objective of Safety Factor 10 is to determine whether the organization and management system and safety culture are adequate and effective for ensuring safe operation.

The review of Safety Factor 10 confirmed that OPG's management system ensures that policies and objectives are implemented in a safe, efficient, and effective manner, in addition to ensuring that OPG has a strong safety culture, which is present throughout the organization to all individuals carrying out duties important to safety.

Safety Factor 11 – Procedures

The objective of Safety Factor 11 is to determine whether the procedures of a NPP are of an adequate standard.

The review of Safety Factor 11 through comprehensive review of OPG procedures confirmed the adequacy of their development, review, maintenance, and categorization, as well as implementation of industry best practices, self-assessments, and analysis for continuous improvement at Pickering NGS.

Safety Factor 12 – Human Factors

The objective of Safety Factor 12 is to determine the status of the various human factors that may affect the safe operation of Pickering NGS.

The review of Safety Factor 12 through comprehensive reviews confirmed that OPG has adequate procedures, programs, and controls in place regarding human factors, which includes staffing, training, fitness for duty, workstation design, and procedural clarity, supporting continued safe operation of Pickering NGS.

Safety Factor 13 – Emergency Planning

The objective of Safety Factor 13 is to determine whether the operating organization has adequate plans, staff, facilities, and equipment for dealing with emergencies and whether the operating organization's arrangements have been adequately coordinated with local and national systems and are regularly exercised.

The review of Safety Factor 13 confirmed the adequacy of OPG's emergency management plans, which includes staff, facilities, and equipment, as well as coordination with local and national organizations and governments, and the usage of exercised drills and training to ensure radioactive releases are prevented or minimized that could give risk to workers, the public, or the environment.

Safety Factor 14 – Radiological Impact on the Environment

The objective of Safety Factor 14 is to determine whether the operating organization has an adequate program for surveillance of the radiological impact of the plant on the environment.

The review of Safety Factor 14 confirmed that Pickering NGS has in place an effective program for monitoring the radiological impact of the plant on the environment, which ensures that emissions are properly controlled and maintained ALARA.

Safety Factor 15 – Radiation Protection

The objective of Safety Factor 15 is to confirm that Radiation Protection has been adequately accounted for in the design and operation of the reactor facility, that Radiation Protection provisions (including design and equipment) provide adequate protection of persons from the harmful effects of radiation and ensure that contamination and radiation exposures and doses to persons are monitored and controlled, and maintained ALARA.

The review of Safety Factor 15 confirmed through comprehensive assessments of reactor design, operation, equipment, and emergency provisions at Pickering NGS that in addition to ensuring worker protection that contamination and radiation exposures and doses are controlled and maintained ALARA.

The assessment of the 15 Safety Factor Reviews has concluded that there are no fundamental safety issues at Pickering NGS, and that OPG has effective programs and processes in place for continued safe operation before, during, and after refurbishment. The Safety Factor Reviews have identified areas of improvement which will be documented in the GAR and IIP and will be submitted to CNSC staff in August 2026 and August 2027, respectively.

Appendix D: Major Scope Activities for Pickering NGS Units 5 to 8

Significant physical plant improvements are planned to be undertaken to improve long-term plant reliability and to increase safety and operational margins of the Pickering NGS Units 5 to 8. The following table outlines the major scope of work that is planned to be undertaken during the licensing period.

Note: OPG is currently undergoing the project definition phase where other SSCs are being assessed for replacement or upgrades and this project phase is expected to be completed in 2026. To effectively manage scope throughout this period, OPG will utilize established processes for scope changes and oversight.

Table 16. Major Scope Activities for Pickering NGS Units 5 to 8

Scope	Description
Retube, Feeder, and Boiler Replacement (RFBR)	<p>The RFBR project will involve the removal and replacement of the reactor face, feeder cabinet frames, insulation, fuel channel components, and associated piping and instrumentation. Specialized activities will include replacement of feeder pipes and fuel channel assemblies, with comprehensive inspections performed before and after installation to ensure the integrity of all replaced components.</p> <p>The project will also replace all 48 boilers/steam generators across the affected units. Boiler removal and installation will require the use of cranes positioned on the south side of the plant. The boilers will be lifted through engineered openings in each reactor building which control radioactive contamination and weather ingress. The removed boilers will be transported to the Pickering Component Storage Structure (PCSS).</p>
Emergency Coolant Injection (ECI)	A number of ECI valves will be refurbished or replaced as part of the refurbishment project. Components such as the ECI recovery motors as well as the ECI recovery heat exchangers will also be inspected/refurbished/repared to support continued reliable operation post-refurbishment.
Emergency Water Supply (EWS)	Inspection of EWS buried piping and installation of cathodic protection (as required) will be completed.
Fire Protection System	The scope of work for the fire protection system is currently being defined, with active assessments underway to evaluate system life extension. Preliminary findings indicate that several components—such as valves, sprinkler systems, and fire hydrants may be recommended for replacement or upgrades during the licensing period.
Turbine & Generator and Auxiliaries	The refurbishment of Turbine Generator systems at Pickering NGS Units 5–8 will upgrade and replace critical components to ensure

Scope	Description
	<p>reliable, efficient, and modernized operation. This work will address aging equipment, integrate new digital controls, and enhance monitoring and auxiliary systems throughout the facility.</p> <p>This includes High Pressure/Low Pressure Turbine upgrades, inspection and overhaul of turbine steam valves, refurbishment of turbine auxiliaries, moisture separator reheater upgrades, digital control system installation, and generator refurbishment including rotor and stator rewind plus stator core replacement, excitation system upgrades and generator auxiliaries upgrades.</p>
Main Power Output	Transformer replacements will be completed as part of the aging management program.
Main Steam & Boiler Blowdown	The continuous boiler blow down system will be re-designed to improve the chemistry for the replacement steam generators and protect tube integrity.
Moderator & Auxiliaries	Valves will be replaced for improved reliability and to support required future maintenance on moderator components such as heat exchangers and pumps. There is also scope to address existing operational challenges on the moderator cover gas system.
Negative Pressure Containment (NPC), Vacuum Building (VB), and Pressure Relief Duct (PRD)	A number of scope items will be executed to improve the leakage rate performance of our concrete containment structures including but not limited to: replacing construction seals and sealant, refurbishing the sealing surfaces of components, replacing containment boundary and/or intra-containment seals, and repairing and sealing concrete cracks. Select components from the vacuum building dousing system will also be replaced based on condition assessments.
Plant Computers	<p>The Digital Control Computer (DCC) upgrades will include the replacement of systems such as computers, software, peripherals, and process input-output (I/O) equipment as part of the life extension program. The Plant Computers project will also upgrade hardware as required.</p> <p>Note: Only Unit 6,7& 8 DCC's will be replaced during Pickering refurbishment window. Due to execution and planning complexities, the Unit 5 DCC replacement will be executed during the first Unit 5 planned outage following refurbishment, tentatively scheduled for 2033.</p>
Primary Heat Transport & Auxiliaries	To improve the reliability and safety of Primary Heat Transport and Auxiliaries, components such as Motorized Valve gaskets/packing and Shutdown Cooling system blind flange gaskets, bleed cooler, bleed condenser tube bundles, etc. will be inspected/repaired/or replaced.

Scope	Description
Reactor Building Cooling	A condition-based maintenance approach will be undertaken to improve Air Conditioning Unit (ACU) reliability through a modified coil design intended to improve the reliability of the ACU coils and prevent premature failures.
Reactor Regulating System (RRS), Shutdown System 1 (SDS1), Shutdown System 2 (SDS2)	Replacement of subset of In-core Flux Detectors and Ion Chamber Detectors based on condition assessment.
Standby Generators	Replacement of Unit 056 and 078 Standby Generators.
Fuel Handling	<p>Scope items to extend equipment life and improve reliability include but are not limited to:</p> <ul style="list-style-type: none"> • New Closure plug replacements to reduce risk of sticking during fueling activities. • Fueling Machine (FM) and Carriage Refurbishment: Fueling Machine head and carriage to be overhauled including internal shaft support and magazine bearings. • Bridge Ball Screw Replacement. • Inspection and Repair of Elevator and Conveyor.
Civil System	<p>Inspections, repairs, and replacements will be carried out on civil structures and components, including but not limited to:</p> <ul style="list-style-type: none"> • Inspections for concrete cracking and sealant condition. • Application of an elastomeric floor coating to the vacuum building floor slab to address leaks and enhance waterproofing, with repairs to the main floor slab and upper chamber concrete to restore pressure boundary and containment functions. • Fitness for Service (FFS) assessments of the foundation steel H-Piles for the Reactor Buildings (RB), Vacuum Building (VB), and Pressure Relief Duct (PRD) to support continued operation of P058 beyond Refurbishment.
Air Systems	The Air System Improvements Project includes upgrades to the Breathing Air, Service Air, and Instrument Air systems. The scope involves replacing key components, such as compressors, and modifying applicable isolation valve designs from diaphragm-type to ball-type valves to reduce leakage risks into containment. These upgrades will also mitigate equipment obsolescence and support long-term system reliability.

Scope	Description
CLI, II, III Electrical	Class I, II, and III electrical scope mainly consists of component replacement for relays, rectifiers, and switchgear.
Safety Improvement Opportunities (SIOs)	<ul style="list-style-type: none"> • Diesel Firewater Make-Up Enhancements: An alternate water supply will be established for the Pickering NGS units 5 to 8 Heat Transport System (HTS) and/or Moderator by utilizing the diesel firewater pump system through the existing service water infrastructure. • Enhanced EWS Supply to Boilers, HTS, and Moderator: The emergency water supply (EWS) to the boilers, heat transport system, and moderator will be enhanced for both design basis accidents and beyond design basis accidents. Modifications will allow the moderator to be directly fed by the EWS to provide a long-term heat sink. System reliability will be enhanced through elimination of single points of failure. • Alternate Water Supply to the Moderator: The Emergency Water Storage Tank (EWST) is currently supplied by the Pickering NGS units 1 to 4 Service Water system and serves as an interim heat sink for the Pickering NGS units 5 to 8 Moderator during beyond design basis accidents. To maintain a diverse and independent supply post-refurbishment, an alternate water source to the moderator will be provided. • Containment Filtered Venting System (CFVS) modification: A new modification to the CFVS will be implemented to mitigate containment overpressure and reduce airborne contaminant releases during beyond design basis accidents. This will use a controlled pressure venting and filtration system. • Shield Tank Overpressure Protection (STOP): The STOP project will install a large relief capacity on the End Shield/Calandria Vault to improve the margin to shield tank overpressure resulting from rapidly progressing accidents. • External Hazard Protection: Reinforcement of the metal-clad portion of the Unit 7 Control Equipment Room exterior wall with a masonry block wall will be completed to improve windborne missile resistance and reduce core damage risk.
Deep Water Intake (DWI)	The proposed DWI will consist of an intake cap, an offshore intake shaft, a tunnel, a forebay up-shaft and a forebay conduit to bring water from deeper in the lake into the forebay for station operations. A permanent bridge will be constructed over the existing Pickering NGS units 5 to 8 outfall to enhance construction logistics. A supplemental forebay cutoff wall will be constructed to isolate the surface water intake from the forebay. The cutoff wall will maintain a passive water flow for Emergency Service Water.

Appendix E: Update on CSA Standards and REGDOCs

Table 17. Updated CSA Standards and REGDOCs

Item	CSA Standards or REGDOC	Compliance Date
Pickering NGS		
1.	CNSC REGDOC 2.2.2, Personnel Training Version 2, 2016	Immediate
2.	CNSC REGDOC 2.3.1, Conduct of Licensed Activities: Construction and Commissioning Program, 2016	Immediate
3.	CNSC REGDOC-2.9.2 Environmental Protection: Controlling Releases to the Environment, 2024	January 1, 2030
4.	CSA N285.0 / N285.6 General requirements for pressure-retaining systems and components in CANDU nuclear power plants /Materials Standards for reactor components for CANDU nuclear power plants - Annex G and J are accepted to be used as “Normative” Annexes, 2023	January 1, 2027
5.	CSA N285.4, Periodic Inspection of CANDU Nuclear Power Plant Components, 2019	December 7, 2027
6.	CSA N285.5 Periodic Inspection of CANDU Nuclear Power Plant Containment Components, 2022	June 2, 2027
7.	CSA N285.7, Periodic Inspection of CANDU Nuclear Power Plant Balance of Plant Systems and Components, 2021	To be provided on November 26, 2027
8.	CSA N287.2, Material Requirements for Concrete Containment Structures for Nuclear Power Plants, 2017 (R2022)	January 1, 2027
9.	CSA N287.8, Aging Management for Concrete Containment Structures for Nuclear Power Plants, 2015 (R2020)	January 1, 2027
10.	CSA N288.6 Environmental risk assessments at nuclear facilities and uranium mines and mills, 2022	April 27, 2027

Item	CSA Standards or REGDOC	Compliance Date
11.	CSA N289.1, General Requirements for Seismic Design and Qualification of CANDU Nuclear Power Plants, 2023	January 1, 2027
12.	CSA N289.2, Ground Motion Determination for Seismic Qualification of Nuclear Power Plants, 2021	January 1, 2027
13.	CSA N289.3, Design Procedures for Seismic Qualification for Nuclear Power Plant, 2020	January 1, 2027
14.	CSA N289.4, Testing Procedures for Seismic Qualification of Nuclear Power Plant Structures, System, and Components, 2022	January 1, 2027
15.	CSA N289.5, Seismic Instrumentation Requirement for Nuclear Power Plant and Nuclear Facilities, 2012 with Update No. 1 (R2022)	January 1, 2027
16.	CSA 290.7 Cyber security for nuclear facilities, 2021	March 31, 2027
17.	CSA N290.12, Human Factors in Design for Nuclear Power Plants, 2023	Immediate
18.	CSA N290.13 Environmental qualification of equipment for nuclear power plants, 2018	September 30, 2026
19.	CSA N290.15, Requirements for the Safe Operating Envelope for Nuclear Power Plants, 2019	Immediate
20.	CSA N290.20, Aging Management Requirements for Nuclear Power Plants, 2021	N/A OPG requests that CSA N290.20 be "Guidance" in the new LCH.
21.	CSA N291, Requirements for Nuclear Safety-Related Structures, 2019	January 1, 2027
22.	CSA N292.0, Radioactive Waste Management: Common Requirements of the CSA N292 Series of Standards, 2024	Immediate
23.	CSA N293, Fire Protection for Nuclear Power Plants, 2023	December 31, 2028
24.	CSA N299 series of Standards, Quality Assurance Program Requirements for the	N/A

Item	CSA Standards or REGDOC	Compliance Date
	Supply of Items and Services for Nuclear Power Plants, Category 1/2/3/4, 2019 (Update No. 1)	OPG requests that the CSA N299 series be "Guidance" in the new LCH.
25.	CSA B51 Boiler, pressure vessel, and pressure piping code, 2019	January 1, 2027
26.	ASME BPVC Boiler and Pressure Vessel Code with Addenda, 2021	January 1, 2027
27.	ASME B31.1 Power Piping, 2022	January 1, 2027
28.	ASME B31.3 Process Piping, 2022	January 1, 2027
29.	ASME B31.5 Refrigeration Piping and Heat Transfer Components, 2022	January 1, 2027
PWMF		
30.	CNSC REGDOC 3.1.2, Reporting Requirements, Volume 1: Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills, Version 1.1, 2022	Immediate
31.	CNSC REGDOC-2.4.4 Safety Analysis for Class 1B Nuclear Facilities, 2022	December 31, 2028
32.	CNSC REGDOC-2.9.2 Environmental Protection: Controlling Releases to the Environment, 2024	January 1, 2030
33.	CSA B51 Boiler, pressure vessel, and pressure piping code, 2019	January 1, 2027
34.	ASME BPVC Boiler and Pressure Vessel Code with Addenda, 2021	January 1, 2027
35.	ASME B31.1 Power Piping, 2022	January 1, 2027
36.	ASME B31.3 Process Piping, 2022	January 1, 2027
37.	ASME B31.5 Refrigeration Piping and Heat Transfer Components, 2022	January 1, 2027
38.	CSA 285.0 / N285.6 General requirements for pressure-retaining systems and components in CANDU nuclear power plants /Materials Standards for reactor components for CANDU nuclear power plants - Annex G and J are accepted to be used as "Normative" Annexes, 2023	January 1, 2027

Item	CSA Standards or REGDOC	Compliance Date
39.	CSA N288.6 Environmental risk assessments at nuclear facilities and uranium mines and mills, 2022	April 27, 2027
40.	CSA 290.7 Cyber security for nuclear facilities, 2021	March 31, 2027
41.	CSA 292.0, Radioactive Waste Management: Common Requirements of the CSA N292 Series of Standards, 2024	Compliant with exception to Clause 12.7.3.4 Selection of Design Extension Conditions (DEC) Sequences; full compliance by December 31, 2028
42.	CSA N292.4, Storage of radioactive waste and irradiated fuel, 2023	Immediate

Appendix F: Pickering Nuclear Site Indigenous Engagement Report March 2023 to January 2026

**Pickering Nuclear Site
Indigenous Engagement Report
March 2023 to January 2026**

P-REP-00531-10003 R000

2026-05-13

Order Number: N/A

Other Reference Number: N/A

Prepared by:



05/13/2026

Meghan Buckham Date
Sr. Manager Indigenous
Relations, Nuclear
Ontario Power Generation



05/13/2026

Alison Dresser Date
Sr. Manager Indigenous
Relations and Partnerships,
Projects
Ontario Power Generation

Approved by:



05/13/2026

Katie Haddlesey Date
Director, Indigenous Relations
and Partnerships, Projects
Ontario Power Generation

OPG Proprietary		
Document Number: P-REP-00531-10003		Usage Classification: N/A
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Revision Summary

Revision Number	Date	Comments
R000	2026-05-13	Initial issue.

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1.0 LAND ACKNOWLEDGEMENT

The lands and waters on which the Pickering Nuclear Generating Station (PNGS) and Pickering Waste Management Facility (PWMF) are situated are the Traditional and Treaty Territory of the Williams Treaties First Nations, which includes Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Chippewas of Beausoleil First Nation, Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, and the Mississaugas of Scugog Island First Nation.

The PNGS and PWMF are within the territory of the Johnson-Butler Purchase/Gunshot Treaty (1787-88) and the Williams Treaties of 1923. These Treaty Rights were reaffirmed in 2018 in a settlement with Canada and the Province of Ontario.

To acknowledge the Treaty and Traditional Territory, is to recognize the rights of the First Nations. It is to recognize the history of the land, predating the establishment of the earliest European colonies. It is also to acknowledge the significance for the Indigenous peoples who lived and continue to live upon it, to acknowledge the people whose practices and spiritualities are tied to the land and water and continue to develop in relation to the territory and its other inhabitants today.

2.0 IDENTIFIED NATIONS AND COMMUNITIES

OPG respects Aboriginal and Treaty rights and is committed to developing positive relationships with Indigenous Nations and Communities which are integral to our operations. OPG's objective is to ensure that Indigenous Nations and Communities are provided information and opportunities to discuss key topics related to ongoing operations, decommissioning and refurbishment at Pickering.

OPG's Indigenous Relations Policy, OPG-POL-0027, provides a framework for engagement with Indigenous Nations and Communities and provides support of community programs and initiatives. As part of its Indigenous Relations policy, OPG maintains an Indigenous Relations program for its nuclear operations. The intent of this program is to:

- Develop relationships with the Williams Treaties First Nations as Rights Holders and other identified Indigenous Nations and Communities who have interest in the project;
- Communicate effectively by keeping proximate Indigenous Nations and Communities informed of nuclear station operations, emerging projects, and station environmental performance;
- Seek the input and worldview of Indigenous Nations and Community representatives regarding OPG's ongoing nuclear operations and projects;
- Address and resolve identified concerns and issues as appropriate, and;
- Advance reconciliation with Indigenous Nations and Communities as described in OPG's Reconciliation Action Plan which sets out goals under five pillars: Leadership, Relationships, People, Economic Empowerment, and Environmental Stewardship. (<https://www.opg.com/about-us/our-commitments/indigenous-relations/reconciliation-action-plan/>)

As guided by the Canadian Nuclear Safety Commission (CNSC) REGDOC 3.2.2, Indigenous Engagement, this Indigenous Engagement Report has been prepared to document the engagement scope and activities for engagement at Pickering, inclusive of OPG's PROL and WFOL renewal application.

These activities include ongoing dialogue regarding operations, decommissioning as well as refurbishment and include opportunities for overview meetings, both general and technical, document reviews, monitoring opportunities, site tours and Nation/Community site visits. The engagement activities specified in this report support the goal of continuing dialogue and ensuring sufficient information is provided in a timely fashion and to ensure that Indigenous Nations and Communities can provide feedback, ask questions and have their concerns and/or potential impacts to Treaty and/or Aboriginal rights addressed as appropriate. Actionable items are recorded and tracked in an Engagement Log.

The following Indigenous Nations and Communities have established Aboriginal and Treaty rights, have credibly asserted Aboriginal and Treaty rights, or have expressed an interest in the Pickering site. (See Table 1 below.)

Table 1: Identified Indigenous Nations/Communities with Established o Aboriginal and/or Treaty Rights

Aboriginal and Treaty Rights refer to those rights that are recognized and affirmed in section 35 of the *Constitution Act, 1982*. For the purposes of the Duty to Consult, both established and credibly asserted rights are considered. Indigenous Nations and Communities identified in this Table 1 have Aboriginal or Treaty rights in the PNGS and PWF area that have been recognized by the Crown or established in court.

Indigenous Nation/ Community	Cultural Affiliation	Political Representation
Mississaugas of Scugog Island First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Curve Lake First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Hiawatha First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Association of Iroquois and Allied Indians (AIAI)
Alderville First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Chippewas of Rama First Nation	Chippewa	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Chippewas of Beausoleil First Nation	Chippewa	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Chippewas of Georgina Island First Nation	Chippewa	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)

Table 2: Identified Indigenous Communities with Credibly Asserted Aboriginal and/or Treaty Rights

Aboriginal and Treaty Rights refer to those rights that are legally recognized and affirmed in section 35 of the *Constitution Act, 1982*. For the purposes of the Duty to Consult, both established and credibly asserted rights are considered. Indigenous Nations and Communities identified in this Table 2 have asserted Aboriginal and/or Treaty rights in the PNGS and PWF area. The inclusion of the Michi Saagiig Nations below is in acknowledgement of assertions of Aboriginal rights to the Lake Ontario lakebed.

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Indigenous Nation/ Community	Cultural Affiliation	Political Representation
Kawartha Nishnawbe	Michi Saagiig	Independent
Mississaugas of Scugog Island First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Curve Lake First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)
Hiawatha First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Association of Iroquois and Allied Indians (AIAI)
Alderville First Nation	Michi Saagiig	Williams Treaties First Nations (WTFN) & Anishinabek Nation (AN)

Table 3: Identified Indigenous Nations and Communities Expressing an Interest

The Indigenous Nations and Communities in this table have expressed an interest in the PNGS and PWSF area and OPG will continue to provide information as ongoing and potential activities on the site project progress.

Indigenous Nation/ Community	Cultural Affiliation	Political Representation
Mississaugas of the Credit	Michi Saagiig	Association of Iroquois and Allied Indians (AIAI)
Six Nations of the Grand River	Haudenosaunee	Six Nations of the Grand River (SNGR)
Métis Nation of Ontario Regions 8	Métis	Métis Nation of Ontario (MNO)
Mohawks of the Bay of Quinte	Haudenosaunee	Association of Iroquois and Allied Indians
Saugeen Ojibway Nation comprised of Saugeen First Nation and Chippewas of Nawash Unceded First Nation	Ojibway, Odawa, and Pottawatomie	Saugeen Ojibway Nation (SON)
Wendat Nation	Wendat	Independent

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3.0 SUMMARY OF ENGAGEMENT

OPG has established Framework Agreements with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, the Mississaugas of Scugog Island First Nation and the Six Nations of the Grand River. The Framework Agreements allow for dedicated time and capacity funding to support ongoing engagement on OPG's nuclear and renewable generation operations. OPG recognizes that meaningful engagement begins with relationship-building, the establishment of trust and mutual respect. In January and February 2024, OPG developed a draft Indigenous Engagement Plan (IEP) to guide engagement activities on ongoing and proposed programs and initiatives at Pickering NGS, including related Crown authorizations and engagement on OPG's PROL and WFOL renewal application. This comprehensive IEP was informed by CNSC REGDOC-3.2.2, Indigenous Engagement, and was developed based on comments from Indigenous Nations and communities for a site wide engagement strategy that supports a holistic, comprehensive and coordinated approach to engagement across the Pickering NGS.

Indigenous Nations and communities identified in the draft IEP, at the time of drafting, received a copy for review and comment. In May 2024, OPG updated the IEP based on feedback received from Indigenous Nations and communities and issued a final working version of the IEP in late May and June 2024. For those that provided substantive comments on the IEP, OPG prepared comment disposition tables to demonstrate how comments did or did not influence the IEP update. The IEP is intended to be a dynamic document and, as such, can continue to be updated, as appropriate, to respond to new comments that come forward from Indigenous Nations and communities and/or any shifts in engagement priorities and needs. As an example, a revised working version of the IEP was issued in January 2025 to reflect additions made to the list of Indigenous Nations and communities that have expressed interest in the Pickering NGS. The up-to-date IEP is circulated annually through Indigenous Nations and communities, with no additional feedback provided since its latest circulation in August 2025.

To date, Pickering Site has provided PROL and WFOL information and invited the Indigenous Nations and communities identified in Table 1, Table 2, and Table 3 to learn more, provide comments on and discuss operations, refurbishment, and decommissioning activities. Efforts have included opportunities for engagement on the renewal application and key supporting documents (e.g. draft Detailed Decommissioning Plan, draft Pickering Site PERA, revised PCSS PERA and Climate Change Resiliency Assessment), as appropriate.

Below OPG has provided:

- Thematic summary of interests, issues and concerns raised to date through early and ongoing engagement activities at Pickering regarding operations, refurbishment and decommissioning (Table 4). OPG will continue to diligently capture issues and concerns over the course of engagement and seek to understand and address interests, as appropriate, through continued engagement.
- Measures to address areas of interest and/or concern (Table 5) that reflects measures and/or actions that OPG has, will or will continue to undertake alongside the Michi Saagiig Nations to:

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- avoid, mitigate and/or accommodate for potential impacts to asserted and/or established Treaty and/or Aboriginal rights; and
- address and be responsive to comments and/or concerns that have been raised, but at this time, are not linked to addressing a potential rights impact.
- Engagement log containing OPG's engagement efforts with Indigenous Nations and communities since OPG communicated its plan to undertake a feasibility assessment for refurbishment of Pickering NGS in March 2023 to end of January 2026 (Table 6). This IER includes updates until January 2026 so that OPG could facilitate a thorough review period for Rightsholders to review and comment on the draft IER prior to submission.

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Table 4: Thematic Summary of Issues, Interests and/or Concerns

Interest and/or Concern	Description	Next Steps/Status
Generation, Transportation and Interim Storage of Waste	<ul style="list-style-type: none"> Questions raised about the volume of waste that will be generated by Pickering NGS post refurbishment. Comments regarding the absence of a long-term strategy for disposal of low, intermediate and high-level waste. Concerns that OPG has not provided a solution, should the Nuclear Waste Management Organization not be able to find a willing host, and the plan for waste remains unclear, making it difficult to know which potential adverse impacts are present. 	<ul style="list-style-type: none"> OPG understands that the generation and storage of nuclear waste is a key topic of interest. OPG has made efforts to provide an overview of OPG's waste strategy and updates on the generation and storage of nuclear waste at Pickering for those Indigenous Nations and communities that have raised questions and/or concerns. This has included information and discussion including, but not limited to classification of waste, Waste Management Facilities, how OPG minimizes and stores nuclear waste and by-products and plan for their permanent disposal, and nuclear waste forecasting. OPG has also provided opportunities and been responsive to requests to discuss its nuclear waste storage buildings at Pickering, as well as global facilities for used fuel disposal. This has included information and discussion including but not limited to an overview of the four existing nuclear waste storage buildings at Pickering and including the construction of a fifth one in Q3 2025. Additionally, through engagements with the Michi Saagiig Nations, OPG has supported an independent third party Used Fuel Benchmarking Report on OPG's practices and procedures related to the management of used/spent fuel, as well as a third-party review of the Detailed Decommissioning Plan. OPG recognizes the concerns about the long-term storage plans and strategy of radioactive waste. With respect to used fuel, OPG is supportive of the NWMO initiative to advance permanent and safe storage solutions for this high-level waste stream. Wabigoon Lake Ojibway Nation and the town of Ignace in northwestern Ontario have both elected to move forward in the NWMO's site selection process as the

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		<p>potential host communities for the future site for Canada's deep geological repository for used nuclear fuel.</p> <ul style="list-style-type: none"> OPG's planning assumptions for the long-term management of L&ILW costs include a conceptual long-term disposal strategy assumption consistent with the NWMO's recommended Integrated Strategy for Radioactive Waste for the long-term management of irradiated wastes in Canada, as accepted by the federal Minister of Natural Resources in 2023. The strategy determined that ILW/non-fuel high-level waste will be disposed of in a DGR with implementation by the NWMO. OPG has full confidence in the NWMO's process and its ability to execute its statutory responsibility to design and implement Canada's plan for the long-term managements of used nuclear fuel, which is consistent with international best practices. If this unlikely situation of delays to a DGR occurred, OPG would proactively engage with the WTFN Rightsholders and seek the required regulatory approvals to continue to safely manage and store used fuel onsite, on an interim basis, until a permanent solution is implemented. OPG looks forward to continuing discussions on interests and concerns related to waste management to identify potential measures to address, as appropriate.
Decommissioning – Detailed Decommissioning Plan	<ul style="list-style-type: none"> Questions about why certain end states (e.g. restricted/brownfield vs. unrestricted/greenfield) are defined in the Ontario Nuclear Funding Agreement. Questions about who/how any shortfalls in the fund are addressed if there is a change in proposed 	<ul style="list-style-type: none"> OPG understands that the end state of facilities on the traditional lands of the Williams Treaties First Nations is of great interest and importance. The Michi Saagiig Nations have expressed specific concern that the current funding projection of a "restricted use" end state will dictate the actual end state of the land which PNGS Units 1-4 are situated on. OPG provided a formal response to this in January 2026. To date, OPG has held a Decommissioning Workshop and provided decommissioning updates via presentations and emails at both the Pickering Indigenous Engagement and Waste Tables.

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	end state (increasing the cost to execute decommissioning activities).	<ul style="list-style-type: none"> Additionally, through engagements with the Michi Saagiig Nations, OPG supported a third-party technical review of the Detailed Decommissioning Plan, addressing and incorporating comments into future revisions of the PNGS DDP.
Incorporation of Indigenous perspectives in application materials and supporting documents	<ul style="list-style-type: none"> Interest in opportunities to include Indigenous perspectives in application materials and supporting documents, such as the PERA and Climate Change Resilience Assessment (CCRA). OPG has shared the application and supporting documents with all Indigenous Nations and communities identified in the Pickering Indigenous Engagement Plan. Reviews are ongoing and OPG will continue to work with the Nations to address comments that come forward. 	<ul style="list-style-type: none"> OPG shared documents in support of licensing which included the PCSS PERA (November 2024) and Pickering Site PERA and CCRA (April 2025) to WTFN for review and comment in advance of the Hearing in writing. MSIFN responded with comments on the PCSS PERA in April 2025 which OPG dispositioned and incorporated to R003 (May 2025). PCSS PERA R003 was sent to Michi Saagiig Nations June 2025. CLFN provided comments in June 2025 on the PCSS PERA, PN PERA and CCRA which were dispositioned by OPG and sent September 2025. No further comments were received. For the PN PERA and CCRA reviews, MSIFN requested to engage Arcadis for a third-party review which was provisioned via capacity funding. Reports by Arcadis were received in June 2025 and OPG disposition was sent back September 2025 with no further comment. Chippewas of Rama First Nation provided a community history document (Dec 2025) for inclusion in all future archaeology reports relating to PNGS. This excerpt is confirmed to be incorporated into archaeology reports moving forward and is being included to PN PERA R01 per further direction by the Nation (Jan 2026). Feedback by each Nation respondent was incorporated into PN PERA R001, which was sent in March 2026 for Rightsholder review prior to final submission. OPG also included relevant feedback from previous engagements from other OPG nuclear projects. For example, considered during the development of the 2025 aquatic sampling program for the Pickering site were the presence of species at risk and cold-water species which OPG understand to be a particular interest to Indigenous Nations and communities. For example, PN PERA R001

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		<p>includes sampling results for salmon and American Eel as a direct result of Nations' comments from review of R00.</p> <ul style="list-style-type: none"> • OPG appreciates the feedback and input received by Indigenous Nations and communities to conduct additional studies, as appropriate. • OPG reviewed this feedback and in response, prepared and shared comment dispositions tables and a related report in August 2025. None of the feedback received required changes to the current assessment, however, OPG remains committed to ongoing and meaningful engagement with Rights Holders on climate change topics related to the PNGS and seeks to incorporate Indigenous Knowledge as it is shared.
Assessment of Impacts and Past Grievances	<ul style="list-style-type: none"> • Comments regarding lack of consultation and that consent was never provided from the Michi Saagiig Nations from the original construction and ongoing operation of the Pickering site. • Concerns regarding OPG's scope of formal consultation and assessment limits. Perspective that the Duty to Consult should be triggered for the renewal application. 	<ul style="list-style-type: none"> • The PNGS PROL WFOL Renewal Application included OPG's initial assessment regarding whether the activities contained in the application may give rise to novel adverse impacts on asserted and/or established Treaty and/or Aboriginal rights. OPG initially assessed that some activities, such as the construction and operation of the Deep-Water Intake structure may give rise to novel adverse impacts. • OPG welcomes any additional knowledge, information and perspectives regarding any new or novel impacts that may arise from the Renewal Application so that OPG and the Michi Saagiig Nations can work together to collaborate on how to address those impacts. OPG has not received any additional knowledge, comments and/or insights to date regarding OPG's initial assessment. • OPG acknowledges that legal requirements regarding Indigenous engagement and consultation have evolved significantly since the construction of the PNGS began in the 1960s and the past practices would not meet current standards and expectations. OPG continues to monitor industry best practices, relevant jurisprudence, and evolving legal requirements in order to ensure that we are meeting or exceeding contemporary standards of engagement and/or consultation.

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<p>Lakebed Jurisdiction and Potential Impact of Dredging on Asserted Rights</p>	<ul style="list-style-type: none"> The Michi Saagiig Nations have asserted title to the lakebed and are concerned about potential impacts to the lakebed as a result of refurbishment. Concerns regarding proposed in-water dredging and disposal options for dredged materials to support the construction of a new deep water in-take tunnel for refurbishment. Interest in potential disposal of dredged materials that provide opportunities for shoreline restoration and habitat creation. 	<ul style="list-style-type: none"> OPG leverages its monthly Pickering Table meeting series and ad hoc meetings, as necessary, with the Michi Saagiig Nations to discuss proposed activities and potential impacts to the lakebed, such as Deep-Water Intake activities. Engagement activities with the Michi Saagiig Nations specific to the lakebed has included in-water archaeological plans developed with them and invitations to participate in monitoring in the rock shack to screen materials that were removed through the in-water borehole campaign. Michi Saagiig Nations engaged an archaeological subcontractor through capacity funding for in-water scope resulted in Archaeological Assessments which were shared laterally to other WTFN members and Wendat Nation as Rights Holders and asserted Rights Holders. While engagement is ongoing and dynamic, OPG is actively engaging with the Michi Saagiig Nations in attempt to address potential impacts through avoidance, mitigation, and accommodation measures, as appropriate. There has and will continue to be thorough engagement on key aspects of the deep water in-take activities such as offsetting and spoils management. Given that the Michi Saagiig Nations' assertion of rights in relation to Lake Ontario and the lakebed relates to multiple OPG facilities and operations, OPG will continue to engage with the Michi Saagiig Nations on this topic through ongoing long-term relationship discussions.
<p>Environmental/Impact Assessments and Engagement Approach at the Pickering NGS</p>	<ul style="list-style-type: none"> Concerns regarding past environmental studies and assessments that do not align with an Indigenous perspective at the Pickering NGS. Concerns regarding limitations of the CNSC 	<ul style="list-style-type: none"> OPG has heard concerns that the 2007 Environmental Assessment is outdated and does not align with Indigenous perspectives at the Pickering NGS. OPG appreciates the concerns heard regarding the 2007 Environmental Assessment and looks forward to moving forward in our commitment to continue deepening engagement and strengthening our relationship with Indigenous Nations and communities when it comes to activities taking place at Pickering. OPG has shared with Indigenous Nations and communities that the approved Environmental Assessment for the refurbishment and continued operation of

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	<p>regulatory process and questions regarding the use of an impact/environmental assessment framework for Pickering.</p>	<p>Pickering Units 5 to 8, completed in 2008 under the Canadian Environmental Assessment Act, 1992, is still valid for the project that was assessed at the time. The current refurbishment project does not trigger a federal impact assessment under the Impact Assessment Act, and any potential environmental impacts are assessed and addressed through nuclear licensing and regulatory approval processes.</p> <ul style="list-style-type: none"> • OPG shared that it will continue following the licensing process and associated requirements for proposed activities at Pickering. OPG is also open to working collaboratively with Indigenous Nations and communities to identify what processes and/or activities we can adopt together to address concerns about the existing process. • OPG is still awaiting additional feedback and guidance to advance further exploration of possible engagement activities and measures that could help address the concern.
Holistic vs. piecemeal approach to engagement at Pickering NGS	<ul style="list-style-type: none"> • Interest in a holistic, site-wide engagement approach at Pickering NGS that brings a comprehensive lens to potential impacts across decommissioning, refurbishment and operations. 	<ul style="list-style-type: none"> • OPG appreciates the feedback received from Indigenous Nations and communities that a holistic, site-wide engagement approach is preferred. To support this, OPG implemented a site-wide Pickering Indigenous Engagement Plan with a goal of increasing collaboration and deepen engagement with respect to ongoing and planned activities at Pickering NGS, including engagement on OPG's PROL and WFOL renewal application. This comprehensive Indigenous Engagement Plan was informed by CNSC REGDOC-3.2.2 and was developed based on comments from Indigenous Nations and communities who explicitly shared that a holistic and comprehensive approach to engagement was desired.
Archaeological Studies and Assessments	<ul style="list-style-type: none"> • Interest regarding terrestrial and marine archaeology studies and assessments to understand, mitigate and address potential impacts 	<ul style="list-style-type: none"> • Through ongoing engagement with Indigenous Nations and communities and feedback received to date, OPG has conducted additional studies to support refurbishment, deep-water intake, and decommissioning activities at Pickering. • Through engagements, OPG has planned to conduct additional terrestrial and marine archaeology studies at Pickering in 2026 to support these activities. For

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	to archaeological resources from proposed refurbishment activities.	example, the marine archaeology scope has been expanded to include all of OPG's water lots and also includes eastern shoreline mitigation. Additional areas within leased lands of OPG Pickering are being included proactively within broader scope for Stage 1 assessment, and areas of the Pickering campus are moving to Stage 2 terrestrial assessment.
Engagement on Station Operations	<ul style="list-style-type: none"> Concerns regarding limited engagement with respect to OPG operations aside from licence amendments and extensions and there is an interest in deepening engagement on operations. Interest in better understanding OPG's Emergency Management Program, and participation in Emergency Drills & related Exercises. Interest in site visits and tours of PNGS that have an operational and environmental focused compared to the standard tour. 	<ul style="list-style-type: none"> OPG's relationship with Indigenous Nations and communities has evolved significantly over the current licensing term. In the last five (5) years alone, OPG has entered into several capacity funding agreements to support engagement for ongoing operations as well as proposed new projects and initiatives. In particular, OPG has worked in good faith with the Michi Saagiig Nations to strengthen our relationship and engagement on operations as demonstrated by: <ul style="list-style-type: none"> Establishing and maintaining Framework Agreements with each of the Michi Saagiig Nations. These forums are serving as the place for operational engagement and OPG is open to shifting what we focus on and how we implement Framework Agreements to be responsive to the Michi Saagiig Nations interests. Looking to the future, OPG has incorporated ongoing capacity funding to support operational engagement into our business planning for years to come. This includes comprehensive funding to support an Indigenous Knowledge Study and Cumulative Effects Study for ongoing and proposed nuclear operations within the territory. Establishing Environment & Waste Tables. Through these thematic tables, OPG and the Michi Saagiig Nations are endeavoring to address common issues, inclusive of operations, in a coordinated and strategic manner rather than across various engagement tables.

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		<ul style="list-style-type: none"> o OPG and the Michi Saagiig Nations have agreed in principle, through a Letter of Intent, to explore the negotiation of a broader relationship agreement. • OPG is committed to continue facilitating participation and deepening engagement with respect to emergency management and has and will continue to discuss with interested Indigenous Nations and communities. Through ongoing discussion, OPG is collaborating with interested Indigenous Nations and communities to plan an environmental focused tour to take place in Spring of 2026.
Regulatory Reportable Events	<ul style="list-style-type: none"> • Interest in receiving timely notifications from OPG when regulatory reportable and/or notable events occur that may impact the lands, waters and/or wildlife. 	<ul style="list-style-type: none"> • Through engagement OPG has advanced discussions regarding communications and notifications during regulatory reportable and/or other notable events for Indigenous Nations and communities that have raised this as a concern. • OPG has taken steps with certain Indigenous Nations and communities to share regulatory reportable events to support ongoing engagement and information sharing.
Environmental Monitoring Program (EMP)	<ul style="list-style-type: none"> • Concerns regarding which radionuclides might enter the environment, their environmental fates/transport, and whether radionuclides bioaccumulate. • Concerns regarding the level of detail on how the Environmental Monitoring Program (EMP) assesses/monitors might impacts on local ecosystems (flora, fauna, aquatic life), whether non- 	<ul style="list-style-type: none"> • Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from one First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation's perspective. • OPG will continue engagement with interested Nations to clarify and better understand the perspectives and intends to advance engagement discussions with the Nation through a comment disposition table process.

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	<p>radiological pollutants (e.g., chemical discharges) and thermal effects/thermal pollution are included within monitoring scope, and how cumulative environmental impacts over time are evaluated (e.g., trend assessment).</p>	
Spill Management Program	<ul style="list-style-type: none"> Concerns regarding how spill severity (e.g., Category A/B/C) is assessed and communicated (specifically whether classification considers impacts to human wellbeing, the environment, or both) recognizing that ecological impacts might occur at levels below those associated with human health effects. 	<ul style="list-style-type: none"> Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from one First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation's perspective. OPG will continue engagement with interested Nations to clarify and better understand the perspectives and intends to advance engagement discussions with the Nation through a comment disposition table process.
Groundwater Protection and Monitoring Program	<ul style="list-style-type: none"> Interest in groundwater sampling design, including sampling frequency, whether sampling occurs year-round, and how seasonal variability is considered to 	<ul style="list-style-type: none"> Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from one First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation's perspective.

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	<p>capture potential fluctuations.</p> <ul style="list-style-type: none"> Concerns regarding groundwater quality trends over time, including whether any on-site or near-site locations show potential areas of concern (even if results are within regulatory limits) and how such areas are identified and communicated. Concerns regarding the scope of groundwater monitoring beyond tritium and currently identified hydrocarbons/metals, including whether additional potential contaminants (e.g., other radionuclides, heavy metals, and/or emerging pollutants) are included in monitoring 	<ul style="list-style-type: none"> OPG will continue engagement with interested Nations to clarify and better understand the perspectives and intends to advance engagement discussions with the Nation through a comment disposition table process.
Effluent and Emission Control	<ul style="list-style-type: none"> Interest in how gaseous effluent measurements are validated (quality assurance/quality control) to ensure accuracy and precision. 	<ul style="list-style-type: none"> Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from one First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation's perspective.

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| | <ul style="list-style-type: none"> Concerns regarding factors that may influence variability in gaseous emissions, including potential seasonal and operational conditions. Concerns regarding the timeliness and process for reviewing weekly results, including what protocols/actions are triggered when trends indicate movement toward action levels or potential exceedances. Concerns regarding how OPG distinguishes station-related waterborne radiological releases from external/interfering sources (e.g., lake sediment entrainment) and from potential laboratory/sample contamination, and how confidence in source attribution is established. Interest in the investigation process for monthly action level/DRL exceedances, including | <ul style="list-style-type: none"> OPG will continue engagement with interested Nations to clarify and better understand the perspectives and intends to advance engagement discussions with the Nation through a comment disposition table process. |
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	<p>how the four monthly exceedances (at Pickering between 2018-2024) were assessed, documented, and reported, and what the conclusions were.</p> <ul style="list-style-type: none"> Concerns regarding corrective and preventive actions implemented following exceedances and how effectiveness is verified to reduce the likelihood of recurrence. Interest in the waterborne radiological monitoring approach (e.g., continuous/real-time monitoring versus periodic sampling), including the rationale for the chosen frequency and how timely detection of abnormal conditions is ensured. 	
Thermal Plume	<ul style="list-style-type: none"> Interest in the methods and criteria used to assess potential thermal plume impacts on Round Whitefish (including 	<ul style="list-style-type: none"> Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from one First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation's perspective.

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	<p>embryo survival and other life stages).</p> <ul style="list-style-type: none"> Concerns regarding the comprehensiveness of thermal plume potential effects assessment for other fish species and aquatic organisms, including the overall scope and methodology used to evaluate potential effects 	<ul style="list-style-type: none"> OPG will continue engagement with interested Nations to clarify and better understand the perspectives and intends to advance engagement discussions with the Nation through a comment disposition table process.
Regulatory Process and Parallel Engagement ("Pickering IA Lite")	<ul style="list-style-type: none"> Interest in establishing a parallel "IA Lite" process that would run alongside the Pickering licence period to support improved outcomes over the life of the plant and to address matters not fully covered through CNSC/Nuclear Safety and Control Act processes. Concerns regarding the need for early and ongoing leadership/community inputs before and throughout the licence period (including year-to-year engagement 	<ul style="list-style-type: none"> Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from Curve Lake First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation's perspective. OPG will continue exploratory discussions with the Michi Saagiig Nations to better understand the proposed IA Lite/parallel engagement concept.

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	<p>“building blocks” between renewal cycles).</p> <ul style="list-style-type: none"> • Interest in aligning IA Lite discussions with ongoing knowledge work (e.g., Oshkigmong Knowledge Study) and defining follow-up activities such as monitoring and oversight to build understanding and confidence in OPG/CNSC processes. • Concerns regarding adequacy of current participation/inputs, including the need for harvester involvement and clarity on offsets/commitments and how these will be advanced during the licence period. 	
Preliminary Assessment of Impacts	<ul style="list-style-type: none"> • Concerns regarding potential changes in access to, or use of, lands and waters in the vicinity of the Pickering site, including lakeshore access. 	<ul style="list-style-type: none"> • Through engagement activities, OPG received comments on the draft of this Commission Member Document (CMD) from one First Nation related to this topic. These comments have been documented in the column to the left to preserve the Nation’s perspective. • OPG will continue engagement with interested Nations to clarify and better understand the perspectives and intends to advance engagement discussions with the Nation through a comment disposition table process.

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- Concerns regarding potential disturbance or destruction of ecosystems/habitats near the station.
- Concerns regarding potential effects on fish and fish habitat associated with warmer water discharge/thermal plume, including implications for cold-water fish species and potential increases in suitable habitat for invasive species.

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Table 5: Measures to Address Areas of Interest and/or Concern

Topic	Description of Concern and/or Interest	Measure to Address	Commitment Type
<i>Assessing Risk & Monitoring Potential Impacts on Indigenous People</i> Predictive Environmental Risk Assessment (PERA) and Environmental Risk Assessment (ERA) Harvester Receptor	Through ongoing engagement on PERAs and ERAs, Michi Saagiig of the Williams Treaties First Nations (MS-WTFNs) expressed an interest in the inclusion of a Harvester receptor to conservatively account for Indigenous people who may live, work and/or practice rights near OPG’s facilities. Concerns were expressed that the receptor groups used previously may not capture how Michi Saagiig members who may live and/or work and/or harvest and consume wildlife, fish and/or plant resources close to the site.	For the PNGS Refurbishment PERA and PCSS PERA (and upcoming PNGS ERA), OPG has included the Harvester Receptor to assess the radiological dose for Indigenous populations who may live and/or work and/or harvest and consume wildlife, fish and/or plant resources close to the site. OPG has also presented the MS-WTFNs with a list of questions/discussion topics that will help understand areas of concern or importance, harvesting practices, and how they would like information received, to guide refinements in future PERA and ERAs. OPG is committed to continued engagement on the design and outcome of environmental risk assessments.	Accommodation Measure – measure supports ongoing monitoring and management of potential impacts in collaboration with Nations.
<i>Site Survey Inclusive of Indigenous People</i> Site Specific Survey	MS-WTFNs expressed an interest in reviewing and providing input on OPG’s draft site specific survey to ensure Indigenous peoples living proximate to Darlington and Pickering stations are appropriately captured for OPG to better understand potential impacts to rights.	As a result of this feedback OPG adapted the Site Specific Survey to make the survey inclusive of Indigenous peoples living and working near OPG's facilities with questions worded based on feedback provided by the MS-WTFNs.	Accommodation Measure - measure supports ongoing monitoring and management of potential impacts in collaboration with Nations.
<i>Consideration of Archaeological and Cultural Heritage Values</i> Terrestrial & Marine Archaeology Program	MS-WTFNs raised concerns regarding impacts of refurbishment and decommissioning activities on archaeological and cultural heritage resources.	OPG and MS-WTFNs worked collaboratively to develop and execute a site wide archaeological assessment program that goes above and beyond legal requirements. The terrestrial program to date has included conducting a Stage 1 assessment across the entire Pickering site. Based on the outcomes of this assessment, OPG and the MS-WTFNs have proceeded with Stage 2 assessments in recommended areas where ground disturbance work is being contemplated. The marine program includes desktop studies, sub bottom profiling, ROV video capture, archaeological monitoring and sediment screening. The archaeology program will continue to evolve and inform engagement at site to ensure archaeological and cultural heritage values are identified and impacts are avoided and/or mitigated. OPG will inform the MS-WTFNs and commit to further archaeology assessment if any planned ground disturbance activities are proposed in areas recommended for further archaeology assessment.	Accommodation Measure – measure supports avoidance and mitigation of potential impacts to archaeological and cultural heritage values in collaboration with the Nations.
<i>Monitoring of aquatic species at site</i> Aquatic environmental surveys	MS-WTFNs expressed an interest in attending aquatic monitoring activities, particularly those related to species at risk and culturally significant, such as Lake Sturgeon. MS-WTFN also raised concerns that only one spot was available (due to boat size) for participants wishing to attend these sampling activities.	For sampling activities taking place in the summer and early fall, OPG worked with our vendor to ensure that an additional spot (total of two spots) on the boat would be reserved for any interested First Nations participants while continuing to ensure that boat safety requirements are maintained. For sampling activities conducted during harsh weather conditions in late fall, and in consideration for safety, OPG offered to record videos of the sampling activities and provide shift reports, along with data tables summarizing the species caught. Additionally, OPG worked with our vendor to coordinate with another vendor in Frenchman’s Bay to secure access to a boat with 10 additional spots, should there be increased interest from participants wishing to attend the sampling activities. ROV videos were captured and shared with the Nations to improve our collective understanding of aquatic habitats in areas of interest and to inform project activities. OPG targets to share the monitoring schedule approximately two weeks in advance of planned activities, to assist the MS-WTFNs in coordinating potential monitoring participation.	Deepening Engagement – measures help to facilitate deeper level of engagement and involvement on studies of importance on site.

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Topic	Description of Concern and/or Interest	Measure to Address	Commitment Type
<i>Monitoring of culturally significant aquatic species at site</i> Lake Sturgeon targeted monitoring	MS-WTFNs expressed concern regarding the temperature of the lake during the Lake Sturgeon sampling activity conducted from 29-Sep-25 to 2-Oct-25. Specifically, MS-WTFNs highlighted the temperature was higher than the preferred temperature range for Lake Sturgeon.	OPG worked with our vendor to conduct an additional round of Lake Sturgeon sampling from 14-Nov-25 to 15-Nov-25, during which the lake water temperatures were within the preferred habitat range for Lake Sturgeon.	Accommodation Measure – measure supports additional data collection that will further inform assessment and further avoidance and/or mitigation measures, as appropriate, in collaboration with the Nations,
<i>Monitoring Fish Entrainment</i> Increase sampling due to climate change	OPG engaged the MS-WTFNs on the design for a fish entrainment study at Pickering in 2024. The study is currently in progress and is a requirement of OPG’s existing Fisheries Act Authorization. Through engagement, we heard that as climate change continues to impact spawning times and windows, there was an interest in increasing sampling frequency during those time periods.	Based on these comments, OPG increased the monitoring schedule from every other week to weekly during October, November, February and March.	Accommodation Measure - measure supports ongoing monitoring and management of potential impacts in collaboration with Nations.
<i>MS-WTFN offsetting considerations</i> Selection of an aquatic offsetting location/concept in support of the Fisheries Act Authorization Application for construction of a deepwater intake	MS-WTFNs expressed an interest in being engaged on the selection of an offsetting location/concept early and throughout the process to consider MS-WTFN’s worldview. MS-WTFNs also provided feedback from past projects to consider contacting local municipalities for potential offsetting location opportunities.	OPG has been engaging with the MS-WTFNs at the MS-WTFN/OPG Pickering Table meetings, where OPG has presented potential offsetting concepts and will be sharing the proposed offsetting opportunities for early input. OPG has also invited MS-WTFN to participate in field visits of potential offsetting locations on Sep 23, 2025. Additionally, OPG has contacted local municipalities as per MS-WTFNs feedback to seek out potential offsetting location opportunities.	Deepening Engagement – measures help to facilitate deeper level of engagement and involvement on studies of importance on site.
<i>MS-WTFN offsetting considerations</i> Identification of potential offsetting locations/concepts for future projects/operations permitting	MS-WTFNs expressed an interest in being engaged on a holistic approach to planning for offsetting for future permits.	OPG has been engaging with the MS-WTFNs at the MSN/OPG Environment Table meetings, where OPG is working collaboratively with the MS-WTFN to develop a scope of work for vendor support to develop a list of potential offsetting locations/concepts that consider both MS-WTFNs and future OPG permit needs. OPG shared a draft scope of work document with the MS-WTFNs for review and input, prior to finalizing.	Deepening engagement – approach helps to facilitate holistic and coordinated approach to offsetting across various sites and/or projects. Outcomes intended to result in effective avoidance and mitigation measures to potential impacts to rights, as appropriate.
<i>Project updates</i> Notifications	MS-WTFNs expressed an interest that OPG provides project event notifications that are regularly shared with regulators and/or Crown authorities to support meaningful, transparent engagement.	OPG has committed to MS-WTFNs to provide project event notifications such as environmental reportable events and notable wildlife observations/events.	Deepening Engagement – measure is responsive to an interest from the Nations to understand reportable and notable events to deepen engagement discussions.
<i>Spoils Management</i> Assessment of options and approaches for spoils management .	MS-WTFNs have an interest in spoil management approaches that avoid and/or mitigate impacts to asserted and/or established Treaty and/or Aboriginal rights. A specific interest has been communicated regarding potential disposal of dredged materials that provides opportunities for shoreline restoration and habitat creation.	OPG has been engaging with the MS-WTFNs on assessment of onshore and offshore disposal options as well as beneficial reuse opportunities. The MS-WTFNs have engaged a third party consultant (KWL) to support MS-WTFNs collaboration with OPG project team relating to spoils management. MS-WTFNs engagement to-date has included opportunities to minimize potential aquatic and environmental impacts, as well as requests for further information which may support designation of beneficial reuse (i.e. Local, across OPG) pending geotechnical and other requirements are met.	Accommodation Measure - measure supports ongoing monitoring and management of potential impacts in collaboration with Nations, if any such impacts are identified.

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Topic	Description of Concern and/or Interest	Measure to Address	Commitment Type
		Dedicated space for further collaboration with MS-WTFNs and consultant KWL has been identified in forthcoming meeting schedules to support project decisions relating to DWI spoils.	
Indigenous Knowledge and Cumulative Impacts	MS-WTFNs have expressed concerns regarding cumulative impacts of ongoing and proposed nuclear projects along Lake Ontario and interest in enhancing application of Indigenous Knowledge to potentially inform future monitoring and adaptive management approaches.	<p>OPG has committed to financially support the MS-WTFN to undertake an Indigenous Knowledge Study over the next five (5) years. These Indigenous Knowledge studies will be scoped to consider potential impacts of activities across OPG's Nuclear sites and impacts to rightsholders throughout the Williams Treaties First Nations traditional territory. The Indigenous Knowledge Study is the intellectual property of the Nations and respect that the MS-WTFNs will share the information gathered through the Indigenous Knowledge Study process with OPG as the MS-WTFNs deem appropriate. OPG is committed to working with the MS-WTFNs to collaborate on how IKS results and how contributions could inform monitoring activities and additional measures as appropriate.</p> <p>In parallel to the development of the IKS, OPG and WTFN have an on-going relationship that provides opportunity for Indigenous Knowledge to be reflected into consultation and/or engagement process on a continuous basis when shared.</p>	Deepening Engagement – measures support in better understanding how ongoing and proposed initiatives may impact Indigenous values. Outcomes of the IKS, if shared with may inform collaboration on future monitoring activities and adaptive measures at PNGS.
Engagement on Detailed Decommissioning Plan (DDP) Ongoing commitment to engaging MS-WTFN's on the DDP.	<p>MS-WTFNs have expressed concerns that the current version of the DDP was accepted without adequate engagement and/or consultation.</p> <p>MS-WTFNs voiced concerns that OPG has decided the end state of Pickering A without the Nations and that this end state decision is influencing present day decommissioning decisions, including the activities contained in the relicensing application.</p>	<p>OPG facilitated engagement on the current DDP in parallel to CNSC review, including the provision of capacity funding for the MS-WTFN to retain a third-party technical review. OPG has dispositioned all comments received and are committed to having the views of the MS-WTFNs, from this third party review and any additional future engagement, reflected in the next DDP update. OPG is committed to ongoing engagement on the DDP, including discussion concerning end-state.</p> <p>OPG also commits to developing and implementing an Indigenous Engagement Plan collaboratively with the MS-WTFNs specific to the Detailed and Preliminary Decommissioning Plans at PNGS. This plan would outline key engagement activities and milestones OPG and the MS-WTFNs wish to undertake together before the next PDP and DDP updates.</p>	Deepening Engagement – approach helps to facilitate and strengthen engagement on Preliminary and Detailed Decommissioning Plans at PNGS in collaboration with the MS-WTFN going beyond regulatory requirements. Outcomes intended to enhance opportunities for Indigenous perspectives to inform future decommissioning planning activities, including end-state.

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Table 6: OPG Engagement Log for Identified Indigenous Nations and Communities

Date	Community	Activity	Discussion Topics	Additional Information	Issues Raised
3/28/2023	Alderville First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Chimnissing (Beausoleil First Nation)	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Curve Lake First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Chippewas of Georgina Island First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Chippewas of Rama First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Hiawatha First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Mississaugas of Scugog Island	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Huron-Wendat Nation	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
3/28/2023	Kawartha Nishnawbe	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A

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3/28/2023	Six Nations of the Grand River	Email	Pickering feasibility assessment for refurbishment.	OPG Letter sent by email to various First Nations included context about Nuclear Power, the Pickering Station, past technical feasibility assessments for refurbishment, a statement of planned feasibility assessment, key milestones, invitation to tour the Pickering facility and commitment to ongoing engagement.	N/A
6/11/2023	Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island; Alderville First Nation	Community Meeting	CLOCA compensation plan (DNCS and PNGS)	OPG convened Michi Saagiig Nations, Central Lake Ontario Conservation Authority (CLOCA), AtkinsRealis to support a conversation around compensation plans and referenced Endangered Species Act (ESA) and looking to Toronto and Region Conservation Authority (TRCA) strategy as a point of reference.	Endangered Species CLOCA compensation
6/13/2023	Alderville First Nation	In Person Meeting	General Pickering discussion at meeting.	Alderville First Nation expressed an interest in being involved in work onsite with regards to environment. Alderville First Nation is concerned with the waterways, lakefront and environment. Also expressed the importance of balancing the environment with the economy. Would like to ensure skilled trades, training and programming investment is committed by OPG.	Environmental impacts Economic opportunities
6/28/2023	Mississaugas of Scugog Island	Email	Organize meeting to discuss Pickering feasibility assessment for refurbishment	Emails to and from Mississaugas of Scugog Island First Nation (MSIFN) regarding the meeting date for Pickering Feasibility to present to Scugog Island. Virtual meeting planned for July 10 between 3-4 pm.	N/A
6/28/2023	Curve Lake First Nation; Hiawatha First Nation	Virtual Meeting	Additional information on the Pickering Refurbishment Feasibility Study.	Hiawatha First Nation (HFN) and Curve Lake First Nation (CLFN) requested a summary of the Pickering Refurbishment Feasibility Study in order to better determine what participation from HFN/CLFN would be, noting that the communities are more concerned with the project process. Areas of interest at the forefront of the communities were noted to include environmental protection and minimizing environmental impacts, protection of cultural keystone species, impacts to rights, and accommodation. A question was asked about whether the Social Feasibility had been assessed as part of the Technical and Economic Feasibility review for the Pickering Refurbishment. Pickering representatives were invited to the next Framework Meeting.	Environmental impacts; Cultural significant species; Potential Impact to Rights
6/29/2023	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	In Person Meeting, Virtual Meeting	Bank Swallow habitat at Pickering.	This was the first monthly meeting with Michi Saagiig Williams Treaties First Nations (WTFNs) on Darlington New Nuclear Project (DNNP) since the agreed resumption of engagement activities. Topics included: General Project Update (including the update on the artificial Bank Swallow habitat at PNGS), Events Notification Process for WTFNs, Environment Related Topics (including Species at Risk (SAR) Draft Management Plan, Butternut Tree Health Assessment, Planting Plans for Beneficial Action, and Bat Box Designs), Upcoming Project Permitting, and lastly Future Monthly Meeting Locations. Elder Lorenzo Whetung (Curve Lake First Nation) offered an opening to begin the meeting in a good way, and Tom Cowie (Hiawatha First Nation) offered closing words to leave the meeting in a good way.	N/A
7/10/2023	Mississaugas of Scugog Island	Virtual Meeting	Pickering feasibility assessment for refurbishment.	Virtual meeting with Scugog representatives for Pickering Feasibility to present the project and potential for Pickering Refurbishment.	N/A

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7/17/2023	Alderville First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Chimnissing (Beausoleil First Nation)	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Curve Lake First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Chippewas of Georgina Island First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Hiawatha First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Mississaugas of Scugog Island	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Chippewas of Rama First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Huron-Wendat Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Kawartha Nishnawbe	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Métis Nation of Ontario (MNO)	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A

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7/17/2023	Historic Saugeen Métis (HSM)	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Six Nations of the Grand River	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Mississaugas of New Credit First Nation	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Mohawks of the Bay of Quinte (Tyendinaga)	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/17/2023	Wahta Mohawks	Email	Pickering feasibility assessment for refurbishment.	OPG letter sent to Indigenous communities identified in the Engagement Plan to follow-up on letter sent in March 2023. Letter gave an overview of the Pickering Station future, requested a meeting to discuss engagement and involvement of the Station of each Indigenous community.	N/A
7/18/2023	Hiawatha First Nation; Curve Lake First Nation	Email	RIOBEE and Pickering Fisheries Act Authorization.	OPG emailed Hiawatha First Nation (HFN) and Curve Lake First Nation (CLFN) teams to set up a meeting for RIOBEE and Pickering Fisheries Act Authorization conversations. OPG texted the HFN and CLFN teams regarding discussions about concerns surrounding RIOBEE/Pickering Fisheries Act Authorization (FAA). HFN/CLFN requested to discuss this further at Framework meetings, and requested a meeting date, which OPG agreed to.	N/A
7/19/2023	Six Nations of the Grand River	Email	Pickering feasibility assessment for refurbishment.	Peter Graham from the Lands and Resources Consultation department of the Six Nations of the Grand River replied by email to confirm receipt of the OPG correspondence. Dawn Russell will follow-up with OPG to schedule a meeting.	N/A
7/21/2023	Alderville First Nation	Email	Schedule meeting for newly-elected Chief.	Newly-elected Chief, Taynar Simpson, of Alderville First Nation replied by email to confirm receipt of OPG correspondence. Would like to meet in the coming weeks, by end of summer.	N/A
8/10/2023	Historic Saugeen Métis (HSM)	Email	General Pickering.	Historic Saugeen Métis (HSM) responded to the letter sent by OPG to request a meeting to discuss the PNGS, stating the project is not within their traditional territory therefore no further correspondence is needed.	N/A
8/14/2023	Hiawatha First Nation; Curve Lake First Nation	Email	Framework meeting - RIOBEE and Pickering Fisheries Act Authorization.	OPG emailed Hiawatha First Nation (HFN) and Curve Lake First Nation (CLFN) teams regarding the agenda for the August 22 Framework Agreement meeting.	N/A

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9/13/2023	Six Nations of the Grand River	Virtual Meeting	Overview of Pickering NGS, plans for refurbishment feasibility assessment, and questions/answers.	<p>Six Nations of the Grand River (SNGR) requested that OPG provide information on:</p> <ol style="list-style-type: none">1) Electricity costs resulting from Pickering refurbishment2) Zebra Mussel mitigation related to anticipated changes to the intake pipes as part of refurbishment3) SMRs beyond those already announced in Ontario. OPG noted that they are leading a year long study on this.4) Safety of facility under unlikely natural disaster scenarios5) Failsafe systems to avoid contamination in the event of emergency situations6) Deep Water Intake7) Safety of facility and emergency response under terror attack scenario <p>OPG offered a tour of the Pickering facility. SNGR requested that OPG complete an agreement for engagement and dates by Monday September 18, 2023 to bring to Council before election season. OPG committed to conducting a follow-up meeting to provide status update on refurbishments and address other questions/concerns that may have arose from the meeting.</p>	Environmental impacts; Safety; Emergency Response
9/26/2023	Six Nations of the Grand River	Email	Overview of Pickering NGS, plans for refurbishment feasibility assessment, and questions/answers.	OPG sent a follow-up meeting to Six Nations of the Grand River (SNGR), thanking the SNGR team for meeting to discuss the Pickering Nuclear Generating Station (PNGS). OPG reiterated items raised at the meeting held on September 13th, 2023. OPG shared the PNGS presentation to Six Nations of the Grand River, requested a follow up meeting and offered a PNGS site tour.	N/A
9/26/2023	Six Nations of the Grand River	Email	Overview of Pickering NGS, plans for refurbishment feasibility assessment, and questions/answers.	Six Nations of the Grand River Elected Council (SNGREC) Lands and Resources Department Consultation and Accommodation Process (CAP) Team responded to OPG's email to offer 3 dates and times in October 2023 to have a follow up meeting on Pickering Nuclear Generating Station (in-person or virtual).	N/A
10/12/2023	Mississaugas of Scugog Island	Virtual Meeting	Pickering feasibility assessment for refurbishment.	Framework meeting included discussion on the Pickering Nuclear Generating Station (PNGS). Presentation given on update on PNGS and quick project overview. OPG invited Chief LaRocca to an announcement for the PNGS if the Minister of Energy accepts the recommendation on refurbishment (OPG will ensure notice given for time to plan). Don stated that the Scugog Island First Nation considers Pickering to be in their backyard and will need to be included, engaged, consulted on all activity at PNGS. Environmental restoration is a priority for Scugog Island First Nation and must be a consideration in all work being done at PNGS. It was suggested OPG supply chain hold an open house in the community of Scugog Island First Nation to inform about the work required at PNGS and to assist with individuals who may want to register as a supplier, also explore community owned businesses and to ensure inclusion and opportunity within PNGS refurbishment. Scugog Island First Nation is interested in exploring opportunities on isotopes. OPG committed to providing a spreadsheet with upcoming hearings and license applications for their information purposes and for planning purposes.	Environmental restoration; Economic opportunities

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10/24/2023	Curve Lake First Nation; Hiawatha First Nation	Virtual Meeting	Pickering overview, feasibility study, and Deep-Water Intake program.	OPG presented the current State of Pickering Nuclear Generating Station, Status of Pickering Refurbishment Feasibility Study and high-level overview of Deep-Water Intake - impacts from environmental standpoint, environmental monitoring reports and risk assessments. 4 Directions requested annual data and trends regarding environmental benefits. 4 Directions stated that establishing a goalpost is critical for refurbishment, and beginning a dialogue is the first step. 4 Directions expressed interest in being informed ahead of Refurbishment announcement from the Province.	Potential Impact to Rights; Legacy Issues from historical impacts; Economic opportunities
11/1/2023	Curve Lake First Nation	Email	Community visit.	OPG confirmed Pickering's interest in attending the Harvester's Gathering.	N/A
11/3/2023	Mohawks of the Bay of Quinte (Tyendinaga)	Email	Emergency Management at Pickering.	OPG emailed the Mohawks of the Bay of Quinte (MBQ) to revise OPG Nuclear's internal events notifications procedure, in case of an environmental spill event or fish event at Pickering Nuclear Generating Station (PNGS) or Darlington Nuclear Generating Station (DNGS) where the Spills Action Centre or Ministry must be notified. This will allow First Nations to also be notified, recognizing the sovereignty of the Nations and role as caretaker of lands and waters. OPG inquired if the Mohawks of the Bay of Quinte want to be notified directly in these types of spill events at PNGS/DNGS. MBQ stated that they wish to be notified.	Safety
11/10/2023	Six Nations of the Grand River	Email	Site tour.	OPG emailed representatives of Six Nation of the Grand River in preparation for the scheduled meeting at the Pickering Information Centre and tour of the Pickering Station. Forms for safety checks were sent to representatives in order to be permitted access to the Station for the tour, as well as a proposed agenda for discussion to take place.	N/A
11/21/2023	Curve Lake First Nation	Email	Community visit.	OPG emailed the 4 Directions team to confirm Pickering team's attendance to Harvesters Gathering and request for finalized agenda.	N/A
11/21/2023	Six Nations of the Grand River	In Person Meeting, Site Tour	Site tour.	Six Nations of the Grand River attended a meeting at the Pickering Information Centre and a tour of the Pickering Station. The meeting prior to the tour offered the opportunity to follow up on a few of the questions asked of OPG in the initial engagement meeting. A tour of the station with Six Nations of the Grand River representatives and OPG representatives enabled participants to see the operations of the Pickering Station and to ask questions along the tour. Most questions were addressed during the tour with the exception of the following: 1. Amount of space for storage of spent fuel at Pickering, and; 2. What are the fish program offsets? OPG has committed to following up with the answers to these questions. After the tour the group had lunch and discussed other issues. The following issues were discussed - holding an information session with youth in Six Nations and doing a virtual tour to explore opportunities within the trades and sciences, holding training sessions with the Polytechnic school for students interested in a career in energy, the duty to consult and if it has been delegated to OPG, Six Nations gave a bit of history of the significance of Lake Ontario and the city of Toronto to the Haudenosaunee people, highlighted issues within the community with capacity for language and culture. OPG Provided a brochure on Pickering.	Waste management; Aquatic offsets
11/23/2023	Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	In Person Meeting, Site Tour, Virtual Meeting	Site tour.	OPG hosted representatives from Curve Lake First Nation (CLFN), Hiawatha First Nation (HFN), and Mississaugas of Scugog Island (MSIFN) at the Darlington Nuclear site for a tour of the Darlington Waste Management Facility (DWMF) (onsite storage). The DWMF tour was followed by lunch and an afternoon meeting. The afternoon meeting's key topic of focus was Nuclear By-Products, a presentation was provided by OPG. The meeting was attended in-person and virtually by OPG and representatives of MSIFN, CLFN, HFN.	N/A

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				The meeting materials (slide show) and materials on Best Available Technology and Techniques Economically Achievable (BATEA) were shared with the Nations post meeting.	
11/24/2023	Six Nations of the Grand River	Email	Site tour follow up.	OPG sent an email with representatives of Six Nations of the Grand River First Nation to extend thanks for the meeting and tour held at the Pickering Station on November 21st, 2023. OPG reiterated its commitment to engagement and inclusion of Indigenous communities in the development and activities at the Pickering Station. OPG also welcomed the opportunity for OPG to attend community event days to share information on OPG and employment opportunities, as well as, presentations at the Six Nations Polytechnic school to discuss careers in the nuclear sector.	N/A
12/6/2023	Curve Lake First Nation	Community Meeting	Community visit.	Members of the Darlington New Nuclear Project (DNNP), Pickering NGS and Nuclear Sustainability Services (NSS) teams were present and participated at Curve Lake First Nation's (CLFN's) quarterly Harvester's Gathering. OPG representatives were on hand to share information about the DNNP, Employment and Procurement (Indigenous Opportunities Network), Pickering NGS, NSS and By-Product storage and transportation. The gathering serves as a forum for members/citizens of CLFN to gather and share perspectives, concerns, questions and information directly related to harvesting/gathering activities, exercising Inherent Aboriginal and Treaty rights, and interfacing with proponents on current projects and initiatives.	N/A
12/13/2023	Curve Lake First Nation; Hiawatha First Nation	Virtual Meeting	Pickering feasibility assessment for refurbishment update.	Framework meeting topics of discussion included: 1) Pickering feasibility/refurbishment Update 3) Fisheries Act Authorization (FAA)/RIOBEE updates	N/A
12/14/2023	Mississaugas of Scugog Island	Virtual Meeting	Pickering feasibility assessment for refurbishment update.	Framework meeting topics of discussion included: 1) Pickering feasibility/refurbishment Update 3) Fisheries Act Authorization (FAA)/RIOBEE updates	N/A
12/15/2023	Métis Nation of Ontario (MNO)	Virtual Meeting	Pickering feasibility assessment for refurbishment update.	Meeting agenda items: 1. Opening Prayer 2. Introductions, Agenda Review & Meeting Expectations 3. Safety Updates 4. Project & Site Operations Updates 5. General Business & Company Updates 6. Environmental Program Updates 7. Questions & Next Steps 8. Closing Prayer	N/A
1/8/2024	Curve Lake First Nation; Hiawatha First Nation	Email	Pickering Indigenous Engagement Plan (IEP)	OPG sent an email to Hiawatha First Nation (HFN) and Curve Lake First Nation (CLFN) to share the Draft Indigenous Engagement Plan for the Pickering Nuclear Generating Station (PNGS) for review, input, and feedback.	N/A
1/23/2024	Curve Lake First Nation; Hiawatha First Nation	Virtual Meeting	Pickering Decommissioning.	OPG had a meeting with Curve Lake First Nation and Hiawatha First Nation. Topics discussed: 1. Darlington New Nuclear Project (DNNP) 2. Decommissioning 3. New Nuclear Development	Potential Impact to Rights; Legacy Issues from historical impacts
1/24/2024	Mississaugas of the New Credit First Nation	Document Review, Email	Pickering Indigenous Engagement Plan (IEP)	OPG emailed the Mississaugas of the New Credit First Nation (MNCFN) on January 24, 2024 to request feedback on OPG's draft Indigenous Engagement Plan (IEP) for the Pickering Nuclear Generating Station (PNGS). The draft IEP was attached to the email, and OPG requested feedback by February 15, 2024.	N/A
1/30/2024	Alderville First Nation	Letter	Draft Pickering Indigenous Engagement Plan and	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A

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			Pickering Kick-Off meeting planning.		
1/30/2024	Chimnissing (Beausoleil First Nation)	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Chippewas of Georgina Island First Nation	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Curve Lake First Nation	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Hiawatha First Nation	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Métis Nation of Ontario (MNO)	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Mohawks of the Bay of Quinte (Tyendinaga)	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Six Nations of the Grand River	Letter	Draft Pickering Indigenous Engagement Plan and Pickering Kick-Off meeting planning.	OPG distributed the Pickering Indigenous Engagement Plan to the Williams Treaties First Nations (WTFN); planning Kick-off meeting in March 2024.	N/A
1/30/2024	Métis Nation of Ontario Region 8	Virtual Meeting	Pickering Refurbishment DNNP, MNO Regional consultation committee	Darlington New Nuclear Project (DNNP), Pickering Nuclear Generating Station (PNGS) Refurbishment; Discussion aimed at setting a meeting in Q1 with the Métis Nation of Ontario (MNO) nuclear coordinator and regional consultation committee; Introductory call, new nuclear consultation coordinator for MNO.	N/A
1/31/2024	Métis Nation of Ontario Region 8	Email	Pickering Refurbishment	OPG emailed the Métis Nation of Ontario (MNO) regarding Pickering Nuclear Generating Station (PNGS) PNGS Refurbishment and edits to contact information requested and fulfilled. MNO confirmed their review of draft PNGS Refurbishment document.	N/A
2/14/2024	Chippewas of Rama First Nation	In Person Meeting, Site Tour	Pickering Refurbishment, Draft Pickering Indigenous Engagement Plan	<p>OPG hosted leadership and staff from Chippewas of Rama First Nation (RFN) at the Darlington Energy Complex (DEC) to discuss various topics under OPG's Nuclear line of business including: Darlington New Nuclear Project (DNNP), Darlington Nuclear Generation Station (DNGS) Refurbishment, Pickering Nuclear Generation Station (PNGS) Refurbishment, Nuclear Sustainability Services (Waste). RFN representatives were also taken on a tour of the DNGS, as well as a brief drive-by of the DNNP development area.</p> <p>Discussions included: Request to re-send information on DNGS 30-year license and PNGS Indigenous engagement plan; discussion on disposition of waste (on-site and transported); rationale for 10-year water cooling for used fuel; Supply Chain categories for Indigenous business; interest in potential sites for new nuclear development and Deep Geological Repository (DGR) for waste</p>	Engagement on Station Operations, Generation, Transportation and Interim Storage of Waste

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2/15/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	In Person Meeting, Virtual Meeting	Pickering Refurbishment and Decommissioning	OPG met with the Michi Saagiig Williams Treaties First Nations to discuss two permits and an introductory meeting for engagement required for Pickering Nuclear Generating Station (decommissioning and refurbishment, first steps) Topics Discussed: 1. CCW System 2. Shoreline Protection 3. Thermal Effects Assessment 4. Non-Thermal Effects 5. Offsetting 6. Pickering Nuclear Generating Station (PNGS) and Deep-Water Intake (DWI)	Impacts to habitat; Impacts to environment
3/19/2024	Alderville First Nation	Event Support, Participation, and/or Sponsorship	Community visit	OPG attended a community event in Alderville First Nation (AFN), where AFN conducted land-based learning with Indigenous Knowledge Holders. Indigenous Knowledge Holders shared their teachings around maple syrup harvesting and processing.	N/A
3/20/2024	Curve Lake First Nation; Mississaugas of Scugog Island; Hiawatha First Nation; Chimnissing (Beausoleil First Nation)	Virtual Meeting	Pickering Refurbishment, Decommissioning, Pickering Component Storage Structure, 6-year fuel.	OPG met with some Williams Treaty First Nations (Option 1 - Curve Lake First Nation, Mississaugas of Scugog Island First Nation, Hiawatha First Nation, and Chimnissing (Beausoleil First Nation)) on March 20, 2024, to discuss Pickering Indigenous Engagement Kick-off. Topics Discussed: 1. Pickering Nuclear Generation Station (PNGS) Units 5-8 Refurbishment, which will extend the operational life of the station for an additional 30+ years, supporting Ontario's energy transition 2. Decommissioning strategies were outlined, emphasizing the development of a detailed decommissioning plan 3. The importance of environmental protection, economic opportunities, and incorporating traditional knowledge into project processes was highlighted 4. Detailed plans for waste management, including the proposal to load six-year-cooled fuel into dry storage containers and the construction of an additional storage building for used fuel, were discussed 5. The session also covered OPG's support for the Nuclear Waste Management Organization's (NWMO) process for a Deep Geological Repository (DGR) for Canada and provincial-wide engagement for low-level waste disposal facility hosting.	United Nations Declaration on the Rights of Indigenous Peoples
4/11/2024	Mississaugas of Scugog Island	Virtual Meeting	Pickering Refurbishment, Pickering Waste Management Facility, 6-year fuel	OPG met with the Mississaugas of Scugog Island First Nation (MSIFN) on April 11, 2024, to discuss the Pickering Component Storage Structure (PCSS), 6-year-old fuel, Low-Level Waste Initiative (LLWI), capacity/timeline, regulatory overview pieces wholistic narrative, and isotope partnerships	N/A
4/11/2024	Métis Nation of Ontario Region 8	Community Meeting	Tour and presentation. DNNP site	OPG met with the Métis Nation of Ontario on April 11, 2024, for an opportunity to visit the Darlington New Nuclear Project (DNNP) and/or DNNP site to review monitoring activities undertaken by OPG.	N/A

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4/17/2024	Alderville First Nation; Chippewas of Rama First Nation	Virtual Meeting	Pickering Refurbishment, Decommissioning, Pickering Component Storage Structure, 6-year fuel.	<p>OPG met with some Williams Treaty First Nations (Option 2 - Alderville First Nation, Chippewas of Rama First Nation) on April 17, 2024, to discuss the Pickering Indigenous Engagement Kick Off with Williams Treaties First Nations.</p> <p>Topics Discussed:</p> <ol style="list-style-type: none">1. Pickering Nuclear Generation Station (PNGS) Units 5-8 Refurbishment, which will extend the operational life of the station for an additional 30+ years, supporting Ontario's energy transition2. Decommissioning strategies were outlined, emphasizing the development of a detailed decommissioning plan3. The importance of environmental protection, economic opportunities, and incorporating traditional knowledge into project processes was highlighted4. Detailed plans for waste management, including the proposal to load six-year-cooled fuel into dry storage containers and the construction of an additional storage building for used fuel, were discussed5. The session also covered OPG's support for the Nuclear Waste Management Organization's (NWMO) process for a Deep Geological Repository (DGR) for Canada and provincial-wide engagement for low-level waste disposal facility hosting.	United Nations Declaration on the Rights of Indigenous Peoples
4/23/2024	Curve Lake First Nation; Hiawatha First Nation	Virtual Meeting	Pickering NGS – PCSS, IEP	OPG met with Curve Lake First Nation (CLFN) and Hiawatha First Nation (HFN) on April 23, 2024, to discuss Storage Structure 3 (SS3), Stack Monitoring, 6-year-old fuel, Pickering Component Storage Structure (PCSS), Pickering Nuclear Generating Station (PNGS) Refurbishment and Decommissioning Indigenous Engagement Plan (IEP)	N/A
4/30/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email	Deep Water Intake - Geotechnical Drilling Program	OPG emailed the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on April 30, 2024, to notify the Nations of the Transport Canada notification for borehole drilling in support of Deep-Water Intake.	N/A

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4/30/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email	Pickering NGS - Transport Canada Geotechnical Testing	<p>OPG emailed the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on April 30, 2024. OPG shared Transport Canada's Notice of Geotechnical Testing prior to it being shared publicly. OPG also stated that they are drafting Memorandum of Understandings (MoUs) for the Nations and are aiming to have a draft ready by June 2024.</p> <p>Alderville responded on May 1, 2024, requesting the underwater archaeological study that was prepared for the work, if available. Scugog Island also responded on May 1, 2024, requesting the complete application package. OPG stated that they will share the documents with the Nations once received.</p> <p>OPG sent a follow-up email on May 21, 2024 to provide an update and share materials on the matter. OPG stated that geotechnical work will be delayed until June 14, 2024. OPG attached the following documents for the Nations' review:</p> <ul style="list-style-type: none">- Application submitted to Transport Canada- Map of proposed offshore bore hole drilling locations- Preliminary Marine Archaeological Assessment- Fisheries and Oceans Canada (DFO) Project Review Package- DFO's Response to OPG on the Project Review Package	Geotechnical
5/1/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Deep Water Intake - Geotechnical Drilling Program	The Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) emailed OPG on May 1, 2024, requesting the full application package and associated documentation to support First Nations' review for the Geotechnical Drilling Program.	Piecemeal approach to engagement
5/1/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Fish Entrainment Study	OPG emailed the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on May 1, 2024, to share some information about an upcoming fish entrainment study at Pickering. The study is a requirement of OPG's existing Fisheries Act Authorization (FAA) with Fisheries and Oceans Canada (DFO). Request for comments by mid-June.	N/A
5/3/2024	Chimnissing (Beausoleil First Nation)	Document Review, Email	Fish Entrainment Study	OPG emailed Chimnissing (Beausoleil First Nation) on May 3, 2024, to share some information about an upcoming fish entrainment study at Pickering. The study is a requirement of OPG's existing Fisheries Act Authorization (FAA) with Fisheries and Oceans Canada (DFO). Request for comments by mid-June.	N/A
5/3/2024	Chippewas of Georgina Island First Nation	Document Review, Email	Fish Entrainment Study	OPG emailed the Chippewas of Georgina Island First Nation on May 3, 2024, to share some information about an upcoming fish entrainment study at Pickering. The study is a requirement of OPG's existing Fisheries Act Authorization (FAA) with Fisheries and Oceans Canada (DFO). Request for comments by mid-June.	N/A
5/3/2024	Chippewas of Rama First Nation	Document Review, Email	Fish Entrainment Study	OPG emailed the Chippewas of Rama First Nation on May 3, 2024, to share some information about an upcoming fish entrainment study at Pickering. The study is a requirement of OPG's existing Fisheries Act Authorization (FAA) with Fisheries and Oceans Canada (DFO). Request for comments by mid-June.	N/A

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5/14/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Pickering Memorandum of Understandings.	OPG shared a draft Memorandum of Understanding with Alderville, Curve Lake, Hiawatha, and the Mississaugas of Scugog Island First Nations Chief's to support engagements on proposed site activities, and to jointly explore and identify opportunities for further engagement and ongoing capacity funding.	Engagement on Site Operations
5/15/2024	Mississaugas of Scugog Island	Virtual Meeting	Pickering Regulatory Roadmap	OPG met with the Mississaugas of Scugog Island First Nation (MSIFN) to discuss MSIFN's request for OPG to develop a Regulatory Road Map and Site Activity Description to support a coordinated and holistic approach to engagement at Pickering site.	N/A
5/21/2024	Métis Nation of Ontario (MNO)	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Alderville First Nation	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Chimnissing (Beausoleil First Nation)	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Chippewas of Georgina Island First Nation	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Chippewas of Rama First Nation	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Curve Lake First Nation	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Hiawatha First Nation	Document Review, Email	Pickering Indigenous Engagement Plan - Final working version.	OPG shared a revision of the Pickering Indigenous Engagement Plan (Rev2) with Curve Lake, Hiawatha, Alderville, Rama, Georgina Island, Beausoleil, and the Métis Nations of Ontario. Based on the feedback from the Nations, Rev2 was a final working version.	N/A
5/21/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG emailed the Michi Saagiig Nations on May 21, 2024, to provide application and associated documentation for the Geotechnical Drilling Program. Communicated decision to delay borehole drilling to June 14, 2024, for better engagement.	N/A

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5/21/2024	Chimnissing (Beausoleil First Nation); Chippewas of Georgina Island First Nation; Chippewas of Rama First Nation	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG shared an update and materials to support Rama, Georgina Island, and Beausoleil's review of geotechnical drilling work occurring at the Pickering Nuclear Generating Station.	N/A
5/24/2024	Mississaugas of Scugog Island	Virtual Meeting	Pickering Indigenous Engagement Plan and Memorandum of Understandings.	OPG met Mississaugas of Scugog Island First Nation to discuss an overview of updates made in the Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understandings (MoUs).	N/A
5/27/2024	Six Nations of the Grand River	Document Review, Email	Pickering Indigenous Engagement Plan	OPG shared a working version of the Pickering Indigenous Engagement Plan (Rev2) that included feedback from Indigenous Nations identified within it. Six Nations of the Grand River responded to OPG requesting to be identified as a rights holding community. OPG acknowledged the request and suggested following up on this topic.	Recognition of rights
5/28/2024	Hiawatha First Nation; Curve Lake First Nation	Virtual Meeting	Pickering Indigenous Engagement Plan and Memorandum of Understandings. Deep Wate Intake- Geotechnical Drilling Program	OPG held a follow-up meeting with Hiawatha First nation (HFN) and Curve Lake First Nation (CLFN) to discuss Pickering engagement. The Geotechnical Program was on the agenda. HFN requested a water ceremony be conducted prior to drilling and to have another meeting to discuss the application further.	Water Ceremony before drilling
5/28/2024	Alderville First Nation	Virtual Meeting	Pickering Indigenous Engagement Plan, 6-year fuel, Storage Building 5, Pickering Component Storage Structure	OPG held a follow-up meeting to the Pickering Indigenous Engagement Plan Kick-off (April 17) with Alderville First Nation to respond to waste-specific questions.	Waste Management
5/29/2024	Hiawatha First Nation; Curve Lake First Nation	Email	Pickering Indigenous Engagement Plan and Memorandum of Understandings. Deep Wate Intake- Geotechnical Drilling Program	OPG sent a follow-up email to Hiawatha First Nation and Curve Lake First Nation to share action items from May 28th meeting. OPG requested dates for a follow-up meeting to discuss the application further.	N/A
5/30/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG sent a follow-up email to the Michi Saagiig Nations to provide additional documents to support review of the Geotechnical Program.	N/A
6/4/2024	Mississaugas of Scugog Island	Document Review, Email	Pickering Indigenous Engagement Plan	OPG shared the final working version of the Pickering Indigenous Engagement Plan (IEP) with the Mississaugas of Scugog Island First Nation (MSIFN). The correspondence included a comment disposition table with how MSIFN's comments on the IEP were included in the latest version. MSIFN shared further comments regarding consent, commercial participation, and waste management.	United Nations Declaration on the Rights of Indigenous Peoples; Waste Management

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6/6/2024	Historic Saugeen Métis (HSM)	In Person Meeting	OPG Q2 2024 Engagement Meeting	OPG met with the Historic Saugeen Mets (HSM) on June 6, 2024. Meeting topics included: Nuclear Waste, Radioactive Materials Transportation (RMT), Biodiversity Program and/or Studies, Transportation Emergency and Response Plan (TERP), Waste Minimization (nuclear waste), Isotopes, Progressive Aboriginal Relations (PAR), Pickering U5-8 Extended Operations (through 2026), and Resin Processing and Carbon 14 Metal Processing	N/A
6/10/2024	Métis Nation of Ontario (MNO)	Virtual Meeting	Pickering Refurbishment	OPG met with the Métis Nation of Ontario on June 10, 2024. Topics of discussion included: 1. The refurbishment of Pickering's units 5-8 was discussed as a means to extend the operational life of the station for an additional 30+ years, supporting Ontario's energy transition; Units 5-8 Operations to 2026 2. Decommissioning strategies were outlined, emphasizing the development of a detailed decommissioning plan 3. Detailed plans for waste management, including the proposal to load six-year-cooled fuel into dry storage containers and the construction of an additional storage building for used fuel, were discussed 5. The session also covered OPG's support for the Nuclear Waste Management Organization's (NWMO) process for a Deep Geological Repository (DGR) for Canada and provincial-wide engagement for low-level waste disposal facility hosting.	Waste Management
6/10/2024	Métis Nation of Ontario Region 8	Community Meeting	General Updates including PNGS Safe Storage and Refurbishment	OPG met with the Métis Nation of Ontario (MNO) for an update across projects. As part of the meeting, Pickering Nuclear Generating Station (PNGS) Safe Storage and Refurbishments plans and Environmental Monitoring Program (EMP) were presented and discussed, as well as discussion on a bank swallow test facility 7-year test cycle and what happens at the conclusion of the cycle. OPG committed to inform MNO 8 of plans once known.	Environmental impacts
6/11/2024	Hiawatha First Nation; Curve Lake First Nation	Email	Deep Water Intake - Geotechnical Drilling Program	OPG sent a follow-up email to Hiawatha First Nation and Curve Lake First Nation to share additional documentation to support review.	N/A
6/13/2024	Mississaugas of Scugog Island	Virtual Meeting	Pickering NGS Marine Archaeology Discussion - Deep Water Intake - Geotechnical Drilling Program	OPG virtually met with the Mississaugas of Scugog Island First Nation (MSIFN). Discussions included an update on MSIFN's review of the Marine Archaeology Report, in which they are looking to contact an archaeologist to support their review. OPG supports additional time for MSIFN and Alderville to undertake peer review of the Marine Archaeology Report for the geotechnical borehole drilling program.	Archaeology
6/14/2024	Wendat Nation	Document Review, Email	Pickering Indigenous Engagement Plan	OPG shared the final working version of the Pickering Indigenous Engagement Plan with Huron-Wendat.	N/A
6/14/2024	Mohawks of the Bay of Quinte (Tyendinaga)	Document Review, Email	Pickering Indigenous Engagement Plan	OPG shared the final working version of the Pickering Indigenous Engagement Plan with the Mohawks of the Bay of Quinte First Nation.	N/A
6/18/2024	Hiawatha First Nation	Email	Pickering General Update	OPG emailed Hiawatha First Nation to provide a draft agenda for the June 25th meeting. The draft agenda included a discussion on time sensitive Pickering topics such as the Pickering Predictive Environmental Risk Assessment (PERA) and the Nations' participation in monitoring activities	N/A
6/21/2024	Curve Lake First Nation	Email	OPG/CLFN June 15th Framework Meeting Draft Agenda	OPG presented Pickering Nuclear Generating Station (PNGS) updates, Environmental Risk Assessment (ERA) and Darlington Nuclear Generating Station (DNGS) licensing with Curve Lake First Nation (CLFN) representatives.	N/A
6/24/2024	Mississaugas of Scugog Island	Document Review Email	Monitoring Opportunities with PERA at PNGS - MSIFN	OPG shared information about upcoming monitoring opportunities associated with the Predictive Environmental Risk Assessment (PERA) at Pickering.	N/A

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6/24/2024	Alderville First Nation	Document Review Email	Monitoring Opportunities with PERA at PNGS - AFN	OPG shared information about upcoming monitoring opportunities associated with the Predictive Environmental Risk Assessment at Pickering.	N/A
6/25/2024	Hiawatha First Nation	Virtual Meeting	Pickering General Update	Hiawatha First Nation (HFN) noted that they are reviewing the proposed Memorandum of Understanding (MoU). OPG noted that they are working on the Regulatory Roadmap to support the Nations' understanding of upcoming activities. OPG invited HFN to participate in monitoring with Ecometrix for the Predictive Environmental Risk Assessment (PERA). OPG acknowledged the missing Traditional Knowledge early in the PERA and stated that they are working on future collaborative options with the Williams Treaties First Nations (WTFNs).	Traditional Knowledge
6/25/2024	Curve Lake First Nation	Virtual Meeting	Pickering General Update	OPG and Curve Lake First Nation met on June 25, 2024. OPG noted that they are working on the Regulatory Roadmap to support the Nations' understanding of upcoming activities. OPG also noted that the Memorandum of Understandings (MoUs) have been shared and would welcome any feedback or questions regarding them.	N/A
6/27/2024	Alderville First Nation	Virtual Meeting	Pickering General Update	OPG and Alderville First Nation (AFN) met on June 27, 2024. AFN noted that they would like to see a site activity description as part of the Memorandum of Understandings (MoUs) to support their understanding of the current and planned work at Pickering.	N/A
6/28/2024	Hiawatha First Nation	Email	Deep Water Intake - Geotechnical Drilling Program	OPG emailed Hiawatha First Nation sharing actions captured from the June 25th meeting. OPG provided a summary of engagement to date on the borehole drilling program and requested comments by July 5th. OPG also asked for an update on water ceremony logistics.	N/A
6/29/2024	Hiawatha First Nation	Document Review, Email	Pickering Memorandum of Understanding.	Hiawatha First Nation emailed OPG on June 29, 2024, to share comments on the Pickering Memorandum of Understanding (MoU).	N/A
7/10/2024	Hiawatha First Nation	Email	Deep Water Intake - Geotechnical Drilling Program	OPG emailed Hiawatha First Nation to ask if they had any updates on comments on the borehole drilling program and logistics for a water ceremony.	N/A
7/15/2024	Mississaugas of Scugog Island First Nation	Email	Fish Entrainment Study	Mississaugas of Scugog Island First Nation (MSIFN) emailed OPG on July 15, 2024, to submit comments on OPG's study design for the fish entrainment study.	Study design and enhancements; Indigenous worldview; reporting mechanisms; Impacts to rights.
7/15/2024	Alderville First Nation; Curve Lake First Nation; Mississaugas of Scugog Island	Virtual Meeting	Deep Water Intake - Geotechnical Drilling Program	Meeting to address outstanding comments and concerns to initiate geotechnical drilling program by end of July 2024. Commitment to fund a Stage 1 Archaeological Assessment and third party archaeologists oversee archaeological work throughout the summer.	Request for further archaeological work and oversight.
7/17/2024	Hiawatha First Nation	Phone Call	Deep Water Intake - Geotechnical Drilling Program	OPG staff called Hiawatha First Nation (HFN) consultant to provide update on borehole drilling program and advised of July 22nd start date. HFN asked if the other Michi Saagiig Nations had submitted comments and HFN learned of the meeting with Mississaugas of Scugog Island First Nation, Alderville First Nation and Curve Lake First Nation on July 16th. HFN indicated comments would be coming soon.	Perceived engagement effort on borehole drilling program.

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7/17/2024	Mississaugas of Scugog Island; Alderville First Nation; Curve Lake First Nation	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG shared next steps for the geotechnical program at Pickering with Mississaugas of Scugog Island First Nation, Curve Lake First Nation, and Alderville First Nation. The meeting included a path towards initiating borehole drilling on July 22, 2024, barring any major issues that come up as actions are worked through. Alderville responded to the email sharing concerns regarding how the studies will be discussed.	N/A
7/17/2024	Hiawatha First Nation	Email	Deep Water Intake - Geotechnical Drilling Program	OPG sent a follow-up email to Hiawatha First Nation on July 17, 2024, to summarize telephone call and next steps.	N/A
7/19/2024	Six Nations of the Grand River	Virtual Meeting	Pickering General Update	OPG and Six Nations of the Grand River (SNGR) discussed the Pickering Indigenous Engagement Plan. SNGR noted that they would like to see themselves recognized beyond a Nation who has expressed interest in Darlington Nuclear Generating Station and Pickering Nuclear Generating Station. OPG noted that they take guidance from the Crown to understand who and how to engage.	Recognition of rights
7/19/2024	Mississaugas of Scugog Island	Document Review Email	Actions from May 24th Pickering Meeting	OPG shared an update and documents with the Mississaugas of Scugog Island First Nation regarding the May 24th Pickering meeting.	N/A
7/23/2024	Hiawatha First Nation	Virtual Meeting	Fish Entrainment Study	Hiawatha First Nation shared a presentation that included comments, suggestions, questions, and feedback on OPG's Fish Entrainment Study.	Environmental impacts
7/24/2024	Chippewas of Rama First Nation	Document Review, Email	Pickering Indigenous Engagement Plan	Rama First Nation shared comments and feedback regarding the Pickering Indigenous Engagement Plan on May 30, in which OPG shared responses to how the comments would be incorporated into the next revision. Rama confirmed that they would circulate OPG's response with Chief and Council.	N/A
7/26/2024	Hiawatha First Nation	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake team advised Hiawatha First Nation of the start and end dates of planned onshore and offshore drilling.	N/A
7/26/2024	Hiawatha First Nation	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake team shared the Pickering Nuclear Generating Station site access and safety protocol with Hiawatha First Nation.	N/A
7/26/2024	Mississaugas of Scugog Island	Email	Fish Entrainment Study	Mississaugas of Scugog Island First Nation (MSIFN) emailed OPG on July 26, 2024, to submit comments on OPG's study design for the fish entrainment study.	Study design and enhancements; Indigenous worldview; reporting mechanisms; Impacts to rights.
7/26/2024	Hiawatha First Nation	Document Review, Email	PNGS DWI: Onshore and offshore drilling start and end dates	OPG's Deep Water Intake (DWI) team advised Hiawatha First Nation of the start and end dates of planned onshore and offshore drilling.	N/A
7/26/2024	Hiawatha First Nation	Document Review Email	PNGS DWI Action 7.0 Provide a Draft Communication Protocol	OPG's Deep Water Intake (DWI) team shared the Pickering Nuclear Generating Station (PNGS) site access and safety protocol with Hiawatha First Nation.	N/A
7/29/2024	Chippewas of Rama First Nation	In Person Meeting	Pickering General Update	OPG provided an overview and update of the ongoing and planned activities at Pickering to Rama First Nation's Council and consultation staff.	Lack of capacity.

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7/29/2024	Chippewas of Rama First Nation	Community Meeting	Pickering Refurbishment, Decommissioning, and Y90 isotopes	OPG met with the Chippewas of Rama First Nation on July 29, 2024. Topics of discussion included: 1. Yttrium-90 (Y-90) medical isotope overview. 1.a. Reasons for demand of Y-90 2. Review of Pickering Refurbishment/Decommissioning overview	N/A
8/1/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	OPG shared a revised Pickering Memorandum of Understanding (MoU), Regulatory roadmap, and short-term permit list with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and the Mississaugas of Scugog Island First Nation.	N/A
8/7/2024	Curve Lake First Nation; Hiawatha First Nation; Scugog Island First Nation	In Person Meeting	NSS Waste Table Kickoff Meeting	OPG met with Michi Saagiig Nations to discuss waste communications and OPG processes which may tie to Treaty rights. Darlington New Nuclear Project (DNNP) focused discussion which had overarching waste management and communication strategy discussion which related across nuclear projects and led to Waste Table forum. The First Waste Table was two parts: one part presentation followed by a tour of Darlington Waste Management Facility (DWMF) tour.	Waste Management Treaty rights
8/7/2024	Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Site Tour	OPG Waste Table with WTFN - DWMF Tour	OPG met with Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation for OPG's Waste Table with Williams Treaties First Nations (WTFNs). The second part of this Waste Table discussed a tour at Darlington Waste Management Facility (DWMF).	N/A
8/12/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake (DWI) team emailed the Michi Saagiig Nations with an update of the borehole drilling for the week of July 29-Aug 2 with an invitation to attend Borehole screening on August 14, 2024. Updates included: -Offshore boreholes (second -PKI 209 started Saturday July 27, 2024) - Vertical onshore boreholes PKI 102 and 201 drilling in progress as of July 29, 2024. - Sediment core screening July 29, 2024 for offshore boreholes PKI 102 and PKI 209 did not find any archaeological material.	N/A
8/12/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake (DWI) team sent an update of the drilling on August 8, 2024, with Alderville, Curve Lake, Hiawatha, and Scugog Island First Nation	N/A
8/16/2024	Alderville First Nation	Document Review, Email	Fish Entrainment Study	OPG provided comments and responses to Alderville First Nation's comments on the Fish Entrainment Study design.	N/A

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8/21/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake (DWI) team shared an update to the Michi Saagiig Nations regarding the drilling progress for the Geotechnical Drilling Program. Updates included: - Additional weather delays (total weather delay of 12 days to date). - An Archeological visit was completed August 14, 2024, for two (2) onshore boreholes. No findings were encountered in screened soil. - Based on analysis of the screened material of onshore boreholes, it is not deemed necessary to put a vertical borehole adjacent to the third inclined borehole location.	N/A
8/21/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake (DWI) team shared with Michi Saagiig Nations that due to weather delays, the Pickering Nuclear Generating Station (PNGS) Deep Water Intake drilling campaign will be mobilizing a third barge and drill rig to recover the offshore geotechnical schedule.	N/A
8/22/2024	Alderville First Nation Curve Lake First Nation Hiawatha First Nation Mississaugas of Scugog Island	In Person Meeting, Virtual Meeting	DNNP - August 2024 Monthly Meeting with the Michi Saagiig First Nations (WTFN)	OPG met with Michi Saagiig Nations to discuss Darlington New Nuclear Project (DNNP), CCW and Shoreline Protection, Environmental Updates and Federal/Provincial Permitting which were later referenced by the Nations regarding Pickering Nuclear Generating Station (PNGS) shoreline and lakebed activities surrounding monitoring and Deep-Water Intake (DWI) project.	Shoreline Protection Lakebed Jurisdiction
8/23/2024	Mississaugas of Scugog Island	Email	Draft Agenda for MSIFN/OPG Framework Meeting	OPG emailed Mississaugas of Scugog Island (MSIFN) on August 23, 2024, to propose agenda topics for an upcoming framework meeting. Proposed Pickering-related topics included: - Fish Entrainment Study - Pickering Catch All	N/A
8/23/2024	Hiawatha First Nation	Email	Draft Agenda for OPG/HFN Framework Meeting	OPG emailed Hiawatha First Nation (HFN) on August 23, 2024, to propose agenda topics for an upcoming framework meeting. Proposed Pickering-related topics included: - Geotechnical Program for Deep Water Intake (DWI) - Fish Entrainment Study	N/A
8/23/2024	Curve Lake First Nation	Email	Draft OPG/CLFN Framework Meeting Agenda	OPG emailed Curve Lake First Nation (CLFN) on August 23, 2024, to propose agenda topics for an upcoming framework meeting. Proposed Pickering-related topics included: - Pickering Catch All	N/A
8/26/2024	Hiawatha First Nation	Document Review, Email	Fish Entrainment Study	On August 7, Hiawatha shared the Fish Entrainment Study presentation that was presented during the July 25th Framework Meeting. OPG shared responses to Hiawatha's presentation on August 26.	N/A
8/27/2024	Hiawatha First Nation	Virtual Meeting	Fish Entrainment Study and Deep-Water Intake	OPG shared a presentation on the geotechnical investigation program for deep water intake and responses to Hiawatha's comments on the Fish Entrainment Study.	N/A
8/27/2024	Curve Lake First Nation	Virtual Meeting	Pickering General Update	OPG and Curve Lake First Nation (CLFN) had a meeting on August 27, 2024. CLFN noted that they are reviewing the proposed Memorandum of Understanding (MoU) and will share suggested revisions soon. OPG shared opportunities for Curve Lake to tour the Pickering station, in which Curve Lake noted that it would be helpful to see the intake and pump houses.	N/A
8/29/2024	Mississaugas of Scugog Island	Virtual Meeting	MSIFN and OPG Framework Meetings	OPG and the Mississaugas of Scugog Island First Nation had a meeting on August 29, 2024. Pickering-related topics of discussion included:	N/A

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				- Fish Entrainment Study Design - Pickering Catch All	
8/29/2024	Chippewas of Rama First Nation	Document Review, Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	On August 9, 2024, OPG shared a draft Pickering Memorandum of Understanding (MoU) with Rama First Nation. OPG followed up on August 29th requesting a response.	N/A
8/29/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake (DWI) team emailed Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Scugog Island First Nation an update on drilling for the week of August 19th. OPG noted that the next archaeological visit is planned for September 4th and the third barge will arrive on August 30th.	N/A
9/10/2024	Mississaugas of Scugog Island	Email	Fish Entrainment Study	Mississaugas of Scugog Island First Nation shared comments regarding the Pickering Fish Entrainment Study with OPG on July 26, 2024. OPG shared responses on September 10, 2024.	N/A
9/13/2024	Mississaugas of Scugog Island	Email	Draft Pickering MoU	Mississaugas of Scugog Island First Nation emailed OPG on September 13, 2024, to provide comments on the Draft Pickering Memorandum of Understanding (MoU).	N/A
9/17/2024	Hiawatha First Nation	Document Review, Email	Periodic Safety Review	OPG shared the Periodic Safety Review (PSR) 3 document for Pickering Nuclear Generating Station (PNGS) with Hiawatha First Nation for review.	N/A
9/18/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Pickering Engagement Table	On September 5, 2024, OPG shared a poll with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation (HFN), and Mississaugas of Scugog Island First Nation to identify the best date for the Pickering Table Kick Off. On September 16, HFN notified OPG that 4 Directions will no longer be representing HFN. On September 18, OPG shared the poll results and identified October 15 as the most desired date for the Pickering Table Kick Off.	N/A
9/23/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Deep Water Intake - Geotechnical Drilling Program	OPG's Deep Water Intake (DWI) team emailed Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Scugog Island First Nation an update regarding week ending September 20th work. OPG advised the Nations that the next archaeological sediment screening is planned for September 22nd.	N/A
9/24/2024	Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing); Chippewas of Saugeen First Nation (also known as Saugeen);	Document Review, Email	Pickering Indigenous Engagement Plan	OPG emailed the Chippewas of Nawash Unceded First Nation, Chippewas of Saugeen First Nation, and Saugeen Ojibway Nation (SON) to share the Darlington Power Reactor Operating Licence (PROL) Renewal Indigenous Engagement Plan (IEP) and Pickering IEP. OPG requested review/input by October 15, 2024 (no response by that time).	N/A

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	Saugeen Ojibway Nation (SON)				
9/24/2024	Curve Lake First Nation	Virtual Meeting	Pickering General Update	OPG and Curve Lake First Nation (CLFN) discussed the Pickering Fish Entrainment Study and design. OPG noted that the study has been delayed. CLFN noted that they would review the study design and get back to OPG with comments and feedback.	N/A
10/1/2024	Chippewas of Rama First Nation	Document Review, Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	OPG shared an update on the Pickering Memorandum of Understanding (MoU) and Darlington Indigenous Engagement Plan (IEP)/Power Reactor Operating Licence (PROL) Renewal Application with Rama First Nation	N/A
10/2/2024	Hiawatha First Nation	In Person Meeting	Pickering General Update	OPG attended an in-person meeting with Hiawatha First Nation's Chief and consultation staff. OPG shared an overview of ongoing activities, including Pickering, to get the staff at Hiawatha up to speed on ongoing initiatives.	N/A
10/10/2024	Mississaugas of Scugog Island	Virtual Meeting	MSIFN and OPG Framework Meetings	OPG and Mississaugas of Scugog Island First Nation (MSIFN) had a framework meeting, where they discussed the following: Pickering Nuclear Generating Station, Capacity Agreement, Darlington Nuclear Generating Station licence renewal application and Environmental Updates	N/A
10/11/2024	Curve Lake First Nation	Email	Pickering Indigenous Engagement Plan (IEP)	Curve Lake First Nation emailed OPG on October 11, 2024, to share comments on OPG's Darlington and Pickering Indigenous Engagement Plans.	N/A
10/15/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Virtual Meeting	Pickering Engagement Table	OPG's first Pickering Engagement Table with the Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and the Mississaugas of Scugog Island First Nation. Topics of discussion included: 1) Opening remarks provided by OPG and Chief Carr 2) Discussion of table conduct and meetings guidance 3) Draft documents (regulatory roadmap, list of permits, list of studies/reports) 4) Program updates provided by Refurbishment, Nuclear Sustainability Services (NSS)/Decommissioning, Environment	N/A
10/18/2024	Six Nations of the Grand River	Virtual Meeting	Pickering General Update	OPG provided an overview and update of ongoing and planned activities at Pickering. Six Nations of the Grand River (SNGR) were interested in learning about the Deep-Water Intake (DWI) program.	N/A
10/22/2024	Hiawatha First Nation	Virtual Meeting	Pickering General Update	OPG and Hiawatha First Nation (HFN) spent time during the Framework meeting to debrief on the October 15th Pickering Engagement Table. HFN noted that it would be helpful to see a routine schedule of beginning to end plans at Pickering. HFN also noted that capacity has been an issue for them.	Lack of capacity.
10/22/2024	Curve Lake First Nation	Virtual Meeting	Pickering General Update	OPG and Curve Lake First Nation (CLFN) spent time during the Framework meeting to debrief on the October 15th Pickering Engagement Table. CLFN noted that the Terms of Reference and meeting guidance document needs to list the values, principles, and goals for the Table to succeed.	Indigenous Worldview

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10/23/2024	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Nuclear Sustainability Services (NSS): Detailed Decommissioning Plan Pickering NGS	OPG emailed the Michi Saagiig Nations on October 23, 2024, to discuss decommissioning at Pickering Nuclear Generating Station. OPG shared a Briefing Note to the Michi-Saagiig Williams Treaty First Nations.	Decommissioning
10/24/2024	Alderville First Nation	In Person Meeting	Pickering General Update	OPG and Alderville First Nation (AFN) spent time during the Framework meeting to debrief on the October 15th Pickering Engagement Table. AFN noted that there are concerns around the 2006 Environmental Assessment that was conducted, due to the length of time and things changing.	Environmental impacts.
10/28/2024	Alderville First Nation	Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	Alderville First Nation responded to OPG advising that they would request a copy of Mississaugas of Scugog Island First Nation's revisions included in their version of the Pickering Memorandum of Understanding (MoU).	N/A
10/28/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Virtual Meeting	Waste Table Meeting	<p>OPG met with the Michi Saagiig Nations on October 28, 2024, for a Waste Table Meeting.</p> <p>Topics included:</p> <p>Waste Categorization and Pathways, Nuclear waste updates, PIE table debrief from October 15, Terms of Reference, Regulatory Road Map.</p> <p>1. OPG heard that the information being shared needed to be better streamlined to ensure it is accessible and useful for the Nations. This includes updates on the regulatory map, project updates from various facilities.</p> <p>2. It was discussed that there is value in both discussing waste at the project and site level as well as in the waste table.</p> <p>3. The Nuclear Waste Table with the Michi-Saagiig moving forward will focus on these themes:</p> <p>a. Education and Community Engagement</p> <p>b. Specific matters that are not site or project specific in nature</p> <p>c. Holistic perspective for similarities between waste at both sites in territory (for example, interim storage buildings).</p> <p>d. Federal Waste Strategy and Policy including long term disposal</p> <p>4. Mississaugas of Scugog Island First Nation (MSIFN)/Minogi and Curve Lake First Nation (CLFN) requested the possibility of integrating the “Generation for Generations” (G4G) initiative into the waste discussion table, highlighting the importance of educating the community about the nuclear energy lifecycle and power generation including waste. The G4G educational program includes seven modules covering various aspects of nuclear energy and waste, designed to facilitate conversations with the nations. It was also mentioned that including the progress of the initiative in the waste discussion table will enhance the educational component and ensure comprehensive communication of nuclear waste information.</p> <p>5. Natural Resources Canada (NRCan) and Canadian Nuclear Safety Commission (CNSC) - MSIFN/Minogi discussed the need to understand NRCan and CNSC policies, with the importance of understand the Federal policy, strategy and regulations.</p> <p>6. MSIFN/Minogi emphasized the importance of Nuclear Waste Management Organization’s (NWMO’s) engagement with all Nations, including Williams Treaty First Nations (WTFNs).</p> <p>7. Terms of Reference (TOR) – OPG requested for feedback from the Nations on what they would like to see included in the TOR, with a focus on strategic and overarching initiatives, ensuring that the waste table addresses high-level policy and engagement topics.</p> <p>8. Meeting frequency – The Nations agreed to meet every 8 weeks</p> <p>Other Business:</p>	N/A

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				9. As referenced at the meeting and for Information: Canada's Policy for Radioactive Waste Management and Decommissioning	
11/1/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	PROL and WFOL Renewal	OPG shared an Intent to Renew memo indicating consolidation of the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) and Pickering Waste Facility Operating Licence (WFOL). OPG noted that if the Nations are interested in meeting to discuss further, to contact them for a meeting.	N/A
11/8/2024	Alderville First Nation	Document Review, Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	Alderville First Nation emailed OPG on November 8, 2024, to share a signed version of the Pickering Memorandum of Understanding (MoU) with OPG.	N/A
11/12/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Decommissioning	OPG emailed the Michi Saagiig Nations to share the Detailed Decommissioning Plan (DDP) documents with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation.	Decommissioning
11/14/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Pickering Engagement Table	OPG emailed the Michi Saagiig Nations to share the draft agenda, presentation, and draft Pickering Table meeting conduct document with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation for the upcoming November 20 Pickering Table meeting.	N/A
11/14/2024	Mississaugas of Scugog Island	Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	Mississaugas of Scugog Island First Nation (MSIFN) emailed OPG on November 14, 2024, to share a signed Pickering Memorandum of Understanding (MoU) following proposed edits by MSIFN and OPG. OPG shared a revised version based on MSIFN's feedback in July 2024.	N/A
11/19/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Pickering Engagement Table	OPG emailed the Michi Saagiig Nations on November 19, 2024, to share an update to the actions with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation regarding the October 15th Pickering Table.	N/A

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11/19/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Refurbishment Predictive Environmental Risk Assessment (PERA)	On November 18, 2024, OPG shared the Predictive Environmental Risk Assessment (PERA) field sheets with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation (MSIFN). MSIFN noted that a lake sturgeon was found during the deepwater fish community sampling and it was not shared with the Nations. This topic was discussed at the November 20, 2024, Pickering Table.	Environmental impacts; Cultural significant species
11/20/2024	Curve Lake First Nation	Document Review, Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	Curve Lake First Nation (CLFN) shared a signed Pickering Memorandum of Understanding (MoU) with OPG following proposed edits by CLFN and OPG.	N/A
11/20/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Virtual Meeting	Pickering Engagement Table	OPG's second Pickering Engagement Table with the Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and the Mississaugas of Scugog Island First Nation. Topics of discussion included: 1) Predictive Environmental Risk Assessment (PERA) Lake Sturgeon observation 2) Table's Terms of Reference (ToR) 3) Deep Water Intake (DWI) & Dry Storage Module Relocation 4) Waste Strategy 5) Detailed Decommissioning Plan (DDP)	N/A
11/21/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Community Meeting	Pickering NGS Decommissioning	OPG and Mississaugas of Scugog Island First Nation (MSIFN) had a virtual meeting, where Pickering matters were discussed. MSIFN expressed concern regarding the timelines for Pickering Nuclear Generating Station (PNGS) Decommissioning, and stated that the Nations require more time to review documents to provide appropriate comments and feedback. OPG continued to have high-level discussions to support the Nations, and OPG stated that they will gather more information on the decommissioning plan for review and continue to propose solutions.	Timely engagement; Waste Management
11/22/2024	Chimnissing (Beausoleil First Nation); Chippewas of Georgina Island First Nation; Chippewas of Rama First Nation	Email	Pickering NGS Relicensing	OPG emailed Chimnissing (Beausoleil First Nation), Chippewas of Rama First Nation, and Chippewas of Georgina Island First Nation to share OPG's intent to apply for early renewal of consolidation of the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) and Pickering Waste Facility Operating Licence (WFOL). OPG noted that if the Nations are interested in meeting to discuss further, to contact them for a meeting.	N/A
11/26/2024	Curve Lake First Nation	In Person Meeting	Community visit.	OPG and Curve Lake First Nation had an in-person meeting on November 26, 2024. Topics of discussion included: 1) Year in review 2) Relationship building 3) Bridging world views 4) Path to action	Environment; Cultural significant species; Impact to Rights; Economic Opportunities
11/26/2024	Hiawatha First Nation	Document Review, Email	Pickering Indigenous Engagement Plan and	OPG shared the latest version of the Pickering Memorandum of Understanding with Hiawatha First Nation for review.	N/A

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			Memorandum of Understanding		
11/26/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA)	OPG shared a copy of the Predictive Environmental Risk Assessment (PERA) for the Pickering Component Storage Structure (PCSS) that has been submitted to the Canadian Nuclear Safety Commission (CNSC) with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation. OPG noted that feedback can be reflected in the PCSS PERA if received before the written hearing in May 2025.	Environmental Impacts
11/27/2024	Chimnissing (Beausoleil First Nation), Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation	Email	Detailed Decommissioning Plan (DDP)	OPG shared the Detailed Decommissioning Plan (DDP) briefing note to Chippewas of Rama, Georgina Island and Beausoleil (Chimnissing) First Nations as requested by Michi Saagiig Nations at the November 20, 2024, Pickering Table meeting.	Decommissioning
11/28/2024	Alderville First Nation	Virtual Meeting	Refurbishment Predictive Environmental Risk Assessment (PERA)	OPG and Alderville First Nation (AFN) spent time discussing the November 20th Pickering Engagement Table. AFN noted that they would like to learn and understand more about the reporting on the Lake Sturgeon. OPG noted that they are working on organizing a meeting with the 4 communities, OPG staff, and Ecometrix to further discuss.	Environmental impacts
11/29/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Document Review, Email	Pickering Indigenous Engagement Plan and Memorandum of Understanding	OPG shared the Pickering Site Activity Description, as an appendix item to the Pickering Memorandum of Understanding (MoU), to Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation.	N/A
11/29/2024	Alderville First Nation; Mississaugas of Scugog Island	Email	Deep Water Intake - Geotechnical Drilling Program	OPG requested the Mississaugas of Scugog Island First Nation share an invoice for the site-wide Pickering Stage 1 Archaeology Assessment, to allow TMHC (vendor) to begin the assessment.	N/A
12/5/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Pickering Engagement Table	OPG shared actions from the November 20th Pickering Table, which included responses to a written account regarding the Lake Sturgeon discovery, with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation.	Environmental Impacts; Cultural significant species
12/6/2024	Mississaugas of Scugog Island	Email	Deep Water Intake - Geotechnical Drilling Program	OPG requested an invoice from the Mississaugas of Scugog Island First Nation regarding the Stage 1 Archaeology Assessment at Pickering for the work to begin.	N/A

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12/6/2024	Alderville First Nation Curve Lake First Nation Hiawatha First Nation Mississaugas of Scugog Island	Email	Detailed Decommissioning Plan PNGS Draft Documents to CNSC Email correspondence sent to Michi Saagiig Nations	OPG sent a follow-up email to the Michi Saagiig Nations to provide updated wording in the Detailed Decommissioning Plan (DDP) draft documents, as well as provide an updated timeline for submission of the DDP to the Michi Saagiig Nations of the Williams Treaty First Nations (WTFNs).	N/A
12/9/2024	Alderville First Nation Curve Lake First Nation Hiawatha First Nation Mississaugas of Scugog Island	Virtual Meeting	Refurbishment Predictive Environmental Risk Assessment (PERA)	OPG held a meeting with Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation, as well as representatives from Ecometrix, who were on site during the finding of the Lake Sturgeon. The three parties discussed how the Lake Sturgeon was reported to regulators, and what OPG can do going forward to report findings to the Nations.	Environmental impacts; Cultural significant species
12/13/2024	Chimnissing (Beausoleil First Nation); Chippewas of Georgina Island First Nation; Chippewas of Rama First Nation	Document Review, Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA)	OPG shared a copy of the Predictive Environmental Risk Assessment (PERA) for the Pickering Component Storage Structure (PCSS) that has been submitted to the Canadian Nuclear Safety Commission (CNSC) on November 26, 2024 with Beausoleil, Georgina Island, and Rama First Nation.	N/A
12/16/2024	Mississaugas of Scugog Island First Nation	Email	Invoice for Timmins Martelle Heritage Consultants (TMHC) Stage 1 Archaeological Assessment at PNGS	On December 2, 2024, OPG contacted Mississaugas of Scugog Island First Nation (MSIFN) requesting an invoice for the Stage 1 Archaeological Assessment at PNGS in an attempt to begin TMHC's work as soon as possible. OPG noted that while the Memorandum of Understandings (MoUs) were being uploaded to Ariba, MSIFN could send OPG a cheque requisition to achieve payment sooner. On December 16, 2024, MSIFN responded and noted that they have internal procedures and would prefer to stay within the Ariba system to maintain consistency.	Archaeology
12/19/2024	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Pickering General Update	OPG shared a year-end email to Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation an update on the Pickering Memorandum of Understandings (MoUs), Actions from the Pickering Table, and upcoming and ongoing permit priorities at Pickering Nuclear Generating Station (PNGS).	N/A
12/20/2024	Alderville First Nation	Email	Pickering Memorandum of Understanding (MoU)	OPG contacted Alderville First Nation (AFN) advising that the Pickering Memorandum of Understanding (MoU) has been uploaded into Ariba and the details were shared with AFN's finance department.	Invoicing
1/9/2025	Mississaugas of Scugog Island First Nation	Virtual Meeting	Connect on Invoicing for Stage 1 Archaeology	OPG and the Mississaugas of Scugog Island First Nation had a meeting on January 9, 2025, to discuss Pickering Nuclear Generating Station (PNGS) Units 5-8 Refurbishment, PNGS, and Archaeology.	N/A
1/10/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island	Email	Pickering Refurbishment	OPG emailed Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation to request that a representative share feedback on interactions with OPG with respect to the Pickering Refurbishment Project. OPG noted that if possible, the Refurbishment Review Board (RRB) would like to meet for an hour on January 21st, 2025, between 3pm - 4pm. OPG followed up with additional information to support background on the purpose of the RRB.	N/A

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1/13/2025	Alderville First Nation	Email	Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understanding (MoU)	OPG emailed Alderville First Nation (AFN) updates on the Pickering Memorandum of Understanding and Indigenous Engagement Plan. OPG noted that if AFN has any questions regarding the material, to follow up.	N/A
1/13/2025	Mississaugas of Scugog Island First Nation	Email	Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understanding (MoU)	OPG emailed the Mississaugas of Scugog Island First Nation (MSIFN) updates on the Pickering Memorandum of Understanding and Indigenous Engagement Plan. OPG noted that if MSIFN has any questions regarding the material, to follow up.	N/A
1/13/2025	Curve Lake First Nation	Email	Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understanding (MoU)	OPG emailed Curve Lake First Nation (CLFN) updates on the Pickering Memorandum of Understanding and Indigenous Engagement Plan. OPG noted that if CLFN has any questions regarding the material, to follow up.	N/A
1/13/2025	Hiawatha First Nation	Email	Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understanding (MoU)	OPG emailed Hiawatha First Nation (HFN) updates on the Pickering Memorandum of Understanding and Indigenous Engagement Plan. OPG noted that if HFN has any questions regarding the material, to follow up.	N/A
1/13/2025	Chippewas of Rama First Nation	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed Rama First Nation final working versions of the Darlington and Pickering IEPs. OPG noted the dates for the DNGS PROL Renewal Application 2-part hearing and OPG's intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A
1/13/2025	Chimnissing (Beausoleil First Nation)	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed Beausoleil First Nation final working versions of the Darlington and Pickering IEPs. OPG noted the dates for the DNGS PROL Renewal Application 2-part hearing and OPG's intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A
1/13/2025	Chippewas of Georgina Island First Nation	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed Georgina Island First Nation final working versions of the Darlington and Pickering IEPs. OPG noted the dates for the DNGS PROL Renewal Application 2-part hearing and OPG's intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A
1/13/2025	Wendat Nation	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed Wendat Nation final working versions of the Darlington and Pickering IEPs. OPG also noted its intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A
1/13/2025	Mohawks of the Bay of Quinte (Tyendinaga)	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed Mohawks of the Bay of Quinte First Nation final working versions of the Darlington and Pickering IEPs. OPG also noted its intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A

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1/13/2025	Métis Nation of Ontario (MNO)	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed Métis Nation of Ontario Region 8 final working versions of the Darlington and Pickering IEPs. OPG also noted its intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A
1/13/2025	Six Nations of the Grand River	Email	Darlington and Pickering Indigenous Engagement Plan (IEP); DNGS Power Reactor Operating Licence (PROL); DNGS Waste Facility Operating Licence (WFOL)	OPG emailed the Six Nations of the Grand River First Nation final working versions of the Darlington and Pickering IEPs. OPG also noted its intent to combine the Pickering PROL and WFOL in Q2 2025.	N/A
1/13/2025	Alderville First Nation	Email, Phone Call	Pickering Memorandum of Understanding	OPG called and emailed Alderville First Nation regarding invoices under the Pickering Memorandum of Understanding. Details regarding invoices and budgets were included in the email.	Invoicing
1/13/2025	Mississaugas of Scugog Island	Email	Pickering Memorandum of Understanding	OPG emailed the Mississaugas of Scugog Island First Nation (MSIFN) the Amendment 1 of the Pickering Nuclear Generating Station Indigenous Engagement Memorandum of Understanding. MSIFN responded shortly after confirming receipt of the email.	N/A
1/13/2025	Alderville First Nation	Email	PNGS MoU Extension & IEP Update	OPG emailed Michi Saagiig First Nations with an Updated Pickering Indigenous Engagement Plan (IEP) to act as a working version for Pickering activities, as well as a draft Memorandum of Understanding (MoU) Amendment to bridge activities to implementation of a Capacity Funding Agreement (CFA).	N/A
1/13/2025	Curve Lake First Nation	Email	PNGS MoU Extension & IEP Update	OPG emailed Michi Saagiig First Nations with an Updated Pickering Indigenous Engagement Plan (IEP) to act as a working version for Pickering activities, as well as a draft Memorandum of Understanding (MoU) Amendment to bridge activities to implementation of a Capacity Funding Agreement (CFA).	N/A
1/15/2025	Mississaugas of Scugog Island	Email	Pickering Archaeology	The Mississaugas of Scugog Island First Nation (MSIFN) emailed OPG an update on Timmins Martelle Heritage Consultants' (TMHC's) Stage 1 archaeological assessment at the Pickering site. MSIFN shared the contact for TMHC, noted the start week could be the week of January 20 (pending no snow), and a draft report should be ready in February.	Archaeology
1/16/2025	Hiawatha First Nation	Email	Pickering Memorandum of Understanding (MoU)	OPG and Hiawatha First Nation (HFN) corresponded back and forth with updates regarding the proposed Pickering Memorandum of Understanding (MoU). HFN sent a signed copy on January 15, 2025, and OPG shared a signed copy on January 16, 2025.	Invoicing
1/16/2025	Alderville First Nation	Email	OPG/AFN Framework Meeting Agenda	OPG emailed Alderville First Nation (AFN) to confirm a draft agenda - AFN responded to confirm Pickering Table preparation for Feb 6, continued Darlington Nuclear Generating Station (DNGS)/Power Reactor Operating Licence (PROL) Renewal engagement, Goals and objectives for the Environment Table, Category C Spill at DNGS.	N/A
1/17/2025	Curve Lake First Nation	Virtual Meeting	Pickering General Update	OPG and Curve Lake First Nation (CLFN) had a 30-minute meeting to discuss topics of discussion for the Framework meeting from January 28, 2025. Proposed agenda items included the Category C spill at Darlington Nuclear Generating Station (DNGS), DNGS Power Reactor Operating Licence (PROL) Renewal Application, Indigenous Engagement Plan, isotopes, brainstorming objectives of Environment Table, and check-in before February 6, 2025 Pickering Table.	N/A

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1/17/2025	Six Nations of the Grand River	Virtual Meeting	OPG/SNGR Framework Meeting	OPG met with Six Nations of the Grand River (SNGR) and provided updates on Pickering Nuclear Generating Station (NGS) noting the combined Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) licence renewal application to the Canadian Nuclear Safety Commission (CNSC). SNGR noted interest in attending Western Waste Management Facility (WWMF) and OPG indicated support to coordinate. Additional topics included New Nuclear, Reconciliation Action Plan (RAP), Darlington NGS licence renewal application.	N/A
1/17/2025	Hiawatha First Nation	Email	Pickering Memorandum of Understanding (MoU)	OPG emailed Hiawatha First Nation (HFN) advising that OPG is ready to accept invoicing for Pickering Memorandum of Understanding (MoU) matters. OPG offered to support as needed when HFN intends to upload invoices to Ariba.	Invoicing
1/20/2025	Mississaugas of Scugog Island	Email	Pickering Memorandum of Understanding (MoU)	On January 13, 2025, OPG reached out to the Mississaugas of Scugog Island First Nation (MSIFN) to provide an update on capacity invoicing, an extension to the current MoU, and sharing a new release of the Pickering Indigenous Engagement Plan (IEP). MSIFN responded and asked if OPG had an estimated timeline for finalizing a more formal capacity agreement, which OPG responded suggesting sometime in late Q1 - early Q2.	Invoicing, Extension of MoU, IEP
1/20/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering Refurbishment	OPG emailed the Michi Saagiig First Nations advising of an opportunity for them to share their perspectives on engagement with the Pickering Refurbishment Review Board (PRRB). OPG noted that this would be a casual chat with two board members, one being Reg Niganobe. The purpose of the Board is to assess the project's performance, risks, opportunities, identifying blind spots, and recommendations to improve overall project performance. Alderville, Curve Lake, and Scugog Island expressed interest in attending - Hiawatha is unable to attend due to a conflict.	N/A
1/21/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering Refurbishment	OPG emailed the Michi Saagiig First Nations (Alderville, Curve Lake, Hiawatha, and Scugog Island) sharing context related to the Pickering Refurbishment Review Board (PRRB). The PRRB welcomed an Indigenous representative to review the technical aspects of OPG's Indigenous Relations commitments and obligations.	N/A
1/23/2025	Alderville First Nation	Email	Pickering Memorandum of Understanding (MoU)	Alderville First Nation shared an amended Pickering MoU in response to an email January 22, 2025 that was signed by Chief Simpson.	N/A
1/23/2025	Alderville First Nation	Virtual Meeting	AFN/OPG Framework Meeting	<p>OPG and Alderville First Nation (AFN) had a framework meeting. Topics of discussion included:</p> <ul style="list-style-type: none">1) Goals and Objectives of the Environment Table2) Preparations for Upcoming Pickering Table3) Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) Renewal Application4) Category C Spill <p>AFN stated that they would like to be more engaged on Pickering matters, specifically for discussions regarding the Archeological Assessment and soil movement for the Deep Water Intake. OPG stated that they will compile a list of permits, studies, and reports for the Nation's review.</p>	N/A

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1/27/2025	Curve Lake First Nation	Email	OPG/CLFN Framework Meeting Agenda	<p>OPG emailed Curve Lake First Nation (CLFN) on January 27, 2025, to share the agenda for the upcoming Framework meeting, scheduled for January 28, 2025.</p> <p>Proposed agenda topics include:</p> <ul style="list-style-type: none">- Category C Spill at the Darlington Nuclear Generating Station (NGS)- Goals & Objectives of Environment Table- Preparations for Upcoming Pickering Table- Darlington NGS Power Reactor Operating Licence (PROL) Renewal Application- Plan for Ongoing and Future Initiatives	N/A
1/28/2025	Curve Lake First Nation	In Person Meeting Virtual Meeting	OPG/CLFN Framework Meeting	<p>OPG and Curve Lake First Nation (CLFN) had a framework meeting. Topics of discussion included:</p> <ol style="list-style-type: none">1) Category C Spill at Darlington Nuclear Generating Station (NGS)2) Brainstorming the Environment Table3) Preparation for Upcoming Pickering Table4) Planning the Indigenous Knowledge Study <p>CLFN expressed interest in learning about the Pickering fish entrainment study. OPG provided CLFN with the requested details and provided a brief timeline.</p>	N/A
1/29/2025	Alderville First Nation, Curve Lake First Nation, Mississaugas of Scugog Island	Virtual Meeting	NRCAN Nuclear Waste Policy Overview, Darlington New Nuclear Project (DNNP) Used Fuel Onsite Storage Options	Waste Table Meeting: OPG facilitated a presentation from Natural Resources Canada (NRCAN) staff to Alderville First Nation (AFN), Curve Lake First Nation (CLFN) and Mississaugas of Scugog Island First Nation (MSIFN). Hiawatha First Nation (HFN) was not able to attend. Presentation from NRCAN staff was a request from the Michi-Saagiig of the Williams Treaties First Nations.	N/A
1/29/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering Table Agenda	OPG emailed Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation and Mississaugas of Scugog Island First Nation information related to the upcoming Pickering Table, scheduled for February 6, 2025. The email contained information on potential Pickering tours, extending the Pickering Table series to three hours, and upcoming information that will be shared.	N/A
2/1/2025	Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island, Alderville First Nation	Email	Nuclear Sustainability Services (NSS): MSIFN/OPG Arcadis Phase 1 Technical Review of the Pickering DDP	Mississaugas of Scugog Island First Nation (MSIFN) provided the Arcadis Phase 1 Agreement Scope of Work (SoW) for reviewing OPGs Detailed Decommissioning Plan (DDP) for Pickering Nuclear Generating Station (PNGS).	

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2/4/2025	Hiawatha First Nation	Virtual Meeting	OPG/HFN Framework Meeting	<p>OPG and Hiawatha First Nation (HFN) had a Framework meeting on February 4th. Topics of discussion included:</p> <ul style="list-style-type: none">1) Darlington Nuclear Generating Station (DNKS) Power Reactor Operating Licence (PROL) Renewal Application2) Preparations for upcoming Pickering Table3) Invoicing Framework Agreements4) Approach to Environment Table5) Plan for Ongoing and Future Initiatives <p>OPG shared details regarding the upcoming Pickering Table, and prepared an organizational chart to support HFN's understanding of the OPG team responsible for the Pickering Table.</p>	N/A
2/4/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering NGS Tour	OPG emailed representatives of the Michi Saagiig Nations (Alderville, Curve Lake, Hiawatha and Scugog Island) with information related to a tour of the Pickering Nuclear Generating Station (NGS) scheduled for March 21, 2025.	N/A
2/6/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering Engagement Table	OPG emailed the Michi Saagiig Nations (Alderville, Curve Lake, Hiawatha, Scugog Island) on February 6, 2025, to share materials for the upcoming Pickering Table.	N/A
2/6/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Virtual Meeting	Pickering Engagement Table	<p>On February 6, 2025, OPG held its third Pickering Table with the Michi Saagiig Nations (Alderville, Curve Lake, Hiawatha and Scugog Island). Topics of discussion included:</p> <ul style="list-style-type: none">1) PROL/WFOL Re Licensing2) 2025 Permits Review and Update3) Deep Water Intake (DWI) Spoils Management <p>Related to relicensing: Curve Lake First Nation (CLFN) and Mississaugas of Scugog Island First Nation (MSIFN) stated that they wish to review the Pickering Environmental Risk Assessment (PERA).</p>	N/A
2/6/2025	Curve Lake First Nation	Email	Pickering General Update	Curve Lake First Nation shared an updated logo for the Pickering Table Conduct document.	N/A
2/11/2025	Mississaugas of Scugog Island	Email	Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understanding (MoU)	OPG and the Mississaugas of Scugog Island First Nation emailed back and forth to finalize approaches to invoicing for the Timmins Martelle Heritage Consultants (TMHC) Stage 1 Archaeology Assessment.	Invoicing, Archaeology

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2/12/2025	Six Nations of the Grand River	Email	Darlington NGS & Pickering NGS Indigenous Engagement Plans (IEP)	The Six Nations of the Grand River (SNGR) First Nation emailed OPG advising that they are working with the Canadian Nuclear Safety Commission (CNSC) to discuss the assertion of Aboriginal rights associated with Darlington and Pickering. OPG reaffirmed its commitment to ongoing engagement with SNGR and noted that OPG asked the CNSC for clarity to ensure OPG is engaging appropriately	Assertion of rights
2/13/2025	Mississaugas of Scugog Island	Virtual Meeting	OPG/MSIFN Framework Meeting	OPG had a Framework meeting with the Mississaugas of Scugog Island First Nation (MSIFN) on February 13, 2025. Topics of discussion included: 1) MSIFN's Notification Protocol for Site Work Initiatives 2) Darlington Category C Spill 3) Next Steps re: Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) Renewal Application 4) Plan for Ongoing and Future Initiatives 5) Indigenous Focused Supply Chain and Procurement Opportunities 6) SharePoint Access 7) Pickering NGS Detailed Decommissioning Plan (DDP) Third-Party Review 8) Renewable Generation (RG) Updates	N/A
2/13/2025	Curve Lake First Nation	Virtual Meeting	Pickering General Update	OPG and Curve Lake First Nation (CLFN) had a meeting to welcome a new consultant supporting CLFN's engagements on the Pickering site. OPG discussed ongoing deliverables, review, milestones and other important items to support the consultant's onboarding.	N/A
2/18/2025	Six Nations of the Grand River	Email, Phone Call	Darlington NGS & Pickering NGS Indigenous Engagement Plans (IEP)	OPG responded to the Six Nations of the Grand River (SNGR) First Nation noting that OPG addressed their comments in the Pickering Indigenous Engagement Plan (IEP) but they were not carried over to the Darlington IEP. OPG noted that it would be removed in the next re-issue. OPG and SNGR set up a call to discuss the approach to engaging communities who have expressed an interest. OPG reaffirmed its commitment to ongoing engagement with SNGR and noted that OPG asked the Canadian Nuclear Safety Commission (CNSC) for clarity to ensure OPG is engaging appropriately. SNGR shared a list of resources to explain why they believe there is an obligation for the Duty to Consult.	Recognition of rights
2/19/2025	Alderville First Nation	Email	Pickering NGS Archaeology	OPG emailed Alderville First Nation (AFN) to discuss the status of archaeology work at the Pickering site, including a path forward. OPG shared dates and AFN requested February 26th at 8:30 - 9:30am. AFN also noted that they would share the meeting invite with the other Michi Saagiig Nations.	Archaeology

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2/19/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Virtual Meeting	Pickering NGS Archaeology	OPG met with the Michi Saagiig Nations and Timmins Martelle Heritage Consultants (TMHC) to discuss the status and potential next steps regarding a path forward on terrestrial and marine archaeology work at the Pickering Nuclear Generating Station (NGS).	Archaeology
2/20/2025	Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island, Alderville First Nation	Community Meeting	OPG Environment Sub-Table Meeting Overview	Overview and Purpose of Environment Table with Michi Saagiig Nations included development of Primary Topics for Table; Offsetting Approach & Next Steps; Update on Dredging Spoils Location; Video link to All Clear.	N/A
2/21/2025	Mississaugas of Scugog Island	Email	Pickering Indigenous Engagement Plan (IEP) and Memorandum of Understanding (MoU)	OPG emailed the Mississaugas of Scugog Island First Nation (MSIFN) confirming that the recent invoices submitted under the Pickering Memorandum of Understanding (MoU) have been approved and will go out for payment on February 21. OPG asked MSIFN if there is an update on the status of the MoU amendment, in the interim until capacity agreements are finalized. MSIFN responded advising that their legal is reviewing and they will get back as soon as possible.	Invoicing Extension of MoU
2/21/2025	Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing) Chippewas of Saugeen First Nation (also known as Saugeen) Saugeen Ojibway Nation (SON)	Document Review, Email	PNGS and DNGS IEPs, sharing with SON final working versions for review	OPG shared an update with Saugeen Ojibway Nation (SON) including the following topics: Pickering Indigenous Engagement Plan (IEP) Darlington Nuclear Generating Station (DNGS) 30-year licence renewal application IEP Safe Storage Decommissioning Nuclear Waste	N/A
2/24/2025	Alderville First Nation	Email	Pickering Memorandum of Understanding (MoU)	OPG emailed Alderville First Nation a signed version of the Pickering MoU extension.	N/A
2/24/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering Engagement Table	OPG emailed the Michi Saagiig Nations a proposed agenda for the Pickering Table scheduled for March 6, 2025. OPG also shared an update to the SharePoint site which includes new documents to support the Nations' navigation throughout the site. Mississaugas of Scugog Island First Nation (MSIFN) responded requesting OPG and the Nations have a discussion on the Michi Saagiig fishing, harvesting and aquatic specialist brainstorm ways to protect and enhance fish and fish habitat in the planning for dredging, shoreline work and spoils management. OPG responded and suggested that this topic of discussion would be helpful.	Environmental protection; Species protection
2/26/2025	Curve Lake First Nation	Virtual Meeting, Email	Pickering General Update	OPG met with Curve Lake First Nation's (CLFN's) new support staff to discuss the ongoing and upcoming priorities related to the Pickering Nuclear Generating Station (NGS). OPG shared an update over email with a list of ongoing and upcoming priorities. Priorities included:	Refurbishment

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				<ul style="list-style-type: none">- Pickering Waste Management Facility (PWMF)- Waste Facility Operating Licence (WFOL) Amendment related to Pickering Component Storage Structure (PCSS) project- Review of PCSS Predictive Environmental Risk Assessment (PERA)- Climate Change Vulnerability Assessment- Pickering NGS PERA- Detailed Decommissioning Plan (DDP) – third-party review conversations ongoing via Mississaugas of Scugog Island First Nation (MSIFN)- Deep Water Intake (DWI): Spoils Management Options Draft Memo	
2/27/2025	Alderville First Nation, Mississaugas of Scugog Island	Email	Pickering NGS Archaeology	OPG and Timmins Martelle Heritage Consultants (TMHC), with the Nations included on the email chain, coordinated plans and shared information related to the Stage 1 Archaeology Assessment throughout February and March, leading up to the site visit on April 8, 2025.	Archaeology
2/28/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island	Email	Pickering NGS Electrode Boiler Project Update	OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation and Mississaugas of Scugog Island First Nation) an update of the Electrode Boiler Project at Pickering Nuclear Generating Station (NGS). OPG shared that they will be submitting a draft Environmental Compliance Approval (ECA) amendment application to the Ministry of Environment, Conservation and Parks (MECP) and will share the application with the Nations in parallel. On March 26, 2025, OPG followed up with MSFN to share the finalized ECA Amendment application that was submitted to MECP, and requested that the Nations review and comment by the first week of May 2025. On July 2, 2025, OPG shared an update with MSFN, which was provided to MECP on June 23, 2025.	Environmental Compliance Approval
3/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Tree Removal	OPG emailed the Michi Saagiig Nations sharing information that 16 trees will be removed from the West Sally Port area. Mississaugas of Scugog Island First Nation (MSIFN) responded requesting additional information on the two maple trees. OPG responded sharing information of the two maple trees.	N/A
3/5/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Engagement Table	OPG shared the upcoming Pickering Table slide deck with the Michi Saagiig Nations. OPG also included a link to the SharePoint site as a reminder of previous material discussed and ongoing/completed actions	N/A

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3/6/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Engagement Table	The Mississaugas of Scugog Island First Nation (MSIFN) responded to OPG's February 6, 2025 spoils management memo requesting an update when the proposed dredging and disposal would take place, as well as suggesting a working group meeting to discuss potential options to disperse the sediment for shoreline restoration and habitat creation techniques.	Deep Water Intake
3/6/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Engagement Table	OPG met with Michi Saagiig Nations - agenda items included: - Pickering Nuclear Generating Station (NGS) Licensing & engagement - Capacity Funding Agreements - Permit overview - Oil Boom replacement project - Pickering Component Storage Structure (PCSS), Storage Building 5 (SB5), Detailed Decommissioning Plan (DDP)	DDP PROL WFOL
3/12/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Offshore Well Licence Renewal	OPG emailed the Michi Saagiig Nations an update on the 5 boreholes that were licenced in 2024 but not completed and deferred to 2025. OPG included the well renewal application for 2025 and welcome feedback from the Nations.	N/A
3/12/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Archaeology	OPG emailed Timmins Martelle Heritage Consultants (TMHC), a third-party conducting a Stage 1 Archaeology Assessment at the Pickering site (requested by the Michi Saagiig Nations) requesting a meeting to discuss an update on the assessment. OPG invited the Nations to attend the meeting, and the parties decided to meet on March 13, 2025, at 3:30pm.	Archaeology
3/13/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering NGS Archaeology	OPG met with Timmins Martelle Heritage Consultants (TMHC) and the Michi Saagiig Nations to discuss preliminary findings in the Stage 1 Archaeology Assessment. TMHC advised that a site visit would be necessary before making conclusions, and noted that they will look to organize one at the end of March 2025 or early April 2025.	Archaeology
3/16/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Information Request in Support of Arcadis Technical Review	Email received from Mississaugas of Scugog Island (MSIFN) with 5 (6th information request added in subsequent email attached) in support of the upcoming Arcadis Review of the Detailed Decommissioning Plan (DDP).	DDP
3/17/2025	Alderville First Nation	In Person	On the Land Training	OPG was invited to learn from members of the Dibaajimowin Cultural Centre: OPG staff working on New Nuclear and Decommissioning attended for a day of learning about Indigenous culture and Indigenous harvesting techniques.	N/A

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3/18/2025	Chippewas of Georgina Island First Nation	Email	Darlington NGS Power Reactor Operating Licence (PROL); Pickering NGS Electrode Boiler Project	OPG emailed Georgina Island First Nation sharing updates to the Darlington PROL Renewal Application (hearing dates and public information sessions) and the Pickering Nuclear Generating Station (NGS) Electrode Boiler Project Environmental Compliance Approval (ECA) amendment.	N/A
3/18/2025	Chimnissing (Beausoleil First Nation)	Email	Darlington NGS Power Reactor Operating Licence (PROL); Pickering NGS Electrode Boiler Project	OPG emailed Beausoleil First Nation sharing updates to the Darlington PROL Renewal Application (hearing dates and public information sessions) and the Pickering Nuclear Generating Station (NGS) Electrode Boiler Project Environmental Compliance Approval (ECA) amendment.	N/A
3/18/2025	Chippewas of Rama First Nation	Email	Darlington NGS Power Reactor Operating Licence (PROL); Pickering NGS Electrode Boiler Project	OPG emailed Rama First Nation sharing updates to the Darlington PROL Renewal Application (hearing dates and public information sessions) and the Pickering Nuclear Generating Station (NGS) Electrode Boiler Project Environmental Compliance Approval (ECA) amendment. Rama representatives responding noting that they will attempt to join the public information sessions.	N/A
3/19/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering General Update	OPG emailed the Michi Saagiig Nations an update of proposed and ongoing activities at the Pickering Nuclear Generating Station (NGS). Updates included: 1) Suggestion to have an ad hoc meeting to discuss the Pickering Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) and Predictive Environmental Risk Assessment (PERA) 2) Responses to Mississaugas of Scugog Island First Nation's (MSIFN's) questions on the spoils management memo. 3) Addendum to the 2024 Letter of Advice regarding Pickering In-Water Drilling Program 4) Sharing the recording of the Stage 1 Archaeological Assessment meeting with Timmins Martelle Heritage Consultants (TMHC)	PROL, WFOL, PERA Archaeology
3/20/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	NWMO Deep Geological Repository (DGR) Status Overview, NWMO Policy	Waste Table Meeting: OPG facilitated a presentation from Nuclear Waste Management Organization (NWMO) staff to Alderville First Nation (AFN), Curve Lake First Nation (CLFN), Mississaugas of Scugog Island First Nation (MSIFN) and Hiawatha First Nation (HFN). Presentation from NWMO staff was a request from the Michi-Saagiig of the Williams Treaties First Nations.	N/A
3/21/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	In Person Meeting, Site Tour	Pickering NGS Tour	OPG and representatives of the Michi Saagiig Nations had a tour of the Pickering Nuclear Generating Station (NGS). The tour included introductions, a CANDU 101 presentation, stops throughout the station (see agenda for details), lunch and debrief.	N/A
3/24/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Tree Cutting	OPG emailed the Michi Saagiig Nations notifying them of the removal of 16 trees located on the Pickering Nuclear Generating Station (NGS) site, in the West Sally Port area. OPG committed to replace the trees at a 3:1 ratio and shared details of the trees being cut down. Curve Lake First Nation (CLFN) responded to OPG requesting a future discussion of the removed trees being sent to CLFN for firewood, mulch and lumber.	N/A

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3/24/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Nuclear Sustainability Services (NSS): OPG/Pickering Decommissioning Technical Review - Arcadis - Agreement	<p>OPG provided an email response to Mississaugas of Scugog Island First Nation's (MSIFN's) Information Requests in support of the Arcadis Technical Review of the Pickering Nuclear Generating Station (NGS) Detailed Decommissioning Plan (DDP).</p> <p>OPG provided responses to the following requests from the Nations:</p> <ol style="list-style-type: none">1. Reports on lessons learned from bringing Pickering A Units 2 and 3 to Storage with Surveillance (SWS).2. DDP Volumes 3 (Nuclear Component Removal), 4 (Reactor Segmentation), 5 (Powerhouse Structure), 6 (Reactor Building Structure Demolition), and 7 (Site Remediation) when they become available3. The preliminary Predictive Effects Assessment (PEA) document when available for review4. Clarification on how OPG intends to scan materials for the presence of radioactivity or hazardous materials during stabilization and transition to SWS.5. Information on whether OPG has considered alternative end states for the Pickering A site, such as open parkland/recreational, and whether a site-specific risk assessment for possible future uses has been performed.6. Environmental Management Plan referred to in the Ecometrix document	DDP
3/25/2025	Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing) Chippewas of Saugeen First Nation (also known as Saugeen) Saugeen Ojibway Nation (SON)	In Person Meeting	SON-OPG Collaborative Discussion	<p>OPG met with Saugeen Ojibway Nation (SON). Topics of discussion included:</p> <ul style="list-style-type: none">- Historical Impacts- Western Waste Management Facility (WWMF) Licensed Activities (MPSB, Dry Storage Containers (DSCs), Storage, Processing)- WWMF Waste Facility Operating Licence (WFOL) Licence Renewal	Historic Impacts
3/26/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Electrode Boiler Project	<p>OPG emailed the Michi Saagiig Nations sharing a link to the Electrode Boiler Project Environmental Compliance Approval (ECA) Amendment application that has been finalized and submitted to the Ministry of Environment, Conservation and Parks (MECP). OPG noted that if there is any feedback shared by the Nations, OPG will share with the MECP. OPG noted that feedback be shared within 45 days.</p>	Environmental Compliance Approval
3/27/2025	Alderville First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Archaeology	<p>OPG shared information with Alderville First Nation (AFN) and Mississaugas of Scugog Island First Nation (MSIFN) related to the Stage 1 Archaeological Assessment being conducted by Timmins Martelle Heritage Consultants (TMHC). MSIFN responded confirming that they will share the information with TMHC and that the Memorandum of Understanding (MoU) confidentiality provisions form part of the contract with TMHC.</p>	Archaeology
3/28/2025	Alderville First Nation	Email	OPG/AFN Upcoming Meetings	<p>Alderville First Nation (AFN) emailed OPG on April 4, 2025, to suggest rescheduling the April Environment Table meeting to April 30, due to the Canadian Nuclear Association (CNA) conference occurring on the original date. OPG agreed to reschedule the meeting.</p>	N/A

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4/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Engagement Table	OPG emailed the Michi Saagiig Nations material for the Pickering Table meeting, scheduled for April 3, 2025. OPG also shared the two draft Deep-Water Intake (DWI) Marine Archeology reports for the Nations' review and feedback.	N/A
4/2/2025	Mississaugas of Scugog Island First Nation	Email	Pickering Memorandum of Understanding (MoU)	Mississaugas of Scugog Island First Nation (MSIFN) emailed OPG edits of the draft Amending Agreement to the Pickering MoU. MSIFN suggested discussing the capacity agreements during the upcoming Pickering Table.	N/A
4/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Engagement Table	OPG had a Pickering Table meeting with the Michi Saagiig Nations (Alderville, Curve Lake, Hiawatha, Scugog Island) on April 3, 2025. Topics of discussion included: 1) Actions and updates 2) Nuclear Sustainability Services (NSS) project updates 3) Deep Water Intake (DWI) project updates 4) Discussion on ongoing and upcoming priorities from OPG and the Nations.	N/A
4/3/2025	Curve Lake First Nation	Email	Pickering Memorandum of Understanding (MoU)	Curve Lake First Nation (CLFN) emailed OPG noting that they would like their MoU to include the same edits as the Mississaugas of Scugog Island First Nation (MSIFN) MoU.	N/A
4/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Tree Cutting	Mississaugas of Scugog Island First Nation (MSIFN) requested additional details regarding the tree cutting at the Pickering Table. OPG responded and shared additional information related to the two Norway Maple trees that were cut.	N/A
4/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA)	Scugog Island emailed OPG sharing comments on the PCSS PERA. MSIFN noted that the Michi Saagiig Nations would like to work with OPG to incorporate receptors into future PERAs. OPG responded noting that they would be happy to connect to discuss the PROL/WFOL PERA and engagement opportunities.	N/A
4/7/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Archaeology	Timmins Martelle Heritage Consultants (TMHC) emailed OPG and representatives of the Michi Saagiig Nations to share housekeeping items for the Stage 1 Archaeological Assessment scheduled for April 8, 2025.	N/A

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4/8/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Site Monitoring or Site Work	Pickering NGS Archaeology	OPG, Timmins Martelle Heritage Consultants (TMHC) and representatives from the Michi Saagiig Nations performed a Stage 1 Archaeological Assessment at the Pickering NGS. While representatives from Hiawatha and Alderville were not present, TMHC committed to sharing information with them.	N/A
4/10/2025	Alderville First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Deep Water Intake (DWI)	OPG emailed Timmins Martelle Heritage Consultants (TMHC) and the Michi Saagiig Nations material related to marine archaeology & the DWI presentation from the April 3, 2025, Pickering Table, Pickering Nuclear Generating Station (NGS) inadvertent discoveries plan, and the March 20, 2025, Marine Impact Assessment report.	N/A
4/10/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Aquatic Sampling Plan	OPG shared details regarding the 2025 aquatic sampling program for Pickering Nuclear Generating Station (NGS) with the Michi Saagiig Nations. OPG shared the sampling plan and field schedule with the Nations.	N/A
4/10/2025	Alderville First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Deep Water Intake (DWI)	OPG shared two Marine Archaeology reports with Timmins Martelle Heritage Consultants (TMHC) in support of the stage 1 archaeology assessment, as well as a presentation that shared information about the DWI project.	N/A
4/10/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Aquatic Sampling Plan	OPG shared the Pickering Aquatic Sampling Plan with the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation). OPG also shared the schedule for sampling to see if the Nations were interested in monitoring.	N/A
4/10/2025	Alderville First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/TMHC/Michi Saagiig Nations DWI Material	OPG emailed Timmins Martelle Heritage Consultants (TMHC), with the Michi Saagiig Nations included, material related to the Deep-Water Intake (DWI) presentation from the April 3 Pickering Table, Pickering Nuclear Generating Station (NGS) inadvertent discoveries plan, and the March 20 Marine Impact Assessment report.	N/A
4/10/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/Michi Saagiig Nations Pickering Aquatic Sampling Plan	OPG shared details regarding the 2025 aquatic sampling program for Pickering Nuclear Generating Station (NGS) with the Michi Saagiig Nations. OPG shared the sampling plan and field schedule.	N/A
4/14/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas	Email	Pickering Aquatic Sampling Notable Event	OPG emailed the Michi Saagiig Nations sharing updates regarding a long-tailed duck found deceased in the nets during aquatic sampling. On April 17, OPG followed up with the Nations with additional information regarding the long-tailed duck.	Notable event Species of Interest

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	of Scugog Island First Nation				
4/15/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering PERA and Climate Change Resilience Assessment	OPG emailed the Michi Saagiig Nations sharing the draft Pickering Environmental Risk Assessment (ERA) for the Pickering Nuclear Decommissioning, Refurbishment and Continued Operations. OPG also shared the Climate Susceptibility and Adaptation Summary Report. OPG requested the Nations provide feedback (if any) by June 9, 2025.	N/A
4/15/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering PERA and Climate Change Resilience Assessment	<p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville, Curve Lake, Hiawatha, Mississaugas of Scugog Island) on April 15, 2025, and shared two reports in support of the Pickering Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) application. The reports were:</p> <ol style="list-style-type: none">1. Draft Predictive Environmental Risk Assessment (PERA) report for Pickering Nuclear (PN) Decommissioning, Refurbishment, and Continued Operations; and,2. Climate Susceptibility and Adaptation Summary report <p>OPG shared additional context about the Pickering Component Storage Structure (PCSS) PERA. OPG requested for MSFN to share feedback regarding the PERA.</p> <p>OPG followed up with MSFN on June 9, 2025, to request feedback by the end of the day. OPG also attached a memo to provide a summary of the PNGS PROL/WFOL application. OPG requested MSFN's feedback regarding the memo. On June 19, 2025, Mississaugas of Scugog Island First Nation (MSIFN) provided comments for the PERA and Climate Change Resilience Assessment. MSIFN requested to be updated ahead of OPG's submission to the Canadian Nuclear Safety Commission (CNSC) on June 30th.</p>	PROL, WFOL, PERA, PCSS
4/17/2025	Hiawatha First Nation	Email	Pickering Geotechnical Program	OPG emailed Hiawatha First Nation (HFN) asking if they had any update on comments on the borehole drilling program and logistics for a water ceremony. OPG also shared the proposed date of the geotechnical (borehole drilling) program and the water ceremony. Further, OPG acknowledged feedback received by HFN and stated that OPG will discuss this feedback with HFN.	Geotechnical drilling
4/22/2025	Chippewas of Rama First Nation	Email	Chippewas of Rama General Update	Rama First Nation emailed OPG noting that they have a new Community Consultation Worker, Dillon Bickell. OPG responded on April 25, noting that they would provide an update on the various OPG projects and developments for Dillon's understanding.	N/A
4/23/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Deep Water Intake (DWI)	OPG emailed the Michi Saagiig Nations an update regarding the Pickering Deep Water Intake Draft Marine Archaeology Reports and Geotechnical Drilling. Alderville First Nation (AFN) responded on April 23, 2025, requesting additional context on marine archaeology for 2025 being conducted as per the status quo. OPG responded on April 24, 2025, noting that the marine archaeology report is completed for the 2024 study area, with the recommendation of continued studies being completed in 2025.	Archaeology, Geotechnical Drilling

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4/24/2025	Alderville First Nation	Virtual Meeting	OPG/AFN Framework Meeting	OPG had a Framework meeting with Alderville First Nation (AFN). Topics of discussion included: 1) Indigenous Knowledge Protocols 2) Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) Renewal Application Check-In 3) Auburn, Frankford and Sills Island Update 4) Update on Pickering and Wesleyville capacity funding agreements.	N/A
4/24/2025	Hiawatha First Nation	Virtual Meeting	SharePoint Troubleshooting	OPG had a meeting with Hiawatha First Nation (HFN) to discuss the SharePoint issues HFN is experiencing. OPG's IT was able to identify the issues and resolve the access issues.	N/A
5/1/2025	Alderville First Nation, Curve Lake First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting	OPG and the Michi Saagiig Nations (Alderville, Curve Lake, Mississaugas of Scugog Island) had a Pickering Table meeting. Hiawatha First Nation was unable to attend due to a staff retreat. Topics of discussion included: 1) Timmins Martelle Heritage Consultants (TMHC) Stage 1 Archaeology Assessment Update 2) Pickering Component Storage Structure (PCSS), Storage Building 5 (SB5), Decommissioning Update 3) Deep Water Intake (DWI) Update	N/A
5/1/2025	Alderville First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering General Update	OPG emailed Timmins Martelle Heritage Consultants (TMHC) requesting they attend the May 1, 2025 Pickering Table providing an overview of the Stage 1 Archaeology Assessment findings. TMHC agreed to attend. OPG requested TMHC provide a map of the site and proposed next steps. TMHC shared the requested map.	N/A
5/1/2025	Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing) Chippewas of Saugeen First Nation (also known as Saugeen) Saugeen Ojibway Nation (SON)	Email	SON-NSS, follow up on PNGS and DNGS IEPs	OPG emailed a follow up to February correspondence and shared final working versions of Darlington Nuclear Generating Station (NGS) and Pickering NGS Indigenous Engagement Plans (IEPs) for review and request to meet to discuss. Initial email with draft versions were shared with Saugeen Ojibway Nation (SON) in September 2024. Email also highlighted Darlington NGS Power Reactor Operating Licence (PROL) interventions and hearing dates, with an offer for OPG staff to meet for overview.	N/A
5/2/2025	Curve Lake First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Lake Sturgeon Study	OPG emailed representatives of Curve Lake First Nation (CLFN) and Mississaugas of Scugog Island First Nation (MSIFN) offering them to monitor a lake sturgeon study. CLFN responded sharing dates they would be interested in attending.	N/A
5/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Deep Water Intake (DWI)	In follow up to the May 1, 2025 Pickering Table meeting, OPG emailed the Michi Saagiig Nations proposing an ad hoc meeting with the Nations, Timmins Martelle Heritage Consultants (TMHC) and Matrix Heritage to discuss the Deep-Water Intake activities and marine archaeology path forward. Following the Nations internal meeting on May 9, 2025, Curve Lake First Nation responded noting that they will have representatives attend a call on May 12, 2025. OPG responded and appreciated the Nations availability.	N/A

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5/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Early Pickering Site Activities (Ground Disturbance) - Pickering Component Storage Structure (PCSS)	OPG email follow-up to Michi Saagiig Nations to provide schedule information related to planned early site activities related to construction of the Pickering Component Storage Structure (PCSS).	N/A
5/5/2025	Mississaugas of Scugog Island First Nation	Virtual Meeting	OPG/MSIFN Framework Meeting	OPG and the Mississaugas of Scugog Island First Nation (MSIFN) had a Framework meeting. Topics of discussion included: 1) Minogi Corp. Field Protocol 2) OPG Site Specific Survey 3) Available for Service (AFS) Update and Discussion 4) Emergency Management Exercises and Drills 5) Environment and Pickering Table Check In 6) Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) Renewal Application Check In	N/A
5/5/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Early Pickering Site Activities (Ground Disturbance) - Pickering Component Storage Structure (PCSS)	Email from Francis Chua on behalf of the Michi Saagiig Nations regarding position on next steps related to planned early site activities related to construction of the Pickering Component Storage Structure (PCSS)	N/A
5/7/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Deep Water Intake Path (DWI)	OPG set up a virtual meeting with the Michi Saagiig Nations scheduled for May 12, 2025. The purpose of the meeting is to discuss a path forward for Deep Water Intake (DWI) activities and marine archaeology. OPG proposed the following agenda: 1. Recap/Overview of DWI project & timelines; Overview of marine archaeology; and Discussions - scoping and work planning. OPG provided additional reference information which was recently shared with the Michi Saagiig Nations, Timmins Martelle Heritage Consultants (TMHC), and Matrix Heritage. OPG followed up on May 22, 2025 to share and discuss the following three items for follow-up: 1. Planning for next meeting (if possible, early next week) 2 .Follow-up on upcoming inland boreholes – planned to commence June 2nd (details below); invitation for field monitors 3. Reference/follow-up from previous meeting (May 12th) Curve Lake First Nation (CLFN) responded on May 23, 2025, to state that the Michi Saagiig would like to meet on May 28, 2025. Alderville First Nation (AFN), CLFN and Mississaugas of Scugog Island First Nation (MSIFN) will be represented but Hiawatha First Nation (HFN) will not attend and is comfortable with the meeting proceeding with representation from the other Nations. HFN requested the meeting notes from OPG on May 27, 2025.	N/A
5/7/2025	Six Nations of the Grand River First Nation	Virtual Meeting	OPG/SNGR Framework Meeting	OPG and the Six Nations of the Grand River (SNGR) First Nation had a Framework meeting. Topics of discussion included: 1) Renewable Generating (RG) Updates 2) Darlington Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) Renewal Application Updates 3) Pickering Refurbishment and Relicensing Updates	N/A

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				4) New Nuclear Updates 5) Generation for Generations Walkthrough 6) SNGR Events for OPG Participation/Support	
5/8/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA) Comments/Responses	OPG emailed the Michi Saagiig Nations responses to Mississaugas of Scugog Island First Nation's (MSIFN's) comments on the Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA). Responses included detailed information about the mass of materials to be stored and the level of radioactivity.	PCSS PERA, Waste storage
5/9/2025	Curve Lake First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Lake Sturgeon Study	OPG emailed Curve Lake First Nation (CLFN) and Mississaugas of Scugog Island First Nation (MSIFN) sharing an update to the Lake Sturgeon study dates. OPG noted four target dates to lift the nets and invited representatives from CLFN and MSIFN to attend.	N/A
5/12/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Deep Water Intake (DWI)	OPG met with the Michi Saagiig Nations, Timmins Martelle Heritage Consultants (TMHC), and Matrix Heritage to discuss an overview of the Pickering Deep Water Intake (DWI) project and timelines and overview of marine archaeology that occurred to date.	N/A
5/12/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Component Storage Structure (PCSS) Early Site Activities	OPG emailed the Michi Saagiig Nations an update to the Pickering Component Storage Structure (PCSS) early site activities following a question discussed during the May 12, 2025, OPG/Michi Saagiig Nations Deep Water Intake (DWI) Path Forward meeting. OPG noted that activities commenced on May 5, 2025, and provided a summary of work to date and work planned in the next two weeks. Alderville responded to the email on May 12, 2025, asking if the Ministry of Citizenship and Multiculturalism supported the work in advance of receiving the Stage 1 archaeology report, what are is being cleared/grubbed, and where the road is.	Archaeology

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5/14/2025	Curve Lake First Nation	Email	Early Pickering Site Activities (Ground Disturbance) - Pickering Component Storage Structure (PCSS)	Email from Derek Paauw, Curve Lake First Nation, requesting previous archaeological assessment reports for review. OPG followed up on May 21 to provide copies of the reports.	Archaeology
5/15/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Detailed Decommissioning Workshop	Waste Table Meeting/Detailed Decommissioning Plan Workshop: 1. General Decommissioning Overview 2. Detailed Decommissioning Plan Overview 3. Nuclear Forecasting and Waste Management 4. Used Fuel Benchmarking Study	N/A
5/16/2025	Chippewas of Rama First Nation	Email	Darlington NGS & Pickering NGS General Updates	OPG sent an email to the Chippewas of Rama First Nation (CRFN) on March 18, 2025, and provided updates regarding OPG activities at Darlington Nuclear Generating Station (NGS) & Pickering NGS. OPG informed CRFN about opportunities to attend the Darlington NGS Power Reactor Operating Licence (PROL) public hearings held by the Canadian Nuclear Safety Commission (CNSC), as well as Darlington NGS Relicensing Information Sessions held by OPG. CRFN stated that they may be able to attend and will discuss with Chief and Council. On May 16, 2025, OPG provided CRFN with information about OPG projects/developments and the necessary contact people. CRFN responded with a site tour request for Darlington NGS and Darlington New Nuclear Project (DNNP). CRFN requested to be included in framework meetings regarding New Nuclear Development at Wesleyville. CRFN also requested for the Chippewa Tri-Council communities to be able to participate in bi-monthly meetings with OPG, similar to Michi Saagiig engagement.	PROL Tour request Tri-Council Meeting request
5/16/2025	Chippewas of Georgina Island First Nation	Email	Pickering Predictive Environmental Risk Assessment PERA and Climate Change Resilience Assessment	OPG emailed the Chippewas of Georgina Island First Nation (CGIFN) on May 16, 2025, and shared two reports in support of the Pickering Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) application. The reports were: 1. Draft Predictive Environmental Risk Assessment (PERA) report for Pickering Nuclear (PN) Decommissioning, Refurbishment, and Continued Operations; and, 2. Climate Susceptibility and Adaptation Summary report OPG shared additional context about the Pickering Component Storage Structure (PCSS) PERA. OPG requested for CGIFN to share feedback regarding the PERA. OPG followed up with CGIFN on June 9, 2025, regarding the Pickering Nuclear Generating Station (NGS) PROL/WFOL application. OPG also attached a memo to provide a summary of the Pickering NGS PROL/WFOL application and requested CGIFN's comments feedback regarding the memo.	N/A

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5/16/2025	Chippewas of Rama First Nation	Document Review, Email	Pickering Predictive Environmental Risk Assessment (PERA) and Climate Change Resilience Assessment	<p>OPG emailed the Chippewas of Rama First Nation (CRFN) on May 16, 2025 and shared two reports in support of the Pickering Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) application. The reports were:</p> <ol style="list-style-type: none">1. Draft Predictive Environmental Risk Assessment (PERA) report for Pickering Nuclear (PN) Decommissioning, Refurbishment, and Continued Operations; and,2. Climate Susceptibility and Adaptation Summary report <p>OPG shared additional context about the Pickering Component Storage Structure (PCSS) PERA. OPG requested for CRFN to share feedback regarding the PERA.</p> <p>OPG followed up with CRFN on June 9, 2025, to request feedback by the end of the day. OPG also attached a memo to provide a summary of the Pickering Nuclear Generating Station (NGS) PROL/WFOL application. OPG requested CRFN's feedback regarding the memo.</p>	N/A
5/16/2025	Chimnissing (Beausoleil First Nation)	Document Review, Email	Pickering Predictive Environmental Risk Assessment (PERA) and Climate Change Resilience Assessment	<p>OPG emailed the Beausoleil First Nation (BFN) on May 16, 2025, and shared two reports in support of the Pickering Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) application. The reports were:</p> <ol style="list-style-type: none">1. Draft Predictive Environmental Risk Assessment (PERA) report for Pickering Nuclear (PN) Decommissioning, Refurbishment, and Continued Operations; and,2. Climate Susceptibility and Adaptation Summary report <p>OPG shared additional context about the Pickering Component Storage Structure (PCSS) PERA. OPG requested for BFN to share feedback regarding the PERA.</p> <p>OPG followed up with BFN on June 9, 2025, to request feedback by the end of the day. OPG also attached a memo to provide a summary of the Pickering Nuclear Generating Station (NGS) PROL/WFOL application. OPG requested BFN's feedback regarding the memo. BFN stated on June 9, 2025, that they are reviewing the documents sent by OPG.</p>	N/A
5/20/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Power Reactor Operating Licence (PROL/WFOL)	<p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on May 20, 2025, to share a draft copy of the Licence Application for the Pickering Nuclear Generating Station (PNGS) and requested feedback from the Nations. OPG also shared a briefing note with the Nations and a link to the external SharePoint site for the Pickering Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL).</p> <p>On July 3, 2025, OPG sent a follow-up email to MSFN to share a copy of the Pickering PROL/WFOL Licence Application. OPG requested MSFN's review, input, and feedback by September 2025.</p>	N/A

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5/24/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Fish Impingement	<p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation) on May 24, 2025, to share data indicating elevated fish impingement levels at Pickering Nuclear Generating Station (NGS) over the last week due to sudden changes in lake conditions. On June 2, 2025, OPG responded to questions sent by the Nations regarding the elevated levels of fish impingement.</p> <p>OPG sent a follow-up email to MSFN on June 19, 2025, to provide an update regarding the Fisheries and Oceans Canada (DFO) report that was submitted on June 17, 2025. The report discussed the cause of the fish impingement.</p>	Environmental Impacts Fish Impingement
5/28/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Engagement Table - Deep Water Intake (DWI)	OPG emailed the Michi Saagiig Nations to set up a meeting for May 28, 2025. The purpose of the meeting is to continue the conversation on Deep Water Intake (DWI) activities and marine archaeology. OPG also provided supporting materials for the discussion.	N/A
5/28/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Component Storage Structure (PCSS) Early Site Activities	<p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation) on May 1, 2025, to share information for planned site activities involving ground disturbance that are scheduled to occur within the month. OPG requested MSFN to confirm whether they agree with the path forward.</p> <p>On May 5 2025, MSFN provided comments regarding Pickering Nuclear Generating Station (NGS). On May 28, 2025, OPG provided responses to MSFN's comments.</p>	Co-development / Co-planning request
5/28/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Deep Water Intake (DWI)	OPG, the Michi Saagiig Nations, Timmins Martelle Heritage Consultants (TMHC), and Matrix Heritage had a meeting on May 28, 2025, to discuss Pickering Deep Water Intake (DWI) activities and marine archaeology. OPG discussed an overview of shared data and best practice for a proposed marine archaeology scope of work.	N/A

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5/29/2025	Curve Lake First Nation	Email, Document Review	Revised MoU for Capacity Funding (Pickering) and Invoice Question	Curve Lake First Nation (CLFN) shared an advance copy of the quarterly capacity funding invoice forthcoming for advance-OPG review. OPG review completed, and email exchange on June 4, 2025.	N/A
5/30/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Engagement Table Materials	<p>On May 30, 2025, and June 4, 2025, OPG emailed the Michi Saagiig Nations to provide meeting materials and share an agenda for the Pickering Table occurring on June 5, 2025. The agenda included the following:</p> <p>1 .Opening & Updates - Stage 1 Terrestrial Archaeology Update (Timmins Martelle Heritage Consultants (TMHC)) - Review Status of Documents; Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) Licensing - Review Status of Actions, Permits - Discussion Topics</p> <p>2. Project Updates - Pickering Component Storage Structure (PCSS), Storage Building 5 (SB5), Decommissioning - Deep Water Intake (DWI) - Dry Storage Module (DSM) Relocation Update</p>	N/A
6/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Deep Water Intake (DWI) Geotechnical Program	OPG emailed the Michi Saagiig Nations (MSFNs) on June 2, 2025, to invite MSFN monitors to review split spoon samples with Matrix Heritage and WSP as part of the Deep-Water Intake geotechnical program, occurring on June 4, 2025.	N/A
6/2/2025	Curve Lake First Nation	Email, Document Review	Review of Archaeology Materials - Pickering Deep Water Intake	Curve Lake First Nation (CLFN) reached out to confirm access details for recent archaeology related information shared with the Michi Saagiig Nations. OPG clarified access process for CLFN.	N/A
6/4/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas	Document Review, Email	Pickering Draft Capacity Funding Agreement (CFA)	OPG emailed the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and Mississaugas of Scugog Island First Nation) on June 4, 2025, to share the initial draft for the Pickering Capacity Funding Agreement (CFA) and requested feedback from the Nations. OPG stated that they will also follow up with revised Memorandum of Understanding (MoU) Amending Agreements.	N/A

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	of Scugog Island First Nation				
6/5/2025	Hiawatha First Nation	Document Review, Email	Pickering - Amending Agreement to Memorandum of Understanding (MoU)	OPG emailed Hiawatha First Nation (HFN) on June 5, 2025, to share a proposed Amending Agreement to the Pickering MoU for HFN's review.	N/A
6/5/2025	Curve Lake First Nation	Document Review, Email	Pickering - Amending Agreement to Memorandum of Understanding (MoU)	OPG emailed Curve Lake First Nation (CLFN) on June 5, 2025, to share a proposed Amending Agreement to the Pickering MoU for CLFN's review. CLFN responded on June 13, 2025, to confirm the acceptance of changes. OPG stated on June 17, 2025, that they are planning to share the proposed Capacity Funding Agreement (CFA) budgets this week. On June 18, 2025, OPG sent CLFN the fully signed MoU Revision and stated that a revised CO will follow. On June 20, 2025, OPG followed up with CLFN to provide an update regarding capacity funding proposed budgets.	N/A
6/5/2025	Alderville First Nation	Document Review, Email	Pickering - Amending Agreement to Memorandum of Understanding (MoU)	OPG emailed Alderville First Nation (AFN) on June 5, 2025, to share a proposed Amending Agreement #2 to the Pickering MoU for AFN's review. On July 3, 2025, AFN sent OPG the signed Pickering Amended MoU.	N/A
6/5/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	OPG/Michi Saagiig Nations Pickering Table	OPG met with the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on June 5, 2025. Topics of discussion included: 1. Opening & Updates - Stage 1 Terrestrial Archaeology Update (Timmins Martelle Heritage Consultants (TMHC)) - Review Status of Documents; Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) Licensing; permits 2. Project Updates - Pickering Component Storage Structure (PCSS), Storage Building 5 (SB5), Decommissioning - Deep Water Intake (DWI) - Dry Storage Module (DSM) Relocation Update 3. Discussion, Actions, & Closing	N/A
6/5/2025	Curve Lake First Nation	Email, Document Review	Pickering Table Materials - Access for Curve Lake First Nation	OPG shared copies of SharePoint materials via email with Curve Lake First Nation (CLFN) representative supporting CLFN.	N/A
6/9/2025	Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering - Amending Agreement to Memorandum of Understanding (MoU)	OPG emailed the Mississaugas of Scugog Island First Nation (MSIFN) on January 13, 2025, to share a Draft Amending Agreement to the Pickering MoU for MSIFN's review, as well as the final working version of the Pickering Indigenous Engagement Plan (IEP). On April 2, 2025, MSIFN sent OPG the Draft Amending Agreement to the Pickering MoU with redline edits from MSIFN's legal team. On May 14, 2025, OPG shared the reviewed MoU extension with MSIFN and updated budget to account for Arcadis Phase 1. On June 6, 2025, MSIFN sent OPG the signed amending agreement.	N/A
6/9/2025	Alderville First Nation Curve Lake First Nation	Email	Nuclear Sustainability Services (NSS): OPG/MSFN – Pickering	OPG's responses to Michi Saagiig First Nations (MSFNs) Arcadis' review of Canadian Nuclear Safety Commission's (CNSC's) detailed comments on the Pickering Nuclear Generating Station (NGS) Detailed Decommissioning Plan (DDP) and Storage with Surveillance (SWS) Plan.	DDP

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	Hiawatha First Nation Mississaugas of Scugog Island First Nation		NGS DDP Technical Review's Response		
6/9/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering - Predictive Environmental Risk Assessment (PERA) and Climate Change Assessment Summary Report	OPG reached out via email to learn whether there may be comments and feedback expected related to the Pickering site Predictive Environmental Risk Assessment (PERA) and Climate Change Assessment Summary Reports. Curve Lake First Nation (CLFN) reached out on June 9 (requesting an extension) and Mississaugas of Scugog Island First Nation (MSIFN) reached out to share that a third party report review would be forthcoming for OPG review. These reports were previously shared with the Michi Saagiig Nations on April 15, 2025, related to the Pickering Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL) Licence Renewal Application with the Canadian Nuclear Safety Commission (CNSC).	N/A
6/10/2025	Chimnissing (Beausoleil First Nation)	Document Review, Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA) submission to the Canadian Nuclear Safety Commission (CNSC)	OPG emailed Beausoleil (Chimnissing) First Nation (BFN) on November 22, 2024, to notify BFN of OPG's intent to apply for early renewal and consolidation of the Pickering Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL). On December 13, 2024, OPG emailed BFN a copy of the Predictive Environmental Risk Assessment (PERA) for the Pickering Component Storage Structure (PCSS) and requested feedback from BFN. On June 10, 2025, OPG provided an update regarding the PCSS PERA, attached a copy of the revised PCSS PERA, and requested input from BFN.	N/A
6/10/2025	Chippewas of Rama First Nation	Document Review, Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA) submission to the Canadian Nuclear Safety Commission (CNSC)	OPG emailed Chippewas of Rama First Nation (CRFN) on November 22, 2024, to notify CRFN of OPG's intent to apply for early renewal and consolidation of the Pickering Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL). On December 13, 2024, OPG emailed CRFN a copy of the Predictive Environmental Risk Assessment (PERA) for the Pickering Component Storage Structure (PCSS) and requested feedback from CRFN. On June 10, 2025, OPG provided an update regarding the PCSS PERA, attached a copy of the revised PCSS PERA, and requested input from CRFN.	N/A
6/10/2025	Chippewas of Georgina Island First Nation	Document Review, Email	Pickering Component Storage Structure (PCSS) Predictive Environmental Risk Assessment (PERA) submission to the Canadian Nuclear Safety Commission (CNSC)	OPG emailed Chippewas of Georgina Island First Nation (CGIFN) on November 22, 2024, to notify CGIFN of OPG's intent to apply for early renewal and consolidation of the Pickering Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL). On December 13, 2024, OPG emailed CGIFN a copy of the Predictive Environmental Risk Assessment (PERA) for the Pickering Component Storage Structure (PCSS) and requested feedback from CGIFN. On June 10, 2025, OPG provided an update regarding the PCSS PERA, attached a copy of the revised PCSS PERA, and requested input from CGIFN.	N/A
6/11/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering General Update	Part 1 email: On June 11, 2025, OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, and the Mississaugas of Scugog Island First Nation) to follow up on the Pickering Table which occurred on June 5, 2025. OPG shared briefing notes with MSFN. OPG requested feedback from MSFN regarding Deep Water Intake (DWI) and Marine Archaeology. On June 17, 2025, Mississaugas of Scugog Island First Nation (MSIFN) shared preliminary comments from Matrix and Timmins Martelle Heritage Consultants (TMHC) regarding the proposed scope of work for the marine archaeology assessment. OPG confirmed that the comments were shared with the DWI team. Part 2 email:	PROL, WFOL, Archaeology, Geotechnical

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				<p>On June 16, 2025, OPG followed up with the Nations to request feedback on the recently presented marine archaeology. OPG also requested input from the Nations on proposed agenda items or discussion topics of interest for the next Pickering Table. OPG also attached supplemental information for reference, as a follow-up to the meeting from June 5, 2025.</p> <p>Geotechnical Update email: On June 19, 2025, OPG sent MSFN an update for the geotechnical program associated with the DWI. OPG stated that anyone with interest in field monitoring/visits should reach out to OPG. On July 3, 2025, OPG shared another weekly geotechnical update with the Michi Saagiig Nations.</p>	
6/12/2025	Curve Lake First Nation	Email	Pickering - Predictive Environmental Risk Assessment (PERA) and Climate Change Assessment Summary Report	Curve Lake First Nation (CLFN) reached out to provide questions related to the Pickering Site PERA and Pickering Component Storage Structure (PCSS) PERA, as well as the Climate Change Assessment Summary Report. OPG follow-up/clarification correspondence followed on June 13, 18, and 19, 2025.	Climate Change
6/13/2025	Mississaugas of Scugog Island First Nation	Email	Pickering Table Materials - Access for Timmins Martelle Heritage Consultants (TMHC) (terrestrial archaeology) and Matrix Heritage (marine archaeology)	Mississaugas of Scugog Island First Nation (MSIFN) reached out to OPG for support in sharing key archaeology documents with the Nations' archaeologists. OPG actioned the request to share the information on June 13, 2025.	N/A
6/13/2025	Curve Lake First Nation	Email, Document Review	Revised MoU for Capacity Funding (Pickering)	Curve Lake First Nation (CLFN) accepted and shared the signed, proposed revision and extension to the Pickering Memorandum of Understanding (MoU) capacity agreement. OPG followed up to confirm and provide an update on the Capacity Funding budget on June 17, 2025.	N/A
6/17/2025	Kawartha Nishnawbe First Nation	Document Review, Email	Pickering NGS Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL)	OPG emailed Kawartha Nishnawbe First Nation (KNFN) on June 17, 2025, to notify KNFN about OPG's intent to apply for early renewal and consolidation of the Pickering Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) and the Pickering Waste Facility Operating Licence (WFOL). OPG attached the current version of the Pickering Indigenous Engagement Plan (IEP).	N/A

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6/17/2025	Mississaugas of New Credit First Nation	Email	Pickering NGS Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL)	<p>OPG emailed the Mississaugas of the Credit First Nation (MCFN) on June 17, 2025, to notify MCFN about OPG's intent to apply for early renewal and consolidation of the Pickering Nuclear Generating Station (NGS) Power Reactor Operating Licence (PROL) and the Pickering Waste Facility Operating Licence (WFOL). MCFN expressed interest in remaining updated on this file.</p> <p>OPG sent MCFN a draft copy of OPG's Indigenous Engagement Plan (IEP) on January 30, 2025, and MCFN confirmed the receipt of the draft IEP on February 3, 2025.</p>	N/A
6/17/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table Materials - Part 2 Follow-up materials for the Michi Saagiig Nations	<p>OPG shared a Part 2 update to the recent Pickering Table Meeting from June 4th, 2025, with the Michi Saagiig Nations. Updates included seeking feedback on the proposed path forward at Pickering related to archaeology and early site activities; and a summary of Action Items and follow-up items.</p> <p>Mississaugas of Scugog Island First Nation (MSIFN) reached out to share a copy of the Draft Stage 1 Pickering Terrestrial Archaeology Assessment with OPG and the Michi Saagiig Nations. The report had been prepared by Timmins Martelle Heritage Consultants (TMHC).</p>	N/A
6/17/2025	Hiawatha First Nation	Email, Document Review	Revised MoU for Capacity Funding (Pickering)	Hiawatha First Nation (HFN) accepted and shared the signed proposed revision and extension to the Pickering Memorandum of Understanding (MoU) capacity agreement.	N/A
6/18/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering NGS Archaeology	On June 17, 2025, the Mississaugas of Scugog Island First Nation (MSIFN) sent the Draft Stage 1 Archaeological Assessment for Pickering Nuclear Generating Station (NGS) to OPG. The Report was prepared by Timmins Martelle Heritage Consultants (TMHC), and the other Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation) reviewed the Report prior to sending to OPG. OPG acknowledged that they received the report and shared it with the OPG Projects team.	N/A
6/18/2025	Curve Lake First Nation	Email, Document Review	Revised MOU for Capacity Funding (Pickering)	OPG shared the signed revision and extension to the Pickering Memorandum of Understanding (MoU) Agreement (Amendment). On June 26, 2025, OPG shared the amended agreement.	N/A
6/19/2025	Mississaugas of Scugog Island First Nation	Email	Pickering - Predictive Environmental Risk Assessment (PERA) and Climate Change Assessment Summary Report	Mississaugas of Scugog Island First Nation (MSIFN) shared reached out to share with OPG and the Michi Saagiig Nations the third party (Arcadis) review of the Pickering Site PERA report and the Climate Change Assessment Summary Report.	PN PERA Climate Change Summary Report
6/19/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Geotechnical/Deep Water Intake (DWI)	OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on June 19, 2025, to provide the link to the weekly geotechnical update for the respective week. On June 26, 2025, OPG sent the link to the weekly geotechnical update for the respective week. OPG also provided an updated schedule for geotechnical drilling. On June 28, 2025, Curve Lake First Nation (CLFN) acknowledged that they received the update and thanked OPG for sharing it.	N/A

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6/24/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Indigenous Engagement Table - Distribution of Proposed Agenda	<p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on June 24, 2025, to share a proposed agenda for the upcoming Pickering Table on July 3, 2025. Proposed topics of discussion include:</p> <p>1. Opening & Introductions, Updates</p> <p>2. Licensing (Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL))</p> <p>3. Discussion Topics</p> <p>3.1. <i>Terrestrial Archaeology</i></p> <p>3.2. <i>Upcoming aquatic sampling (schedule overview)</i></p> <p>4. Project Updates</p> <p>4.1. <i>Marine archaeology</i></p> <p>4.2. <i>Geotechnical update</i></p> <p>4.3. <i>Dry Storage Module (DSM) Relocation</i></p> <p>5. Discussion, Actions, Closing</p> <p>OPG sent MSFN a follow-up email on June 26, 2025, to invite the Nations to an upcoming meeting with Timmins Martelle Heritage Consultants (TMHC) to discuss Stage 2 terrestrial archaeology. OPG also shared a notable event from Pickering Nuclear Generating Station (NGS), stating that a deceased falcon was found onsite.</p>	PROL, WFOL, Archaeology, Geotechnical, Wildlife
6/24/2025	Hiawatha First Nation	Email, Document Review	Revised MoU for Capacity Funding (Pickering)	OPG emailed Hiawatha First Nation (HFN) the fully completed Revised Memorandum of Understanding (MoU) for Pickering Capacity Funding. Previously, on June 17, 2025, HFN emailed OPG the signed copy.	N/A

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6/25/2025	Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering - Terrestrial Archaeology Report (Draft)	Mississaugas of Scugog Island First Nation (MSIFN) reached out to share a copy of the Draft Stage 1 Pickering Terrestrial Archaeology Assessment with OPG and the Michi Saagiig Nations. The report had been prepared by Timmins Martelle Heritage Consultants (TMHC).	N/A
6/25/2025	Hiawatha First Nation, Curve Lake First Nation	Email	Summary of Recent Meeting Participation and Attendance for Hiawatha First Nation)	OPG emailed Hiawatha First Nation (HFN) and Curve Lake First Nation (CLFN), by request, the recent history of Pickering-related engagement participation by representatives of HFN. OPG followed up on July 3, 2025, to provide a further clarification.	N/A
6/25/2025	Mississaugas of Scugog Island First Nation	Email, Document Review	Marine Archaeology Monitoring Proposal (Pickering Deep Water Intake)	OPG received a marine archaeology monitoring proposal from Mississaugas of Scugog Island First Nation (MSIFN) related to Pickering Deep Water Intake (DWI) geotechnical program.	N/A
6/26/2025	Curve Lake First Nation	Document Review, Email	Pickering NGS CO 50029786 Amendment 2	OPG emailed Curve Lake First Nation (CLFN) on June 26, 2025, to share CO 50029786 Amendment 2 for the Pickering Nuclear Generating Station (NGS) Indigenous Engagement Memorandum of Understanding (MoU). OPG requested the acknowledgement of receipt and acceptance of the purchase order via e-mail. No response has been received from CLFN.	N/A
6/26/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Deep Water Intake - Geotechnical and Aquatic Updates	OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) an update on the Pickering geotechnical program (boreholes) and revised schedule dates.	N/A
6/26/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas	Email	Notable Event - Peregrine Falcon and Terrestrial Archaeology Meeting with TMHC	OPG shared an update with the Michi Saagiig Nations related to an unfortunate event where a peregrine falcon was found deceased on site at Pickering. Following an investigation, it was OPG's understanding that the Peregrine Falcon died due to impact with a door on one of our units.	Species of Interest Notable Event

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	of Scugog Island First Nation			<p>In addition, an invitation was shared with the Michi Saagiig Nations to participate in a terrestrial archaeology meeting with Timmins Martelle Heritage Consultants (TMHC). The purpose of the meeting was to discuss potential next steps and path forward related to further (e.g., Stage 2) assessment, based on the draft findings of the Stage 1 report.</p> <p>On June 27, OPG received follow-up communications from Mississaugas of Scugog Island First Nation (MSIFN), Hiawatha First Nation (HFN), and on June 30 from Curve Lake First Nation (CLFN) for follow-up. This finding was tabled for further and future discussion at the Environment Table with the Michi Saagiig Nations.</p>	
6/26/2025	Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation, Alderville First Nation	Community Meeting	Letter of Notification to CNSC re: amendment application for the Darlington New Nuclear Project Power Reactor Construction Licence to include the construction of a Low and Intermediate Level Waste.	Letter of Notification to the Canadian Nuclear Safety Commission (CNSC) re: amendment application for the Darlington New Nuclear Project (DNNP) Power Reactor Construction Licence to include the construction of a Low and Intermediate Level Waste.	N/A
6/27/2025	Alderville First Nation	Email, Virtual Meeting	Revised MoU for Capacity Funding (Pickering) and Invoicing	Alderville First Nation (AFN) representative met with OPG representative to discuss the current Memorandum of Understanding (MoU) for Pickering capacity funding and invoicing process.	N/A
7/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Terrestrial Archaeology Meeting with TMHC (Pickering)	<p>OPG and representatives of the Michi Saagiig Nations met with Timmins Martelle Heritage Consultants (TMHC) to discuss potential next steps related to terrestrial archaeology assessment for the Pickering site.</p> <p>OPG provided direction to proceed with planned Stage 1-2 terrestrial archaeology assessment, summarized in email by OPG same day</p>	N/A
7/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email Document Review	Pickering - Electrode Boiler Replacement and ECA Amendment (Permit)	OPG shared a follow-up note with the Michi Saagiig Nations regarding a minor update related to the Electrode Boiler Replacement Project at Pickering, and related Environmental Compliance Approval (ECA). The vendor recently communicated that the use of an oxygen scavenger is required to remove residual dissolved oxygen, in order to maintain the warranty for the boilers. Accordingly, in addition to the previously indicated chemical products [i.e. Steamate NA1321 (ammonia) and OptiSperser ADJ5150 (caustic)], the project team has also recommended the use of "CORTROL IS3070" (sodium bisulphite) as the oxygen scavenger. The Safety Data Sheet (SDS) was attached for reference.	N/A

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7/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table - July 2025	July 2025 Pickering Table Meeting (9am-12pm) with the Michi Saagiig Nations. Pre-materials shared June 24, 2025. Proposed Agenda: (1) Opening & Introductions, Updates (2) Licensing (Power Reactor Operating Licence (PROL)/Waste Facility Operating Licence (WFOL)) – High level walk-through (3) Discussion Topics 3 (i) Terrestrial Archaeology 3 (ii) Upcoming aquatic sampling (schedule overview) (4) Project Updates 4 (i) Marine archaeology 4 (ii) Geotechnical update 4 (iii) Dry Storage Module (DSM) Relocation (5) Discussion, Actions, Closing	N/A
7/3/2025	Alderville First Nation	Email, Document Review	Revised MoU for Capacity Funding (Pickering)	Alderville First Nation (AFN) accepted and shared the signed proposed revision and extension to the Pickering Memorandum of Understanding (MoU) capacity agreement.	N/A
7/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Table Meeting	OPG shared a copy of the finalized Pickering Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL) Licence Renewal Application, submitted to the Canadian Nuclear Safety Commission (CNSC) on June 27, 2025.	N/A
7/10/2025	Alderville First Nation	Email, Document Review	Revised MoU for Capacity Funding (Pickering)	OPG emailed Alderville First Nation (AFN) the fully completed Revised Memorandum of Understanding (MoU) for Pickering Capacity Funding. Confirmed receipt on July 11, 2025. Subsequent invoice shared July 29, 2025.	N/A
7/11/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas	Email	Aquatic Sampling Update - OPG Notification of Sturgeon Netting	On July 11, 2025, OPG and the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) had an email exchange to schedule a date for sturgeon sampling. OPG re-shared the 2025 Pickering Nuclear Aquatic Sampling Plan with the Nations. On July 15, OPG identified dates for sturgeon and eel netting. On July 18, OPG circulated a new proposed draft schedule for aquatic sampling, based on feedback from the Nations. Between July 18 and July 24, OPG requested confirmation from each Nation regarding the proposed aquatic sampling schedule. On July 25, upon Mississaugas of Scugog Island	Species of Interest Aquatic Sampling

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	of Scugog Island First Nation			First Nation's (MSIFN's) request, OPG confirmed that additional Nation attendees may be present to support mental/spiritual safety, given cultural significance. On July 28, OPG re-shared logistics and vendor contact information for attendees.	
7/16/2025	Mississaugas of Scugog Island First Nation	Email	Draft Capacity Funding Agreement - proposed Budget (Pickering)	Mississaugas of Scugog Island First Nation (MSIFN) reached out to inquire as to when the proposed Pickering capacity funding agreements will be shared with the Michi Saagiig Nations.	N/A
7/16/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Follow-up materials from Pickering Table Meeting - July 2025	OPG shared a follow-up update with the Michi Saagiig Nations following the July 2025 Pickering Table meeting. Updates included meeting materials, archaeology updates, and proposed new actions following the meeting. Mississaugas of Scugog Island First Nation (MSIFN) followed-up same day to share proposed discussion topics for the upcoming (August) Pickering Table meeting.	N/A
7/17/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Waste Table Meeting	1. Update on Canadian Nuclear Safety Commission (CNSC) accepting OPG's Detailed Decommissioning Plan (DDP) 2. Opportunity for First Nations to Share Updates 3. Review Engagement Plan Topics 4. Project Updates 5. Presentation from Radioactive Material Transportation team – Colin Crawford 6. Q/A Period for Radioactive Materials Transportation (RMT) Presentation 7. Waste Day – Opportunity to bring regulators and consultation staff together	N/A
7/18/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering - Terrestrial Archaeology Proposal (Stage 1-2) Report (Draft)	MSIFN reached out to share a copy of the Draft Proposal for Stage 1-2 Pickering Archaeology Assessment. The proposal had been reviewed by the Michi Saagiig Nations.	N/A
7/18/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	OPG Pickering - Updates for the Michi Saagiig Nations	OPG shared a follow-up update with the Michi Saagiig Nations related to Pickering activities. Topics and information included: 1) CMS (Central Maintenance Services) [Hydro One] Laydown area and planned boreholes; 2) Emergency Water Service Line inspection & maintenance; and 3) Dry Storage Module Relocation Alderville First Nation (AFN) followed-up with questions pertaining to the CMS Laydown area proposed site activities. Proposed work was paused to allow time for a meeting with representatives of the Michi Saagiig Nations and Timmins Martelle Heritage Consultants (TMHC) (archaeologist) to discuss and confirm questions asked by AFN. Meeting was scheduled for July 23.	Archaeology

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7/18/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Deep Water Intake - Geotechnical and Aquatic Updates	<p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) to provide an updated weekly communication for Pickering with information pertaining to:</p> <p>1) Geotechnical program updates (Deep Water Intake (DWI)); and</p> <p>2) Aquatic Sampling program & proposed schedule</p> <p>Follow-up confirmation for Alderville First Nation (AFN) monitoring participation for sturgeon netting activities with Curve Lake First Nation (CLFN) support (July 19, 2025).</p>	N/A
7/22/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	PNGS CMS Area Path Forward - Meeting Confirmation	<p>July 22 - OPG reached out directly to Curve Lake First Nation (CLFN), Hiawatha First Nation (HFN) and Mississaugas of Scugog Island First Nation (MSIFN) archaeological leads with date proposed by Alderville First Nation (AFN) and confirmed by Timmins Martelle Heritage Consultants (TMHC) re: Central Maintenance Services (CMS) laydown area path forward</p> <p>Same day responses from each to confirm attendance by self or delegate, and to identify further attendees.</p>	N/A
7/22/2025	Mississaugas of Scugog Island First Nation	Email	OPG/MSIFN Follow-up to Framework Meeting	<p>OPG emailed MSIFN on July 22 to follow-up on actions for OPG, including types of Capacity Funding and the Organizational Chart and Responsibility Descriptions. MSIFN responded July 23 stating that OPG reached out regarding the Pickering Capacity Funding Agreement and a meeting has been planned. MSIFN also expressed interest in meeting with OPG's finance team. OPG responded, proposing times to meet with the finance team. MSIFN proposed July 28 and OPG accepted.</p> <p>On August 11, 2025, OPG sent a follow-up email regarding the topics discussed with MSIFN (Capacity Funding, LTRA, CHQ, and Organizational Chart & Responsibility Descriptions).</p>	N/A
7/22/2025	Mississaugas of Scugog Island First Nation	Email	Indigenous Procurement Data for the Michi Saagiig Nations and OPG Projects	<p>OPG shared a response with MSIFN regarding a previous request to release granular Indigenous procurement spend data for Michi Saagiig Nation-owned businesses, total Indigenous spend, and total spend pertaining to OPG nuclear (Pickering, Darlington, Pickering Refurbishment, and Darlington New Nuclear Project (DNNP)).</p> <p>Upon internal review, the requested data could not be released (commercially sensitive and third party information). Links to publicly available data sources were shared for reference.</p>	Indigenous Procurement
7/23/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	OPG Pickering - CMS Laydown Area Proposed Site Activities and Path Forward	<p>Meeting to discuss the path forward, approach, and discussion related to questions raised by Alderville First Nation (AFN) re: proposed site activities at the Pickering Hydro One Central Maintenance Services (CMS) Yard location.</p> <p>Follow-up notes and actions were shared by OPG on July 24, 2025. Mississaugas of Scugog Island First Nation (MSIFN) confirmed staff for Timmins Martelle Heritage Consultants (TMHC) site visit monitoring. OPG shared further follow up information with Michi Saagiig Nations August 5 including information included written responses to questions previously raised by AFN, and provided a contact from the City of Pickering related to improvements planned for Sandy Beach Road and Montgomery Park Road per Nations' request.</p>	Archaeology

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7/23/2025	Curve Lake First Nation	Email	OPG Pickering - Central Maintenance Services (CMS) Laydown Area Proposed Site Activities and Path Forward	Curve Lake First Nation (CLFN) reached out to request contact information for OPG Director Refurbishment by name and to inquire about potential participation related to an OPG archaeology protocol. OPG and CLFN email correspondence continued August 1 & 2, 2025.	Archaeology
7/30/2025	Mississaugas of Scugog Island First Nation	Email	Draft Capacity Funding Budget (Pickering)	Mississaugas of Scugog Island First Nation (MSIFN) and OPG confirmed alignment on remaining capacity funding budget amounts July 30 following communications July 22 & 25 & 29 that proposed budgets were still in development prior to release. Original enquiry by MSIFN was on June 19.	N/A
7/31/2025	Hiawatha First Nation, Curve Lake First Nation, Alderville First Nation, Mississaugas of Scugog Island First Nation	Email Document Review	Pickering ECA Amendment for Stormwater Management (Pickering Component Storage Structure (PCSS), Storage Building 5 (SB5))	OPG shared a draft copy of a permit application with Michi Saagiig Nations, sent afterward to Ministry of Conservation and Parks (MECP) Stormwater (SWM) Environmental Compliance Approval (ECA) Amendment. OPG requested any comments on the permit by October 1 (60 days) noting that it would be sent directly to MECP and that OPG would perform best efforts to integrate the comments into the approvals and designs. As follow-up, OPG provided the final copy of the permit application (submitted to MECP) to the Michi Saagiig Nations on August 21, 2025. Earliest versions of the draft stormwater and geotechnical reports were previously shared with the Michi Saagiig Nations on April 17, 2025.	N/A
7/31/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Table Materials - Preparation Materials for Michi Saagiig Nations (August 2025 Table Meeting)	OPG shared a proposed agenda for the August 2025 Pickering Table meeting, and included Briefing Notes on a number of Pickering topics for reference. Briefing Notes included: - Dry Storage Module (DSM) Relocation; - Deep Water Intake (DWI) - Marine Archaeology; and - Environment - Aquatic Offsetting Options/Concepts In addition, OPG also shared follow-up information related to recent Fish Impingement questions raised at the (previous) July Pickering Table meeting.	N/A
8/1/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Site Activities - Pickering Campus Parking and Roads Boreholes (Briefing Note)	Timmins Martelle Heritage Consultants (TMHC) shared an updated Briefing Note from OPG, describing the proposed scope of work and context for Pickering campus parking and roads and boreholes.	N/A

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8/5/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	CLFN Response - Pickering Campus Parking and Roads Boreholes (Briefing Note)	Timmins Martelle Heritage Consultants (TMHC) shared correspondence with OPG August 5 from Michi Saagiig Nations regarding the Pickering Nuclear Generating Station (PNGS) campus parking lot and road boreholes (sent August 1 by TMHC). Curve Lake First Nation (CLFN) identified no concerns for the upcoming borehole (BH) work, and requested the BH summaries be shared back to Michi Saagiig Nations (MSFNs), suggesting OPG ensure the vendor will follow an Inadvertent discovery plan to ensure any cultural materials discovered (incl Euro-Can) are relayed to MSFNs for further discussion. Aug 8- TMHC prompted for any further response by Alderville First Nation (AFN), Hiawatha First Nation (HFN) or Mississaugas of Scugog Island First Nation (MSIFN) Aug 8 - OPG responded to indicate BH composition summary can be shared late September, indicated vendor and OPG protocols are in place for inadvertent archaeological discoveries, and that IR team would notify the Nations	Archaeology Inadvertent Discovery Plan
8/6/2025	Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, Chimnissing (Beausoleil First Nation)	Email, Document Review	Pickering ECA Amendment for Stormwater Management (Pickering Component Storage Structure (PCSS), Storage Building 5 (SB5))	Permit - Ministry of Conservation and Parks (MECP) Stormwater (SWM) Environmental Compliance Approval (ECA) Amendment. OPG shared copy of permit application with the Chippewa Nations of the Williams Treaties First Nations (WTFN). OPG follow-up on August 8, 11, and 18th for Rama First Nation and Georgina Island First Nation.	N/A
8/6/2025	Mississaugas of Scugog Island First Nation	Email, Document Review	Comments on Draft Capacity Funding Agreement (CFA) (Pickering)	Mississaugas of Scugog Island First Nation (MSIFN) shared comments on the Draft Pickering Capacity Funding Agreement (CFA) with OPG, for review and consideration.	N/A
8/6/2025	Chippewas of Georgina Island First Nation	Email	Framework Agreement	On July 22, 2025, Chippewas of Georgina Island First Nation (CGIFN) emailed OPG stating that they would like to establish agreements with regard to OPG projects in the Williams Treaties First Nations (WTFN) territory. OPG responded on July 24, 2025, acknowledging receipt of the email. There was some back and forth to decide on a date for an introductory meeting between CGIFN and OPG; on August 6, 2025, a date of August 12, 2025 was confirmed.	N/A
8/7/2025	Hiawatha First Nation, Curve Lake First Nation, Alderville First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Deep Water Intake - Geotechnical and Aquatic Updates	OPG shared the Pickering weekly update regarding geotechnical program (Deep Water Intake) and Aquatic Sampling programs with the Michi Saagiig Nations.	N/A
8/7/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting - August 2025	OPG and the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) had a Pickering Table Meeting on August 7, 2025. Topics of discussion included: 1. Environment – Aquatic Sampling Update 2. Project Updates 3. Environment – Aquatic Offsetting Options 4. General Discussion	N/A

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8/8/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Site Activities - Pickering Campus Parking and Roads Boreholes (Briefing Note)	Follow-up to the August 1, 2025, Timmins Martelle Heritage Consultants (TMHC) update to the Michi Saagiig Nations, sharing an updated Briefing Note from OPG describing the proposed scope of work and context for Pickering campus parking and roads and boreholes. TMHC sought further feedback from the Nations related to Pickering Nuclear (PN) campus boreholes. No further comments were raised by Mississaugas of Scugog Island First Nation (MSIFN) and Alderville First Nation (AFN), and Curve Lake First Nation (CLFN) requested a copy of the borehole program report.	N/A
8/8/2025	Hiawatha First Nation	Email, Document Review	Capacity Funding Agreement - Proposed Budget (Schedule A) shared with Hiawatha First Nation	OPG shared the proposed Pickering budgets (Schedule A) to the draft Pickering Capacity Funding Agreement with the Michi Saagiig Nations for review and feedback. This topic was also discussed at the Pickering Table Meeting on August 7.	N/A
8/8/2025	Curve Lake First Nation	Email, Document Review	Capacity Funding Agreement - Proposed Budget (Schedule A) shared with Curve Lake First Nation	OPG shared the proposed Pickering budgets (Schedule A) to the draft Pickering Capacity Funding Agreement (CFA) with the Michi Saagiig Nations for review and feedback. This topic was also discussed at the Pickering Table Meeting on August 7.	N/A
8/8/2025	Alderville First Nation	Email, Document Review	Capacity Funding Agreement - Proposed Budget (Schedule A) shared with Alderville First Nation	OPG shared the proposed Pickering budgets (Schedule A) to the draft Pickering Capacity Funding Agreement (CFA) with the Michi Saagiig Nations for review and feedback. This topic was also discussed at the Pickering Table Meeting on August 7.	N/A
8/8/2025	Mississaugas of Scugog Island First Nation	Email, Document Review	Capacity Funding Agreement - Proposed Budget (Schedule A) shared with Mississaugas of Scugog Island First Nation	OPG shared the proposed Pickering budgets (Schedule A) to the draft Pickering Capacity Funding Agreement (CFA) with the Michi Saagiig Nations for review and feedback. This topic was also discussed at the Pickering Table Meeting on August 7.	N/A
8/13/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	TMHC Added Contingency (Stage 2 AA) - MPR/SBR roads	OPG confirmed added contingency scope for Stage 2 proposal prepared by Timmins Martelle Heritage Consultants (TMHC), and identified City of Pickering road enhancement work at Sandy Beach Rd. (SBR), Montgomery Park Rd. (MPR) and provided a map of proposed locations to be included in the contingency scope for the Stage 2 archaeological assessment (AA).	N/A
8/14/2025	Mississaugas of Scugog Island First Nation	Virtual Meeting	OPG/MSIFN Framework Meeting	OPG had a framework meeting with the Mississaugas of Scugog Island First Nation (MSIFN) on August 14, 2025. Topics of discussion included: - Site Tour - Darlington & Pickering Site-wide Indigenous Engagement Plan (IEP) - Approaches for Future Offsetting - Waste Facility Regulatory Approaches - Corporate Headquarters (CHQ) Discussion - Framework Agreement Edits - Budget Allocations for Contractors	N/A

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				- Community Engagement Approach - SharePoint Access	
8/14/2025	Alderville First Nation	Email, Document Review	Pickering Aquatic Sampling Field Data - July 2025 Campaign	OPG shared the recent field data from the July 2025 aquatic sampling campaign with Alderville First Nation (AFN) by request. The same field data was later shared with all of the Michi Saagiig Nations as part of a general update, on August 21, 2025.	N/A
8/15/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering - Revised Archaeology Proposals (Terrestrial Archaeology Stage 1-2; Marine Archaeology)	Mississaugas of Scugog Island First Nation (MSIFN) reached out to share updated copies of the Timmins Martelle Heritage Consultants (TMHC) revised archaeology proposals for OPG review pertaining to: - Terrestrial Archaeology (Stage 1-2); and - Marine Archaeology Proposals included budgets. On August 19, 2025, OPG confirmed authorization to proceed with both archaeology proposals. On August 20, MSIFN reached out to clarify archaeology costs in the context of the draft Capacity Funding Agreement (CFA) budget. On August 22, OPG provided context for where archaeology budget would fall within the proposed CFA budgets.	N/A
8/18/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Virtual Meeting, Email	Deep Water Intake - PNGS Marine Archaeology Priorities Meeting	OPG, Timmins Martelle Heritage Consultants (TMHC), and Matrix Heritage met to align on the Marine Archaeology scope of work and workflow with project team. Discussions centered priorities of desktop study and aquatic studies monitoring. OPG follow up email from same day Deep Water Intake (DWI) Pickering Nuclear Generating Station (PNGS) Marine Archaeology Priorities meeting with TMHC & Matrix Heritage. Shared vertical tow & horizontal tow sampling breakdown of steps and differentiated benthic from bongo sleds re: lakebed disturbance.	N/A
8/18/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering - Fish Impingement Event follow-up (Notable Event)	OPG shared an update with the Michi Saagiig Nations pertaining to an earlier (May 2025) Fish Impingement Event. OPG shared that the Fisheries and Oceans Canada (DFO) has communicated with OPG that it has reviewed the fish event report and agrees with the conclusions of the report.	N/A
8/21/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table Materials - Follow-up materials for the Michi Saagiig Nations from August 2025 Table meeting	OPG shared updates with the Michi Saagiig Nations from the recent Pickering Table Meeting from August 7, 2025. Updates included meeting materials, a Pickering Waste Management Facility (PWMF) licencing update (related to Pickering Component Storage Structure (PCSS), a Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL) licensing update, a summary of proposed Action Items from the recent meeting, field results from the July 2025 aquatic sampling campaign, and Central Maintenance Services (CMS)-area site activity follow-up information.	N/A

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8/21/2025	Curve Lake First Nation	Virtual Meeting	Deep Water Intake - Descoped Boreholes	OPG met with Timmins Martelle Heritage Consultants (TMHC) to discuss boreholes (BHs) BH11 and BH12 for Deep-Water Intake (DWI) project and identify if TMHC had interest to sample adjacent BH identified through Facilities & Infrastructure projects (via Pickering Nuclear Generating Station (PNGS) Campus parking lot briefing card, shared with Michi Saagiig Nations (MSFNs) Aug 1). TMHC identified that given the aerial imaging and other factors, sampling of other BH in the area would not be of high archaeological interest. Email follow up from TMHC with MSFNs as an action coming out of the meeting.	N/A
8/27/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Nuclear Generating Station (PNGS) UAA - TMHC & Matrix request for Geodata For Archaeological Potential Modeling	Timmins Martelle Heritage Consultants (TMHC) emailed OPG to request geodata and shapefiles shared with TMHC and Matrix Heritage to support creating an archaeological potential model as part of the marine arch Scope of Work (SoW) document. TMHC noted there should be no significant impacts to the lakebed in disposing dredged materials, and indicated they did not believe additional geostudies are required for that area unless OPG project team identified. Matrix also provided recommendations for geodata required for expanded UAA study areas identified within the proposal. OPG responded to share the geodata requested via SharePoint (TMHC/Matrix folders) - of sub-bottom profiling data provided later.	N/A
8/27/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Site Monitoring or Site Work	TMHC Site Monitoring Visit - Montgomery Park Rd. - Stage 1 AA	Site monitoring visit with Timmins Martelle Heritage Consultants (TMHC) for Stage 1 Archaeological Assessment in Pickering Nuclear Generating Station (PNGS) parking lot and along Montgomery Park Rd. (MPR) between Brock Rd. and eastern limit of construction (per 50% complete design drawings provided by OPG).	N/A
8/28/2025	Alderville First Nation	Virtual Meeting	OPG/AFN Framework Meeting	OPG had a Framework Table meeting with Alderville First Nation (AFN) on August 28, 2025. Topics of discussion included: - Sussex/Comms Budget Revisions - OPG Port Hope Information Centre - Pickering Nuclear Generating Station (NGS) Archaeological Liaisons Funding Source - LOI Funding Source - Darlington NGS Site-Wide Indigenous Engagement Plan.	N/A
8/28/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Table Updates (IEP, Permitry, Pollinator Garden)	OPG shared updates for Pickering Nuclear Generating Station (PNGS) activities with Michi Saagiig Nations (MSFNs). An updated Indigenous Engagement Plan (IEP) was sent for Nations initial review noting a more fulsome review for 2026. Pickering Component Storage Structure (PCSS) / Storage Building 5 (SB5) Environmental Compliance Approval (ECA) Amendment identified submitted to Ministry of Conservation and Parks (MECP) - final version shared. Identified changes to the final version were minimal. OPG shared that Toronto and Region Conservation Authority (TRCA) Infrastructure Development Permit for proposed SB5 submitted Aug 15, package contents outlined in this email - invitation extended to discuss further if any questions. New well licence for BH27A (Deep Water Intake (DWI) project) identified submitted & application documents provided via SharePoint. Pollinator Garden Relocation Briefing Card (temporary relocation slated for Oct 2025). Feedback on new location welcomed from MSFN. Photos and maps included within briefing card.	N/A
8/29/2025	Curve Lake First Nation	Email, Document Review	Capacity Funding Agreement - Proposed Budget (Schedule A) shared with Curve Lake First Nation	OPG shared the proposed budgets (Schedule A) to the draft Pickering Capacity Funding Agreement (CFA) with Curve Lake First Nation (CLFN).	N/A

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9/3/2025	Alderville First Nation, Mississaugas of Scugog Island First Nation, Hiawatha First Nation, Curve Lake First Nation	Document Review, Email	Pickering Nuclear Generating Station (PNGS) - Deep Water Intake (DWI) - Geotechnical Weekly & Aquatic Sampling	Sept 3 - OPG provided weekly update on geotechnical program and upcoming aquatic sampling (commencing Sept 15). Request for any identified dates of interest. Sept 5 - OPG sent an update for the final sediment screening date, which changed from Wed. Sept 17th to Fri. Sept 12 and indicated alignment with Matrix Heritage availability.	N/A
9/4/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Nuclear Generating Station (PNGS) - Pickering Table Meeting Draft Agenda	OPG provided a draft agenda for upcoming Pickering Table meeting scheduled September 11. Topics included Capacity Funding Agreement (CFA) update, archaeological update, spoils management, offsetting, aquatic sampling, biodiversity sampling, project updates from Pickering Learning Centre (PLC) Pollinator Garden, Pickering Component Storage Structure (PCSS) / Storage Building 5 (SB5), Deep Water Intake (DWI). Invitation extended for Michi Saagiig Nations input or proposed changes. NOTE - Some email addresses input incorrectly - email re-sent to contacts same day. Sept 6 – Alderville First Nation (AFN) requested agenda added to Outlook meeting invite Sept 9 - Slides and meeting materials sent and provided via SharePoint links	N/A
9/10/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	Pickering Nuclear Generating Station (PNGS) - Deep Water Intake (DWI) - Geotechnical Weekly & Aquatic Sampling	September 10 - OPG provided weekly update on geotechnical program and upcoming final aquatic sampling (September 12) along with fall aquatic sampling schedule.	N/A
9/10/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Document Review, Email	PNGS - Terrestrial and Marine Archaeological Updates by TMHC	Sept 9 – Timmins Martelle Heritage Consultants (TMHC) emailed Michi Saagiig Nations to provide an update on Terrestrial and Marine archaeology assessments for Pickering Nuclear Generating Station (PNGS). Stage 1-2 archaeological assessment (AA) terrestrial scope identified work upcoming on Sept 11 pending locates, anticipated 7-10 days and included logistics, map and personal protective equipment (PPE) details for any Michi Saagiig Nation monitors interested. Marine archaeology update focused around Desktop study for OPG water holdings and portions outside, potentially impacted by refurbishment. Priority #1 and #2 areas were identified including lake infill, intake cap, bridge allowance and provisional study areas. Identified that studies were being planned for September. Sept 10th - Response by Alderville First Nation (AFN) identified no liaison available to attend, and interest to keep updated on any findings.	N/A
9/11/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting	OPG and the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) had a Pickering Table Meeting on Sept 11, 2025. Topics of discussion included: Capacity Funding Update, Archaeological Proposals Update, Spoils Management Aquatic Sampling Update (September) Biodiversity Sampling/Attendance Project Updates - Pickering Learning Centre (PLC) – Pollinator Garden - Pickering Component Storage Structure (PCSS) / Storage Building 5 (SB5) - PCSS/SB5 Storm Water Management (SWM) Environmental Compliance Approval (ECA) Amendment - Deep Water Intake (DWI) – Bridge Design, Geotechnical, Marine Archaeology, Spoils Management, Dry Storage	N/A

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				Module (DSM) Relocation - Environment – Aquatic Offsetting Feedback	
9/12/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Nuclear Generating Station (PNGS) - Deep Water Intake (DWI) - Aquatic Sampling call for engagement	OPG emailed Michi Saagiig Nations to confirm attendance for Sept 15th sampling activities and noted current participant sign-up. Logistical information from Ecometrix relating to the nearshore netting was also included to support attendees. Alderville First Nation (AFN) confirmed attendance same-day.	N/A
9/12/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Nuclear Generating Station (PNGS) - Licensing Workshop & Environmental site visit	On Sept 12, Curve Lake First Nation (CLFN) indicated that Michi Saagiig availability Oct 29 as a proposed date for a half-day hybrid licence workshop (Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL)) and half-day environmental site tour. During subsequent Pickering Table on Oct 2 - a timing conflict was flagged by Mississaugas of Scugog Island First Nation (MSIFN) for Oct 29. Michi Saagiig Nations identified that availability for an environmental tour would be provided after Oct 3 meeting. On Oct 6 OPG sent 2 potential tour schedules and request for feedback on route and attendance confirmation from Michi Saagiig Nations & requested attendance confirmed by Oct 8. CLFN responded to identify that there was a confirmed conflict for some delegates Oct 29 and requested the tour deferred to November. CLFN also stated there was no remaining funding for some Nation engagement and proposed to carry forward the conversation once resolved. OPG responded Oct 7 to indicate a new date would be entertained in November for a tour and encouraged the Nations to continue invoicing toward the existing budget available. OPG offered to meet with any Nations experiencing invoicing challenges.	Capacity Funding Agreements
9/16/2025	Chippewas of Georgina Island First Nation	Email	Proposed Chippewas of Georgina Island First Nation Monthly Meeting	OPG emailed the Chippewas of Georgina Island First Nation (CGIFN) on August 18, 2025, to confirm availability for a meeting September 17, 2025, and asked if CGIFN could provide any specific topics and/or areas of focus to prioritize at the meeting. CGIFN requested OPG to send the template for the Framework agreement, agreement templates for projects specific to the Darlington New Nuclear Project (DNNP), Wesleyville, and Pickering, and provided the following topics of interest for discussion at the meeting: DNNP, Wesleyville, and economic opportunities for Georgina Island. On August 22, 2025, OPG provided a draft Framework Agreement and a high-level written update of the projects and initiatives happening at OPG, including Pickering Nuclear Generating Station (PNGS). CGIFN responded on August 25, 2025, stating that the Framework meeting being held September 17, 2025, should also include Chippewas of Rama First Nation and Chimnissing. They also stated that they would like to slightly alter the content of the September 17 meeting: a high-level introduction about the DNNP, Wesleyville, and Pickering sites, and that economic opportunities for Georgina Island may be accomplished via email instead. OPG responded on September 4, 2025, also proposing to discuss the Burial Site Investigation (BSI) at OPG's Corporate Headquarters. Presentation materials in support of project updates, including Pickering, were shared on September 15, 2026. On September 16, 2025, CGIFN emailed OPG stating that capacity funding is a concern for the Nation and that the focus for the Framework meeting tomorrow should just be on the BSI. OPG reiterated that Framework Agreement can be back dated to cover costs.	Capacity Funding Economic Opportunities

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9/17/2025	Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing), Chippewas of Saugeen First Nation (also known as Saugeen), Saugeen Ojibway Nation (SON)	Document Review Email	SON NSS-Western Waste Management Facility (WWMF) 2024 Annual Report for SON	Nuclear Sustainability Services (NSS) Vice President (VP) emailed Saugeen Ojibway Nation (SON) Chiefs and sent copy of 2024 Annual Report, including updates regarding Pickering Nuclear Generating Station (PNGS).	N/A
09/17/2025	Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, Chimnissing (Beausoleil First Nation)	Virtual Meeting	Framework Meeting	OPG shared a proposed agenda with the Chippewa Tri-Council (Chippewas of Georgina Island, Chippewas of Rama, Chimnissing (Beausoleil)) on September 12, 2025, including the following agenda topics: Pickering Overview, Wesleyville Overview, Darlington New Nuclear Project (DNNP) Overview, and Corporate Headquarters (CHQ) Burial Site Investigation (BSI) Overview.	N/A
9/17/2025	Hiawatha First Nation	Email	OPG/HFN Check-in for Pickering relicensing	OPG emailed Curve Lake First Nation (CLFN) September 17 to re-circulate materials developed and shared at OPG's Pickering Table September 11. OPG requested feedback from Hiawatha First Nation (HFN) regarding the following documents to deepen engagement: - Site Activity Description (November 2024) - Briefing Memo (May 2025) - Licensing Walkthrough Presentation (July 2025) CLFN responded October 7, stating that CLFN recommends OPG start from the basics and build upwards. CLFN identified that lessons learned from Darlington Nuclear Generating Station (NGS) relicensing should be implemented for Pickering NGS relicensing, due to concerns with Duty to Consult. OPG responded on October 16 with clarification regarding the Duty to Consult as it pertains to Pickering NGS relicensing and other items of consideration.	PROL, WFOL Duty to Consult
9/18/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Aquatic Offsetting - Proposed Site Visits	OPG sent Michi Saagiig Nations a proposed set of site visits to support Offsetting conversations including Whitevale Park/Seaton Dam trail, Cullen central Park/Lynde Creek and Cobourg Creek / Pratt's Dam. Representatives from Mississaugas of Scugog Island First Nation (MSIFN), Alderville First Nation (AFN), and Curve Lake First Nation (CLFN) confirmed attendance.	N/A

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9/25/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table follow up and Draft Agenda	OPG shared follow up materials and actions from Sept 11 Pickering Table meeting and shared a proposed agenda for October 2 Pickering Table which included a Licensing workshop (Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL), Deep Water Intake (DWI) Spoils Management workshop and brief update for Stormwater Management (Auxiliary Services Building (ASB) / West Sally port). As part of the package, a draft engagement strategy was included for review and comment.	N/A
10/1/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table Agenda and Materials	OPG shared meeting materials and slides for storm water management (SWM) update (Auxiliary Services Building (ASB) West Sally Port), Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) Licensing Engagement Workshop, Deep Water Intake (DWI) Spoils Management workshop.	N/A
10/1/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	PNGS Aquatic Sampling - Weekly Update	OPG shared an updated schedule from Ecometrix with upcoming sampling dates and an update on recent dates and monitoring (confirmation no sturgeon netted). Weather considerations identified as potential risk to sampling schedule.	Aquatic sampling Species of Interest
10/2/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting	OPG and Michi Saagiig Table meeting was identified to focus on Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) Licensing and engagement plan, Deep Water Intake (DWI) Spoils Management workshop and included a brief update and presentation on the Auxiliary Services Building/West Sally Port construction and permitry.	Species of Interest
10/3/2025	Mississaugas of Scugog Island First Nation	Email	Meeting request to discuss Third Party Review (DWI Spoils)	OPG emailed Mississaugas of Scugog Island First Nation (MSIFN) to initiate scheduling of a meeting with the Deep-Water Intake (DWI) project team as a follow up action from Pickering Table (Oct 2). Tues Oct 8 was proposed but a conflict was flagged by OPG. Subsequent date was identified in a separate thread.	N/A
10/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	NSS: OPG Pickering - Dry Storage Module (DSM) Relocation - TRCA Permit	In response to OPG email Sept 16, 2025 regarding Dry Storage Module (DSM) relocation and associated permits to Toronto and Region Conservation Authority (TRCA) for a temporary stockpile and storage area, Curve Lake First Nation (CLFN) sent three questions for disposition. OPG confirmed receipt.	Environmental concerns
10/5/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First	Email	Pickering Environmental Site Tour and Licensing Workshop	OPG emailed to follow up on previously identified date of Oct 29, 2025 for a custom Pickering Nuclear Generating Station (PNGS) site tour of environmental features. Date was previously identified by Michi Saagiig Nations on Sept 12 after September Pickering Table, and flagged Oct 2 by Nations as no longer available (verified via email Oct 6). In-person relicensing workshop for the Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence	Capacity Funding Agreements

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	Nation, Mississaugas of Scugog Island First Nation			(WFOL) was identified to be rescheduled. Budget concerns were raised for engagement, which OPG addressed in an email Oct 7 and offered follow up meetings for any Nations facing budget challenges.	
10/6/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table follow up and Actions	OPG sent a follow up email and Actions from the October 2 Pickering Table (Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) licensing workshop, Deep Water Intake (DWI) Spoils management workshop and Auxiliary Services Building (ASB) West Sally Port update). Actions included feedback to avoid sampling dates which conflict with Indigenous community observances (i.e. National Day for Truth & Reconciliation)	N/A
10/7/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG PNGS Notable Event - Deceased Black Capped Chickadees	<p>OPG emailed the Michi Saagiig Nations on October 7 to share that 18 deceased black capped chickadees were found at Pickering Nuclear Generating Station (PNGS) between October 3 and 5. OPG stated that the incident has been shared with Wildlife Canada Ontario Branch and OPG is hoping to discuss this event with the Nations at the next Environment Table. Mississaugas of Scugog Island First Nation (MSIFN) responded with recommendations for measures OPG can take to prevent birds from hitting the windows.</p> <p>On October 15, OPG sent a follow-up email to share that 6 more deceased chickadees were found at PNGS. OPG stated that there are existing preventative bird stickers but OPG will be installing additional bird-deterrent window decals.</p> <p>On November 5, OPG sent a follow-up email to share that an additional 29 deceased chickadees were found. OPG shared that they will be applying new preventative bird stickers and requested that Main Security Building (MSB) keep all the window blinds closed. MSIFN responded, requesting to know when their feedback was shared with the Environment team.</p> <p>On November 18, OPG responded to the Nations with comments from the Environment team. OPG confirmed that many of the preventative measures taken place by OPG aligns with Canadian Standards Association (CSA) A460 standards. OPG outlined which bird prevention actions are being implemented.</p>	Species of Interest Environmental concerns Notable Event
10/9/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Nuclear Generating Station (PNGS) Aquatic Sampling - Weekly Update	OPG provided a weekly sampling update and Sampling Results table from the fall schedule	N/A
10/16/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/Michi Saagiig Pickering Relicensing Feedback	<p>Update on the Power Reactor Operating Licence (PROL) and Waste Facility Operating Licence (WFOL) Pickering Nuclear Generating Station (NGS) sent.</p> <p>OPG emailed the Michi Saagiig Nations (MSFN) (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on October 16, 2025 to share updates for the following items:</p> <ul style="list-style-type: none">- Licensing Engagement Strategy Review and Workshop- December Pickering Table – new date proposed- Pickering NGS Tour - Rescheduling- Actions/Decisions updated to SharePoint tracker- Permitry update	N/A

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				<p>MSFN responded with comments on October 17. MSFN also stated that they could not meet OPG's October 17 deadline, but they will provide comments on the Pickering PROL/WFOL Engagement Strategy document at a later date.</p> <p>OPG responded on October 21. OPG re-shared the Pickering PROL/WFOL Draft Engagement Plan. OPG also provided potential dates/times for the DNNP Table Meeting and the PROL/WFOL Licensing Workshop.</p> <p>OPG sent a follow-up email on October 23, stating that OPG is planning on sharing a Commission Member Document (CMD) for the Nations to review in mid-January. OPG requested feedback from the Nations regarding the relicensing agenda item at the next Pickering Table meeting.</p> <p>Mississaugas of Scugog Island First Nation (MSIFN) responded on October 28, requesting clarification on some items of the upcoming Pickering Table meeting. OPG responded on October 30 with answers to MSIFN's questions.</p> <p>Curve Lake First Nation (CLFN) responded on October 29, requesting that OPG provide any refurbishment EA documents to help CLFN understand what the EA entails. OPG responded on October 30 and provided EA documentation from 2009.</p>	
10/24/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	NSS: Pickering Decommissioning Technical Review Summary Report of Comments and OPG Responses - Arcadis	<p>Technical Review of the Pickering A Decommissioning Summary Report of Comments and Responses.</p> <p>This Report covers the period from when Arcadis submitted its original Report (April 1, 2025) until responses from OPG were received in July. This summary comment report was shared with Alderville, Curve Lake, and Hiawatha for review and approval prior to submission.</p>	N/A
10/27/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	PNGS Site Tour - Security Forms	<p>OPG emailed Michi Saagiig Nations with a logistics and security forms update for Pickering Nuclear Generating Station (PNGS) tour, confirming November 27, 2025, for the tour date.</p> <p>Oct 31 - OPG emailed Curve Lake First Nation (CLFN) attendee to signal that one of the forms required completing, CLFN attendee indicated the form was filled out and OPG later confirmed it was received.</p>	N/A
10/30/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Table Draft Agenda Documentation shared	<p>Draft agenda shared with Michi Saagiig Nations and further information and follow up items from recent Pickering Tables were provided, including a plant list for the pollinator garden, a Cert of Approval for the East Landfill and security forms follow up for Pickering Nuclear Generating Station (PNGS) tour forthcoming (Nov 20). Mississaugas of Scugog Island First Nation (MSIFN) responded for SharePoint access troubleshooting.</p>	N/A
11/3/2025	Kawartha Nishnawbe	Email	OPG/Kawartha Nishnawbe PNGS PROL/WFOL Update	<p>OPG emailed Kawartha Nishnawbe (KN) to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025. OPG sent a follow-up email on December 5 to share an update re: OPG's PNGS PROL/WFOL application. OPG provided links to the Pickering Predictive Environmental Risk Assessment (PERA) and PNGS Climate Resilience Assessment Summary. OPG also extended the deadline for comments on the CMD from December 19, 2025, to January 14, 2026.</p>	N/A

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11/3/2025	Wendat Nation	Email	OPG/Wendat PNGS PROL/WFOL Update	<p>OPG emailed Wendat Nation on November 3, 2025 to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>Wendat Nation responded on November 17, stating that they wish to participate in any potential archaeological assessment and work that could be planned as part of this project and requested to be mentioned in OPG's land acknowledgement.</p> <p>OPG responded on December 11, stating that they are working to update the land acknowledgement and that WN will be informed of archaeology updates. OPG also shared updates re: the PNGS PROL/WFOL application. OPG shared a link to the licence application, Pickering Predictive Environmental Risk Assessment (PERA), and Climate Resiliency Assessment Summary. OPG also extended the deadline for comments on the CMD from December 19, 2025, to January 14, 2026.</p>	Land Acknowledgement Archaeology
11/3/2025	Mississaugas of New Credit First Nation	Email	OPG/MNCFN PNGS PROL/WFOL Update	<p>OPG emailed Mississaugas of the New Credit First Nation to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>OPG sent a follow-up email on December 5 to share an update re: OPG's PNGS PROL/WFOL application. OPG provided links to the Pickering Predictive Environmental Risk Assessment (PERA) and PNGS Climate Resilience Assessment Summary. OPG requested that any questions from MNCFN be shared with OPG by January 14, 2026.</p>	N/A
11/3/2025	Mohawks of the Bay of Quinte (Tyendinaga)	Email	OPG/Mohawks of the Bay of Quinte PNGS PROL/WFOL Update	<p>OPG emailed Mohawks of the Bay of Quinte to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>OPG sent a follow-up email to the Nations on December 11 to share an update re: Pickering PROL/WFOL Application. OPG provided a link to the licence application, Pickering Predictive Environmental Risk Assessment (PERA), and PNGS Climate Resiliency Assessment Summary. OPG also extended the deadline for comments on the CMD from December 19, 2025, to January 14, 2026.</p>	N/A
11/3/2025	Six Nations of the Grand River First Nation	Email	OPG/SNGR PNGS PROL/WFOL Update	<p>OPG emailed Six Nations of the Grand River (SNGR) First Nation to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>SNGR responded to request clarification on why OPG does not identify SNGR as having Aboriginal rights of asserted Aboriginal rights, which OPG responded to in citing identification inputs.</p> <p>OPG sent a follow-up email to SNGR on December 16 to share an update re: OPG's PNGS PROL/WFOL renewal application. OPG provided links to the licence application, Pickering Predictive Environmental Risk Assessment (PERA), and PNGS Climate Resiliency Assessment Summary. OPG also extended the deadline for comments on the CMD from December 19, 2025, to January 14, 2026.</p>	Aboriginal Rights

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11/3/2025	Chimnissing (Beausoleil First Nation) Chippewas of Georgina Island First Nation Chippewas of Rama First Nation	Email	OPG/CTC PNGS PROL/WFOL Update	<p>OPG emailed the Chippewa Tri-Council (Rama, Beausoleil, Georgina Island) (CTC) to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>OPG sent a follow-up email to the Nations on December 11 to share an update re: Pickering PROL/WFOL Application. OPG provided a link to the licence application, Pickering Predictive Environmental Risk Assessment (PERA), and PNGS Climate Resiliency Assessment Summary. OPG also extended the deadline for comments on the CMD from December 19, 2025, to January 14, 2026.</p>	N/A
11/6/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting	<p>OPG and the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) had a Pickering Table Meeting on Nov 6, 2025. Topics of discussion included:</p> <ul style="list-style-type: none">- Pickering Relicensing- Archaeology Updates – Timmins Martelle Heritage Consultants (TMHC)- Discussion Topics; Documents & Action Review- Environment –- Biodiversity Sampling (November)- Ministry of Environment, Conservation and Parks (MECP) Permit (American eel)- Permits – Pickering Nuclear Generating Station (PNGS) Campus Stormwater (Outfall)- Project Updates- Deep Water Intake (DWI) – Spoils Management & Offsetting Concepts	N/A
11/7/2025	Chippewas of Nawash Unceded First Nation (Neyaashinigmiing) Chippewas of Saugeen First Nation (also known as Saugeen) Saugeen Ojibway Nation (SON)	Email	SON_OPG PNGS PROL/WFOL Update	<p>OPG emailed Saugeen Ojibway Nation (SON) EO information on Pickering Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) application.</p> <p>OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>SON EO responded immediately, acknowledging receipt.</p>	N/A
11/11/2025	Métis Nation of Ontario (MNO) Métis Nation of Ontario Region 8	Email	OPG/MNO PNGS PROL/WFOL Update	<p>OPG emailed the Métis Nation of Ontario (MNO) to share an update regarding the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL). OPG provided an overview of the request to renew the PROL/WFOL and shared key milestones for the renewal process. OPG requested comments from the Nation regarding the Commission Member Document (CMD) by December 19, 2025.</p> <p>OPG sent a follow-up email on December 11 to share an update re: OPG's PNGS PROL/WFOL application. OPG provided links to the Pickering Predictive Environmental Risk Assessment (PERA) and PNGS Climate Resilience Assessment Summary. OPG requested that any questions from MNO be shared with OPG by January 14, 2026.</p>	N/A

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11/13/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	NSS: OPG/MSIFN - DDP Responses and Workshop Actions to MSIFN Questions	OPG responded to address the Nations’ questions and feedback on the Pickering Units 1-4 Detailed Decommissioning Plan (DDP), providing attached documents that cover recent and outstanding inquiries, organized by DDP timelines. Additional materials will be uploaded to a shared folder, and OPG recommends a follow-up workshop for further discussion, with technical experts available if needed. OPG is open to continued third-party review by Arcadis but requests a defined scope for Phase 2, including objectives and timelines, to support resourcing; current funding agreements already include budget for such reviews. OPG also proposes continued use of Waste Tables in 2026, with discussions on Preliminary Decommissioning Plans (PDPs) starting January 2026.	Detailed Decommissioning Plan (DDP)
11/14/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Waste Table Agenda	Waste Table Agenda provided to Michi-Saagiig of the Williams Treaty First Nations (WTFN).	N/A
11/14/2025	Wendat Nation	Email	Archaeological Assessment Report regarding Pickering	OPG emailed Wendat Nation to introduce Indigenous Relations (IR) Pickering Nuclear Generating Station (PNGS) team and acknowledge recent Min. Energy and Mines notification of OPG's Duty to Consult and Wendat Nation's interest to be involved with PNGS archaeological assessment (AA) activities. OPG provided a Stage 1 AA from Timmins Martelle Heritage Consultants (TMHC) which had been submitted to MCM, confirmed by Minogi Corp available to share, and invited any comments or community history contributions to be submitted for any forthcoming reports. Wendat Nation was also encouraged to identify any interest for future archaeological monitoring activities and a tandem introductory meeting onsite. Nov 20 - Wendat Nation responded to confirm interest to review and comment once funding is available and provided an interim quote, requesting notice for monitoring opportunities and information required to attend. Nov 21 - OPG provided details for a forthcoming monitoring opportunity Nov 24 (Sandy beach Road) and Dec 1 (Montgomery Park Rd.) with requested information, a draft agreement for activities, and maps provided. Nov 21 - Wendat Nation responded to confirm receipt and identify more time would be required to review an agreement (a few weeks), and to identify if any postponement to activities for future participation. They requested a weekly update for current field activities as it was of interest to the Nation. Nov 26 - OPG responded to acknowledge receipt Dec 1 - OPG provided an update that Dec 1 scheduled activities would be postponed to 2026 due to weather, and Wendat Nation would be provided notice to participate. An update from Nov 24 field activities was provided with images. Dec 2 - Wendat Nation acknowledged receipt	N/A

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11/17/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/Michi Saagiig Pickering PROL/WFOL Renewal Application Workshop Planning	OPG emailed the Michi Saagiig Nations on November 13, 2025, to provide details regarding the Pickering Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) renewal application workshop scheduled for December 1. OPG proposed agenda topics for the workshop and requested guidance from the Nations re: the approach of the workshop.	N/A
11/20/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Waste Table Meeting: CNSC Regulatory Framework Overview	Waste Table Meeting: OPG facilitated a presentation from Canadian Nuclear Safety Commission (CNSC) staff to Alderville First Nation (AFN), Curve Lake First Nation (CLFN), Mississaugas of Scugog Island First Nation (MSIFN) and Hiawatha First Nation (HFN). Presentation from CNSC staff was a request from the Michi-Saagiig of the Williams Treaties First Nations.	
11/20/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/Michi Saagiig - Pickering Reportable Event - Fire Foam Spill	OPG emailed the Michi Saagiig Nations on November 20, 2025, to share details of a reportable event (fire foam spill) that occurred at Pickering Nuclear Generating Station (NGS). OPG provided details of the event and suggested discussing the event further at the upcoming Environment Table on December 18. Curve Lake responded with questions on December 2. OPG provided responses on January 9, 2026.	Environmental Impacts Notable Event
11/25/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Dec 1 Pickering Table & General Updates	<p>OPG emailed Michi Saagiig Nations November 25 with a draft agenda for December 1 Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) Licensing workshop and included related updates. EA documents (2003) requested via Pickering Table meeting were shared. OPG confirmed that concerns raised identifying Duty to Consult were relayed to the Canadian Nuclear Safety Commission (CNSC) at a recent meeting.</p> <p>Mississaugas of Scugog Island First Nation (MSIFN) responded November 27 with a request to add Deep Water Intake (DWI) Spoils Management update to the December 1 Table agenda and proposed an agenda for the licensing segment same day.</p> <p>OPG replied to confirm the agenda and re-shared the document for December 1 licensing workshop indicating that a new agenda would be difficult to accommodate within the remaining timeframe.</p> <p>MSIFN indicated the agenda was not attached to the meeting invitation which is why an agenda was proposed by the Nation, and confirmed receipt of the document.</p> <p>On November 28, OPG emailed the Nations stating that the Dec 1 Pickering Relicensing Workshop will be postponed to Dec 18 to allow both the Nations and OPG to adequately prepare for the workshop and align on agenda to support a productive and meaningful session.</p>	Duty to Consult

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11/26/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email, Phone calls	Pickering Nuclear Generating Station (NGS) Site Tour – Inclement Weather	OPG emailed Michi Saagiig Nations on November 26 to indicate inclement weather forecast for tour date of November 27, requesting Nations’ feedback on whether or not to cancel the event before afternoon same day. Mississaugas of Scugog Island First Nation (MSIFN) indicated they would not attend, while Alderville First Nation (AFN) and Hiawatha First Nation (HFN) indicated flexibility. Curve Lake First Nation (CLFN) did not provide a response. OPG decided to cancel the tour based on non-response and to mitigate safety concerns due to high winds.	N/A
12/1/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting	OPG and the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) had a Pickering Table Meeting on December 1, 2025. Topics of discussion included: - Archaeology Updates – Timmins Martelle Heritage Consultants (TMHC) - Permits – Update (Overview & Forecast) - Project Updates • Stormwater (Outfall, Common Services Building (CSB)); • Deep Water Intake (DWI) – Bridge Update; • DWI – Offsetting	N/A
12/3/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/MSIFN Relicensing Agenda	OPG emailed Mississaugas of Scugog Island First Nation (MSIFN) on December 3, 2025, as a follow-up to an OPG/MSIFN call that occurred on December 2. OPG provided a draft agenda for the Pickering Relicensing Workshop, which was scheduled to occur on December 18. MSIFN responded on December 3 with approval of the agenda and one concern which was addressed by OPG. OPG also confirmed that they can pull language from Wesleyville Knowledge Sharing Agreement regarding acknowledgement of Anishinaabe Laws. OPG sent a follow-up email on December 8 with a revised agenda.	N/A
12/3/2025	Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, Chimnissing (Beausoleil First Nation)	Email, Document Review	Archaeological Assessment Report regarding Pickering	OPG shared a Stage 1 Archaeological Assessment from TMHC with Chippewa Nation Tri-council and indicated that any future comment could be included in forthcoming reports associated with the project. Dec 3 - Chippewas of Rama First Nation responded to indicate disappointment in the timeframe for sharing and provided CRFN community history to be included in subsequent reports of OPG activities within WTFN territory. Dec 5 - OPG acknowledged receipt and requested clarification of whether inclusion of Rama history was intended for use in all reporting, or specific to archaeological reports. No response was received.	N/A
12/5/2025	Mississaugas of Scugog Island First Nation	Email	DWI Spoils Management Touchpoint - Meeting invitation	OPG sent a meeting invitation placeholder for Dec 11 to discuss Deep Water Intake (DWI) spoils management with Michi Saagiig Nations vendor KWL and included a Mississaugas of Scugog Island First Nation (MSIFN) representative per Action from Dec 1 Pickering Table meeting. Dec 9 - MSIFN invitee responded to request a new time to support MSIFN team attendance alongside KWL to support a broader collaborative process between OPG and Alderville First Nation (AFN), Curve Lake First Nation (CLFN) and Hiawatha First Nation (HFN), as the timeslot proposed had a conflict with the Darlington New Nuclear Project (DNNP) / Michi Saagiig meeting time. Dec 10 - OPG responded to acknowledge MSIFN's request and indicate the date would be rescheduled.	N/A
12/8/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/Michi Saagiig Pickering Relicensing Proposed Agenda	OPG emailed the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on December 8, 2025, to share a proposed agenda for the upcoming Pickering Relicensing Workshop scheduled for December 18. OPG requested that the Nations provide feedback on the agenda and inform OPG if they have a preference for meeting virtually or in-person. All Nations responded, stating that they will attend virtually.	N/A

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12/8/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table Follow Up (Dec)	OPG provided a follow up email from Dec Pickering Table including actions and related updates. A monitoring opportunity for a snag survey (Dec 12) was offered. In lieu of in-person monitoring (due to earlier communication on seasonal weather and safety challenges) video footage was sent to the Nations for the fall spawning assessment. A response in writing to Alderville First Nation's (AFN's) enquiry at Dec Table meeting was provided regarding an Environmental Assessment.	Environmental Assessment
12/10/2025	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	PNGS Monitoring Invitation - Snag Survey	OPG emailed Michi Saagiig Nations a follow up email to the Dec 8 Table follow up email to request any confirmation of monitors to attend Dec 12 snag survey and provided logistics information. No responses were received.	N/A
12/11/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Document Review, Email	PNGS Weekly aquatic update (final for PERA)	OPG sent an aquatic update to identify Predictive Environmental Risk Assessment (PERA) sampling had concluded given the species requirements were met, and the seasonal weather was inconducive to completing week 5 sampling due to health & safety concerns. OPG provided Ecometrix video footage of net pulls (week 4) from Ecometrix in lieu of Michi Saagiig Nation monitoring given health and safety concerns identified in the sampling update sent November 18th. A sampling results table from week 4 were attached and uploaded to Nations SharePoint	N/A
12/11/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Document Review, Email	PNGS DFO RfR Draft for SWM outfall	OPG emailed Michi Saagiig Nations with a Draft Fisheries and Oceans Canada (DFO) Request for Review relating to the Storm water management (SWM) proposed outfall for Pickering Nuclear Generating Station (PNGS) Campus and road improvements, presented at December 1 Pickering Table. The package for review included the RfR application; Outfall Drawings and Tree Inventory report. A timeline for review of January 26, 2026, was requested for any Nations comments to be received prior to regulator submission. Jan 21, 2026 - Curve Lake First Nation (CLFN) responded to indicate the design should improve site conditions, and asked for any details regarding tree compensation after removal. Mississaugas of Scugog Island First Nation (MSIFN) responded same day to indicate they were continuing review to target January 26, and requested as an agenda item for February Pickering Table. Jan 29, 2026 - MSIFN provided questions regarding OPG's considerations for the outfall location and cited minimizing unnecessary shoreline alterations. Feb 05, 2026 - Pickering Table presentation by PNGS Campus Upgrades team provided further information for selection of location to support any outstanding questions by Nation attendees. Alderville First Nation (AFN) requested confirmation of archaeological clearance of the proposed areas (E2 parking, Montgomery Rd. Connection & Storm Water Management (SWM) Outfall), which OPG took as an action. Feb 24, 2026 - OPG provided an email update to indicate Stage 2 AA would be required for Montgomery Rd. Connection scope of PNGS Campus upgrades, and that SWM Outfall and E2 Parking do not present a significant archaeological risk.	Shoreline Protection
12/12/2025	Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing) Chippewas of Saugeen First Nation (also known as Saugeen)	Email	SON-OPG PNGS PROL/WFOL Update - Follow up	OPG emailed the Chippewas of Nawash Unceded First Nation, Chippewas of Saugeen First Nation, and Saugeen Ojibway Nation (SON) on December 12, 2025, as a follow-up to an email from November 7 to share a copy of the Pickering Nuclear Generating Station (PNGS) Power Reactor Operating Licence/Waste Facility Operating Licence (PROL/WFOL) application. This update highlighted additional documents supporting the application; including the Predictive Environmental Risk Assessment (PERA) and PNGS Climate Resiliency Assessment and provided link to where this information can be accessed. OPG also communicated a date extension to receive their comments and perspectives on the application to January 14, from December 19. SON responded immediately, acknowledging receipt.	N/A

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	Saugeen Ojibway Nation (SON)				
12/15/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email	Barn Swallow Habitat Notification	OPG emailed Michi Saagiig Nations to provide an update to the Deep-Water Intake (DWI) presentation materials at December 1 Pickering Table regarding removal of a barn swallow habitat. OPG indicated no active nesting in recent years, and monitoring/maintenance requirements had concluded in 2019. Dec 17 – Curve Lake First Nation (CLFN) responded to clarify whether the initial requirement for the habitat related to compensation for disturbed nesting, and indicated the species remains vulnerable. CLFN requested OPG to explore options for relocation or reinstallation post-construction, or other mitigations to support the species. Dec 18 - OPG responded to confirm project would explore various options and to confirm that an ecologist would support additional assessment and that additional findings would be provided in the new year, prior to removal.	Species of Interest
12/17/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email, Document Review	Pickering Dec 2025 Updates and Information	OPG emailed a roundup of December updates prior to the holiday season which included: - Courtesy Notification: CSB, Waste Buildings - Permitry Update & Target Engagement Schedule - OPG response to Alderville First Nation (AFN) query re: EA - Deep Water Intake (DWI) Updates - Offsetting Briefing Note - HATCH Offsetting report and site visit memo (Oct 2025) - ROV memo (Richardson Point)	N/A
12/18/2025	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Virtual Meeting	OPG/Michi Saagiig Pickering Relicensing Workshop	OPG and the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) had a virtual Pickering Relicensing Workshop on December 18, 2025. Topics of discussion included: - Breakdown of Pickering Nuclear Generating Station (PNGS) Application from OPG - Process & Approach - Environmental Assessment - Next Steps & Path Forward for Next Regulatory Milestone - Walkthrough of Indigenous Engagement Section of Application OPG provided an overview of the site and of the licence renewal and updates regarding the Predictive Environmental Risk Assessment (PERA), Detailed Decommissioning Plan (DDP), used fuel storage, and risk reduction of non-nuclear components. The Nations provided comments regarding specific areas of discussion they wish to focus on throughout Pickering Relicensing.	PROL, WFOL Licensing
12/18/2025	Wendat Nation	Email, Document Review	Archaeological Assessment Report regarding Pickering	OPG shared an archaeological update with Wendat Nation before the holidays including the following topics: - A terrestrial memo of preliminary results for recent assessment November 24 (for information purposes). OPG noted no archaeological resources were encountered. OPG noted intention to offer advance notice to Wendat Nation prior to commencing further archaeological studies, including the test pit survey activities deferred to Q3 2026. - A draft Underwater Archaeology Assessment for the proposed outfall bridge. OPG noted that the proposed bridge design has been revised to a clear span structure with no anticipated marine impacts associated with bridge construction.	N/A

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12/18/2025	Chippewas of Georgina Island First Nation, Chippewas of Rama First Nation, Chimnissing (Beausoleil First Nation)	Email, Document Review	Archaeological Assessment Report regarding Pickering	OPG shared an archaeological update with Chippewa Nation Tri-council before the holidays including the following topics: - A terrestrial memo of preliminary results for recent assessment November 24 (for information purposes) - OPG noted no archaeological resources were encountered. OPG noted intention to offer advance notice to Chippewa Nations prior to commencing further archaeological studies, including the test pit survey activities deferred to Q3 2026. - A draft Underwater Archaeology Assessment for the proposed outfall bridge. OPG noted that the proposed bridge design has been revised to a clear span structure with no anticipated marine impacts associated with bridge construction.	N/A
1/7/2026	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	OPG/Michi Saagiig - Follow-up to December 18 relicensing workshop	OPG emailed the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on January 7, 2026. OPG shared key takeaways from the December 18, 2025, Pickering Relicensing Workshop, and provided draft actions for Michi Saagiig review. OPG requested that the Nations reach out with questions, should there be any.	N/A
1/8/2026	Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation	Email	Pickering Table Meeting (Jan) PNGS	OPG emailed Michi Saagiig Nations with an update on Jan 15 Table agenda and additional items. Proposed Agenda - Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) Licensing Updates and Discussion - Next Steps and Path Forward (Agenda item we didn't get to on December 18th) - Continue Discussion on Engagement Strategy and Approach - Archaeology Updates - Timmins Martelle Heritage Consultants (TMHC) - Project Updates - Deep Water Intake (DWI) – Offsetting Update - Michi Saagiig Nations feedback on offsetting ratios (NEW) - DWI – Spoils Management Update Additional items included: - Permitry - Targeted engagement schedule (2026) - attached and linked with recap of current and forthcoming permits - Overview of Spoils and Offsetting materials shared DWI Marine archaeology documents including TMHC MAIA for Outfall Bridge sent Dec 18; WSP MAIA R6 forthcoming; TMHC MAIA with fish studies TCD Jan 2026, and TMHC Lakebed disturbance MAIA for Intake TCD Feb 2026. Actions recap included a note that Jan 15 Table would be used to support the next offsetting discussion.	PROL, WFOL Licensing Offsetting

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1/15/2026	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting (Jan) PNGS	<p>OPG held a Pickering Table meeting with the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on January 15, 2026.</p> <p>Topics of discussion included:</p> <ul style="list-style-type: none">- Timmins Martelle Heritage Consultants (TMHC) / Matrix Heritage subcontractors presented archaeology updates- Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL) renewal presentation and discussion- Actions and document review as noted, including Pickering Nuclear (PN) Predictive Environmental Risk Assessment (PERA) R0001, Marine Archaeology Impact Assessment R06 by OPG contractor WSP, Marine Archaeology Assessment by TMHC/Matrix,-Deep Water Intake (DWI) Project presented on Offsetting updates, spoils management updates and barn swallow habitat removal with discussions <p>Related to relicensing:</p> <p>OPG provided a recap of the key activities OPG is seeking approval from the Canadian Nuclear Safety Commission (CNSC) on. OPG stated that they will continue to follow licensing process requirements, but intends to work collaboratively with the Nations to address the Nations’ concerns.</p>	PROL/WFOL Licensing, Decommissioning end-state and financial guarantees
1/15/2026	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email	DWI Offsetting workshop proposed dates	<p>OPG’s Deep Water Intake (DWI) team emailed the Michi Saagiig Nations on January 16, 2026, to propose dates for offsetting workshops (January 30 & February 2) based on Department of Fisheries and Oceans (DFO) representative availability.</p> <p>Alderville First Nation (AFN), Curve Lake First Nation (CLFN), Mississaugas of Scugog Island First Nation (MSIFN), and Hiawatha First Nation (HFN) each confirmed availability for Feb 2 AM.</p> <p>Jan 20 - OPG confirmed Feb 2 AM indicating a meeting request and materials were forthcoming. Additional dates for a follow up meeting were requested.</p>	N/A
1/29/2026	Alderville First Nation; Curve Lake First Nation; Mississaugas of Scugog Island First Nation	Virtual Meeting	Nuclear Sustainability Services (NSS) - Waste Table Meeting	<p>OPG and the Michi Saagiig Nations met on January 29, 2026, for a Waste Table Meeting.</p> <p>Key Topics Presented:</p> <ul style="list-style-type: none">- End State (decommissioning)- How OPG implements Natural Resources Canada (NRCAN) Policies- Decommissioning Timelines	Waste management
1/29/2026	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email, Document Review	COO Resolution Against Nuclear Waste Transportation and Burial	<p>MSIFN shared with OPG the Nov 2025 Chiefs of Ontario (COO) Resolution Against Nuclear Waste Transportation and Burial.</p>	Waste management
1/29/2026	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Email	Detailed Decommissioning Questions from January 15 Pickering Table	<p>OPG emailed the Michi Saagiig Nations to provide detailed answers to the following questions raised at the January 15, 2026 Pickering Table:</p> <ul style="list-style-type: none">- Who requires decommissioning financial guarantee?- Can End State Change Every 5 years?- If they [End State] can change every 5 years, why are they required?	N/A
2/2/2026	Alderville First Nation; Curve Lake First Nation;	Virtual Meeting	Pickering Nuclear Generating Station (PNGS) Offsetting Workshop with DWI, Fisheries	<p>OPG convened a tripartite meeting with the Michi Saagiig Nations regarding Deep Water Intake (DWI) offsetting to support identification of ratios.</p>	Environmental impacts

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	Mississaugas of Scugog Island First Nation		and Oceans Canada (DFO), Michi Saagiig Nations	<p>Agenda with slides as enclosed:</p> <p>1. Overview of project footprints & fish habitat impacts</p> <p>2. Overview of offsetting opportunities & constraints</p> <p>- Confirm attributes and criteria to evaluate offsetting opportunities</p> <p>- Input on weighted matrix</p> <p>3.Offsetting Ratio Discussion</p> <p>- Input on proposed offsetting ratios and success criteria</p> <p>OPG's objective was to align on offsetting ratios in order to determine the appropriate scale of each offsetting option and support a weighted cost benefit analysis to advance promising offsetting opportunities for design/costing.</p>	
2/5/2026	Alderville First Nation; Curve Lake First Nation; Hiawatha First Nation; Mississaugas of Scugog Island First Nation	Virtual Meeting	Pickering Table Meeting (February) PNGS	<p>OPG held a Pickering Table meeting with the Michi Saagiig Nations (Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Mississaugas of Scugog Island First Nation) on January 15, 2026.</p> <p>Topics of discussion included:</p> <p>1. Archaeology Updates – Matrix Heritage</p> <p>2. Licensing (Power Reactor Operating Licence (PROL) / Waste Facility Operating Licence (WFOL))</p> <p>Project Updates –</p> <p>- Pickering Nuclear Generating Station (PNGS) Campus Updates</p> <p>- 2024-25 Aquatic Sampling Report Results – (Ecometrix)</p> <p>- Decommissioning & Nuclear Sustainability Updates</p> <p>Permitry Updates</p> <p>Deep Water Intake (DWI) – In-Water Works Overview</p> <p>DWI – Offsetting & Spoils Updates</p> <p>3. Campus Updates: Civil Upgrades & Decommissioning</p> <p>4.DWI Offsetting & Spoils Management</p> <p>5.DWI Permitting & Schedule Acceleration</p> <p>Related to re-licencing:</p> <p>OPG requested that the Nations provide OPG with guidance related to how OPG can enhance processes to support engagement. OPG asked how they can support the Nations’ review of the application to understand key areas of concern, especially related to impacts to rights.</p>	PROL, WFOL Licensing

4.0 PLANNED ENGAGEMENT ACTIVITIES BETWEEN FEBRUARY TO OCTOBER 2026

OPG is steadfast in its commitment to supporting meaningful engagement before, during and after the licencing renewal application process and will work in collaboration with Indigenous Nations and communities to identify approaches to engagement that are considerate of the engagement context and the interests of each Indigenous Nation and community.

For engagement on the Licence Renewal Application, OPG will continue to leverage the site-wide Pickering NGS IEP. Through engagement to date, OPG will continue to explore interests and concerns through future engagement activities and seek to address comments and potential impacts to rights as appropriate.

OPG also will continue to provide capacity funding to the MS-WTFNs and continues to advance discussions with the Chippewa Nations (Beausoleil, Chippewas of Rama, and Chippewas of Georgina Island First Nations) towards establishing Framework Agreements and project specific Capacity Funding Agreements to support participation and engagement through the following forums described in Table 7.

Table 7: Planned Forums with MS-WTFNs

Forum	Scope & Topics	Frequency
OPG-Michi Saagiig Pickering Table	<ul style="list-style-type: none"> Operations of Units 5 to 8 to 2026 Refurbishment of Pickering Units 5 to 8 Stabilization (Safe Storage) of Units 1 to 4 Decommissioning Nuclear Sustainability Services (NSS) 	Monthly
OPG-Michi Saagiig Waste Table	<ul style="list-style-type: none"> OPG heard from the Michi Saagiig Nations that there are key topics, like nuclear waste, that are not site or project specific and would benefit from a strategic engagement approach. OPG and the Michi Saagiig Nations jointly established the Waste Table in August 2024. 	Monthly (alternating between Waste Table and Environment Table)
OPG-Michi Saagiig Environment Table	<ul style="list-style-type: none"> OPG heard from the Michi Saagiig Nations that there are key topics, like environment, that are not site or project specific and would benefit from a strategic engagement approach. 	Monthly (alternating between Waste Table and Environment Table)

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Forum	Scope & Topics	Frequency
	<ul style="list-style-type: none"> OPG and the Michi Saagiig Nations jointly established an Environmental Table in February 2025. 	
Framework Agreement Tables	<ul style="list-style-type: none"> Bilateral forum between OPG and each individual Michi Saagiig Nation. Agenda and topics are identified based on mutual interest between OPG and the individual Nation. 	<p>Monthly (Curve Lake, Hiawatha and Alderville First Nations).</p> <p>Bimonthly (Mississaugas of Scugog Island First Nation)</p>
Ad Hoc Meetings & Workshops	<ul style="list-style-type: none"> Based on interest and need. Since submission of the application have held relicensing workshop, DDP workshop, and meetings with focus on priority topics (e.g. offsetting, spoils management). 	As needed.

OPG will continue to share information, request input and provide opportunities for engagement with the Chippewa First Nation Rightsholders and be responsive to any questions, concerns or issues that may come forward. For those Indigenous Nations and communities that assert Aboriginal and/or treaty rights or express interest in the licence renewal, OPG will continue to reach out, share information and remain open to engaging upon request.

5.0 SCHEDULE OF REPORTING

OPG will also continue its practice of meeting with CNSC representatives monthly to discuss the status of Indigenous engagement regarding Pickering and other projects and operations. An engagement log will be maintained and shared with CNSC upon request. The frequency of these contacts can be increased as needed.

Prior to the Part 2 Hearing, OPG will also provide a written update to the Commission regarding engagement activities and progress between February to September 2026.