



CMD 26-H7.1C

Date: 2026-09-21

Supplementary Information

Presentation from Ontario Power Generation

In the matter of

Ontario Power Generation

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

**Commission Public Hearing
Part 2**

October 6-9, 2026

Renseignements supplémentaires

Présentation d'Ontario Power Generation

À l'égard de

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

**Audience publique de la Commission
Partie 2**

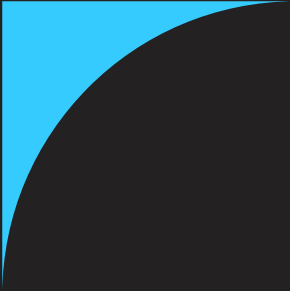
6-9 octobre 2026



Electrifying life in one generation

CNSC Hearing Part 2

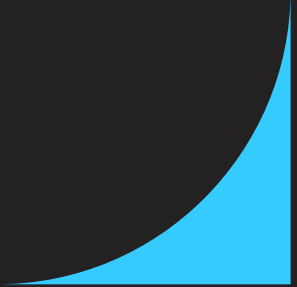




OPG is Ontario's leader in generating
safe, clean and reliable power.

18,615
megawatts

Powering Ontario's clean energy future through
one of the world's most diverse generating fleets.

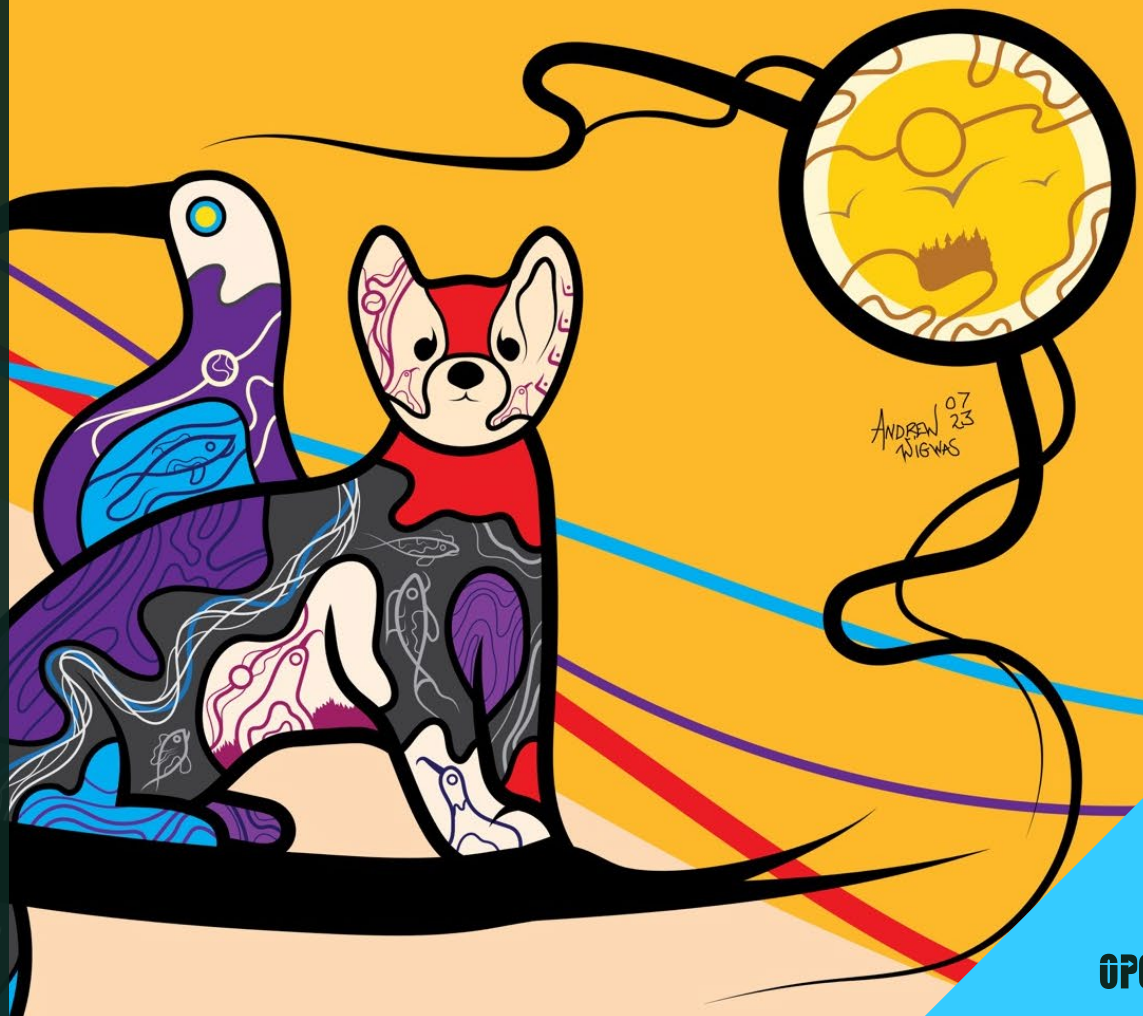




- Request to renew the Pickering Power Reactor Operating Licence and the Waste Facility Operating Licence. **January 1, 2027 to December 31, 2036.**
- The Pickering station has operated safely and reliably for decades and is recognized as a **top-performing nuclear station** worldwide.
- The Pickering Waste Management Facility (PWMF) has **safely managed nuclear waste for 30 years**, since it began operation in 1996.
- CANDU reactors have a strong track record of reliability and are a **robust technology with multiple safety features.**
- The **Pickering Refurbishment Project** will enable continued safe and reliable operation for 30+ years.
- OPG will progress **non-nuclear dismantling** of Pickering Units 1 to 4 during the proposed licence period.

Reconciliation Action Plan

- Leadership accountability for tracking progress on the plan's commitments.
- Building positive and mutually beneficial relationships based on respect.
- Increasing representation of Indigenous People at all levels across the company.
- Advancing economic empowerment for Indigenous communities and businesses.
- Being a trusted partner in environmental stewardship.



Commitment to Indigenous Nations and Communities



- OPG is steadfast in its commitment to supporting meaningful engagement during and after the licensing process.
- We strive to build relationships based on the principles of respect, integrity and mutual responsibility.
- Engagement activities for this application were guided by an Indigenous Engagement Plan and informed by Indigenous Nations and communities.



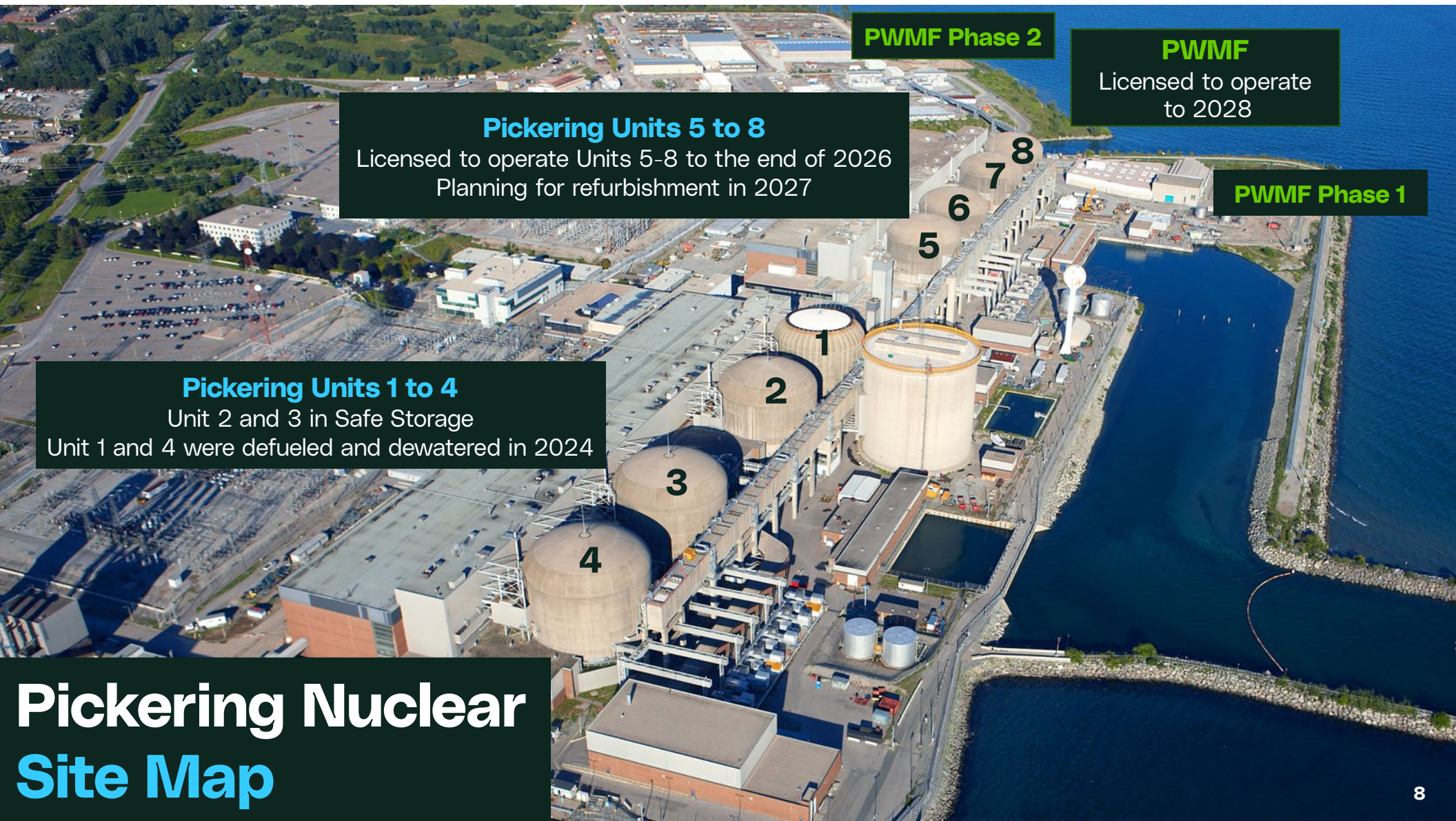
Indigenous Engagement

- Overall, sustained efforts to strengthen engagement on operations over the licensing period.
- Since August 2023, OPG has sought to understand and address Indigenous interests and concerns raised by this application.
- While we have made progress, we recognize we have more work to do as our relationships continue to evolve.

Pickering Nuclear

- Eight-unit CANDU station with four units in operation - **provides 2,100 megawatts**
- Operating **safely and reliably** for over 50 years
- Producing about **10% of Ontario's electricity**
- Provides 20% of the world's supply of **Cobalt-60**
- Electricity Canada **President's Award of Excellence for Employee Safety**
- **Gold Level Certification** from the Wildlife Habitat Council





Pickering Units 5 to 8
Licensed to operate Units 5-8 to the end of 2026
Planning for refurbishment in 2027

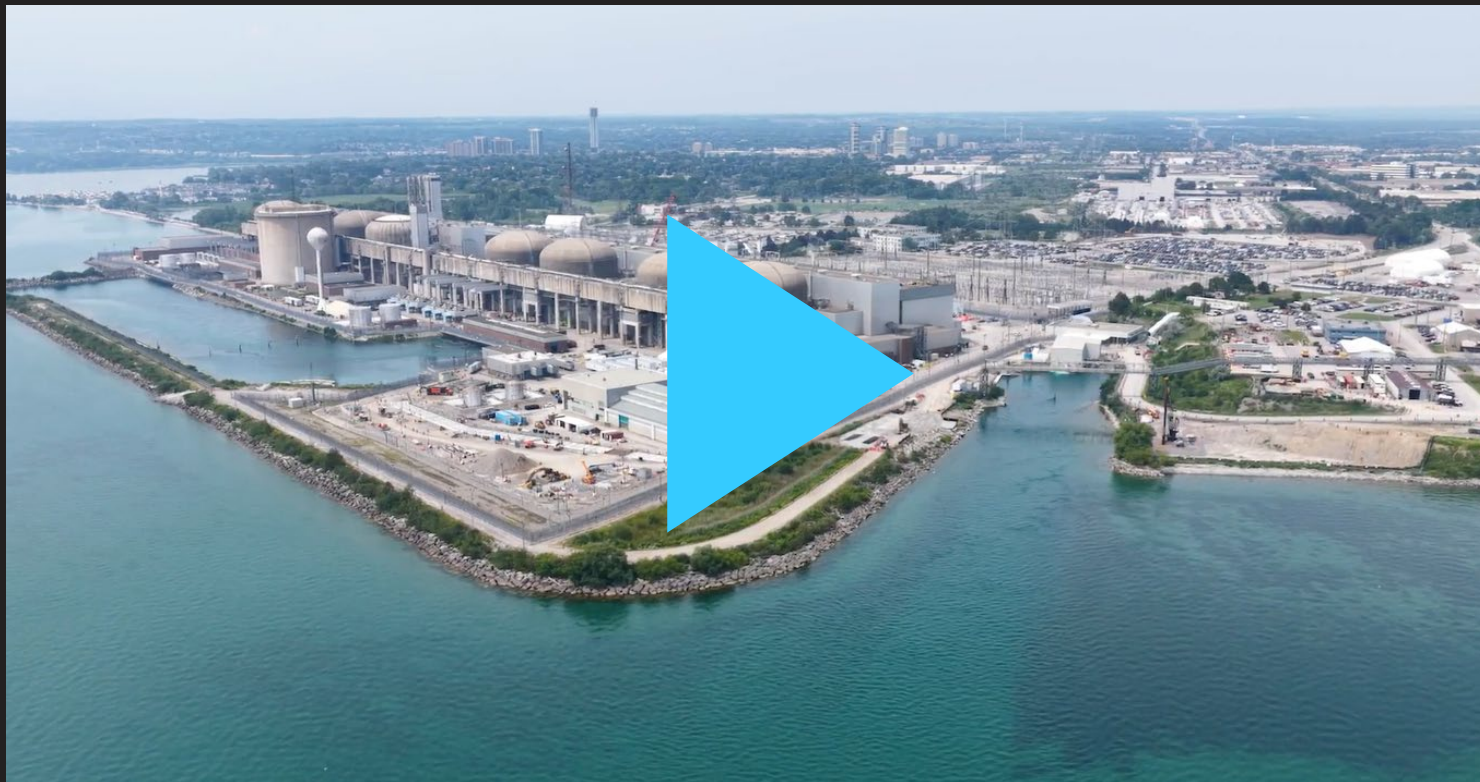
Pickering Units 1 to 4
Unit 2 and 3 in Safe Storage
Unit 1 and 4 were defueled and dewatered in 2024

PWMF Phase 2

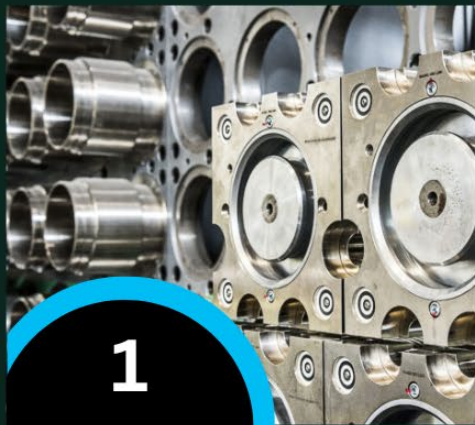
PWMF
Licensed to operate
to 2028

PWMF Phase 1

Pickering Nuclear Site Map

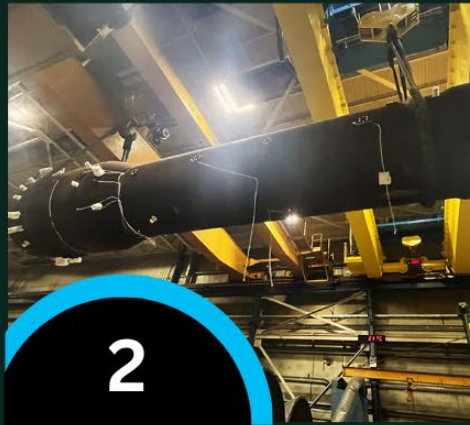


Refurbishment **Project Bundles**



1

Retube & Feeder Replacement



2

Boiler Replacement



3

Turbine Generator



4

Deep Water Intake



5

Balance of Plant



6

Facilities & Infrastructure

Lessons Learned

Industry Operating Experience

- Proven industry methods shaping planning, design, tooling and commissioning

Dose and Worker Safety

- Dose planning, shielding and remote tooling
- Neutron field controls for source-term reduction

Oversight and Readiness

- Independent oversight, vendor quality
- Experienced staff and vendor transfer from the Darlington Refurbishment Project
- Mock-up training facilities



Waste and Non-Nuclear Dismantling



Pickering Waste Management Facility

- **Safely process and store used fuel** generated from the Pickering station in Dry Storage Containers (DSCs)
- **Safely managed for over 30+ years**
- **Interim onsite storage of DSCs** supported by a new storage building with a planned design capacity of up to 1,410 DSCs
- **Ongoing processing and interim storage** of used fuel and reactor components from the station
- Operation of new **Pickering Component Storage Structure** building



Units 1-4 Non-Nuclear Dismantling

- Pickering **Units 2 and 3** have been in Safe Storage since 2010.
- OPG will complete **stabilization activities on Units 1 and 4** and progress to Storage with Surveillance.
- OPG will proceed with **select dismantling of non-nuclear components** and outbuildings per the CNSC staff-accepted Detailed Decommissioning Plans.

**Every
5 years**

**Probabilistic Safety
Assessment**



REGDOC-2.4.2

Systematic way to look at and address any kind of radiological risk in the station.

**Every
5 years**

**Environmental Risk
Assessment**



REGDOC-2.9.1

To assess potential human health and ecological risks to exposure from radiological and conventional stressors present in the environment.

**Every
10 years**

Periodic Safety Review

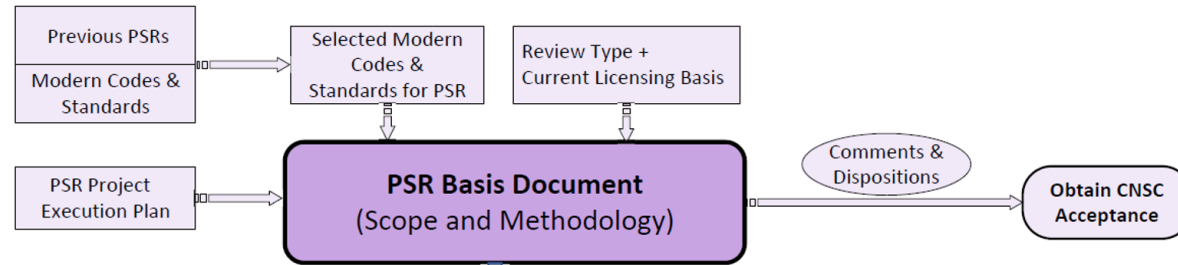


REGDOC-2.3.3

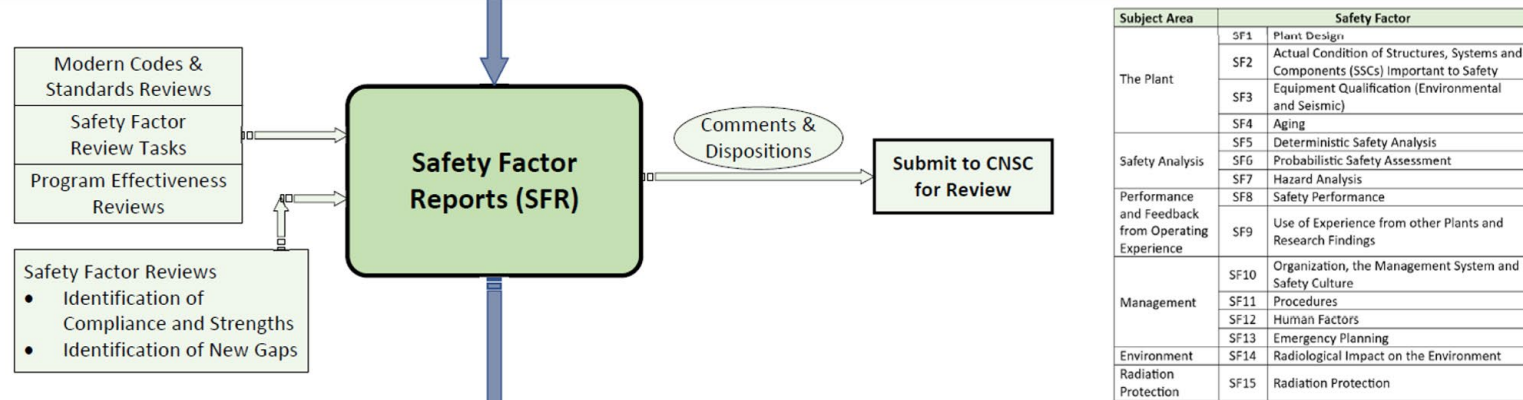
Systematic and comprehensive review performed of the design, condition and operation of the facility against modern codes and standards.

Periodic Safety Review Process

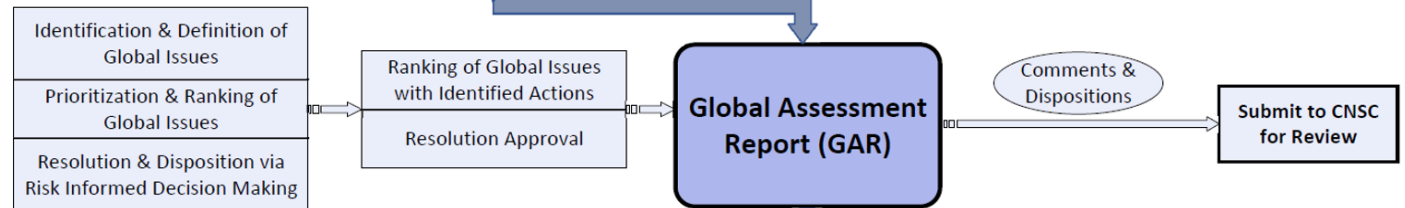
PSR Basis



Safety Factor Reports

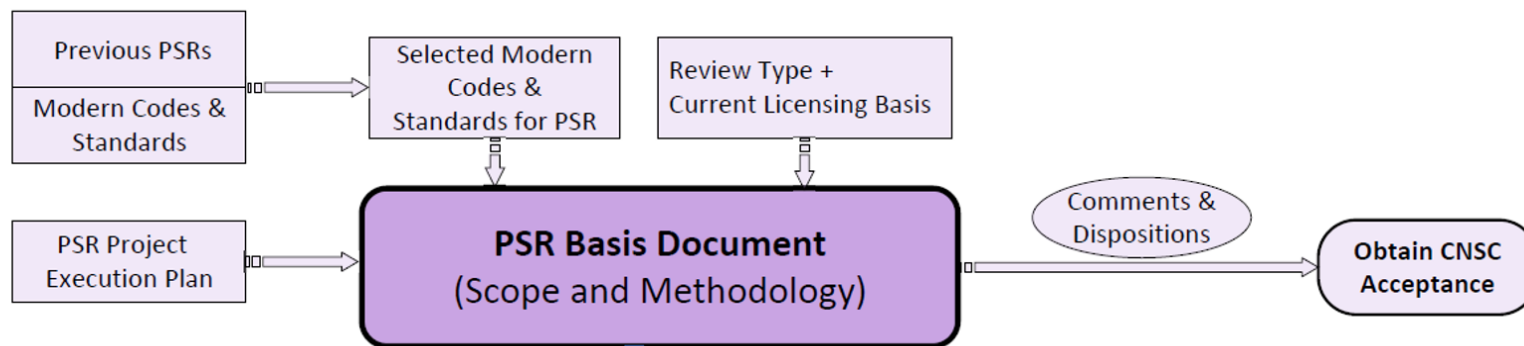


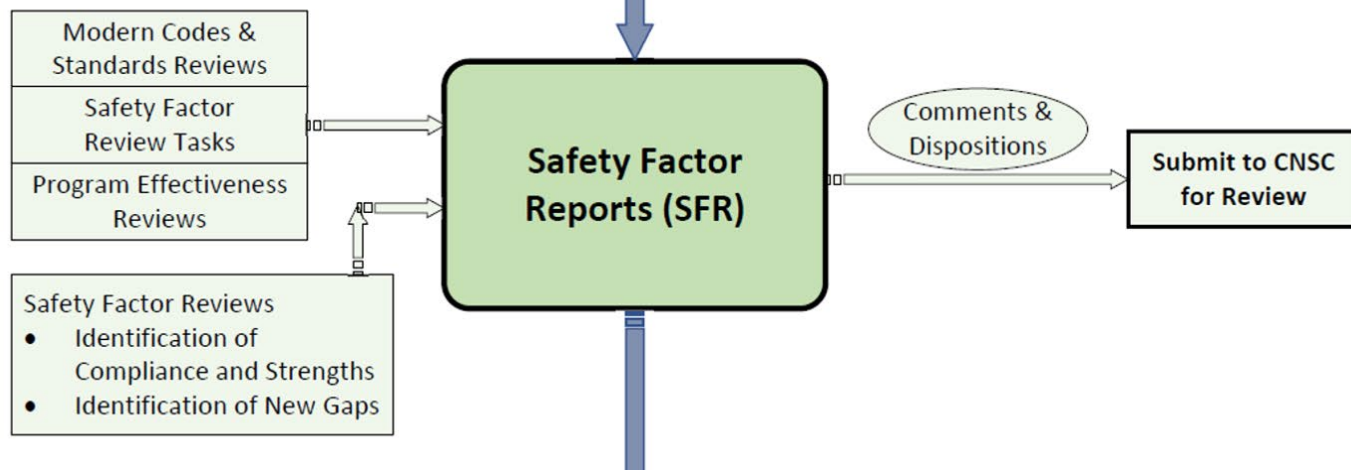
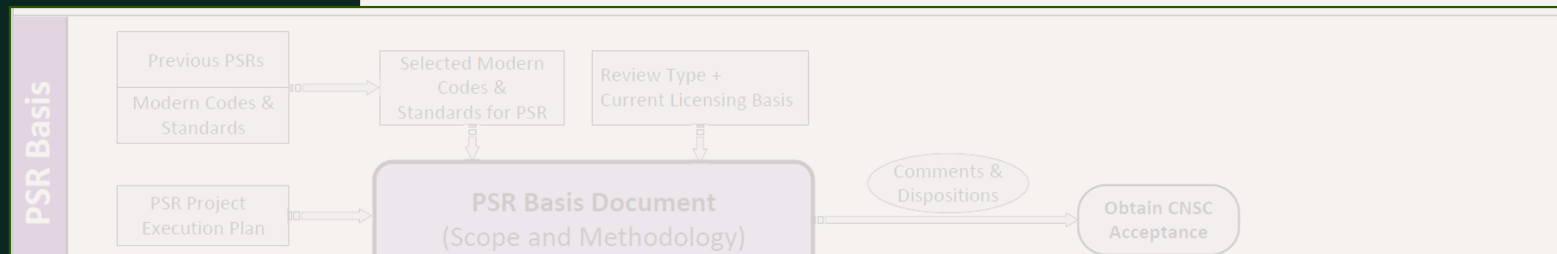
GAR Process



IIP

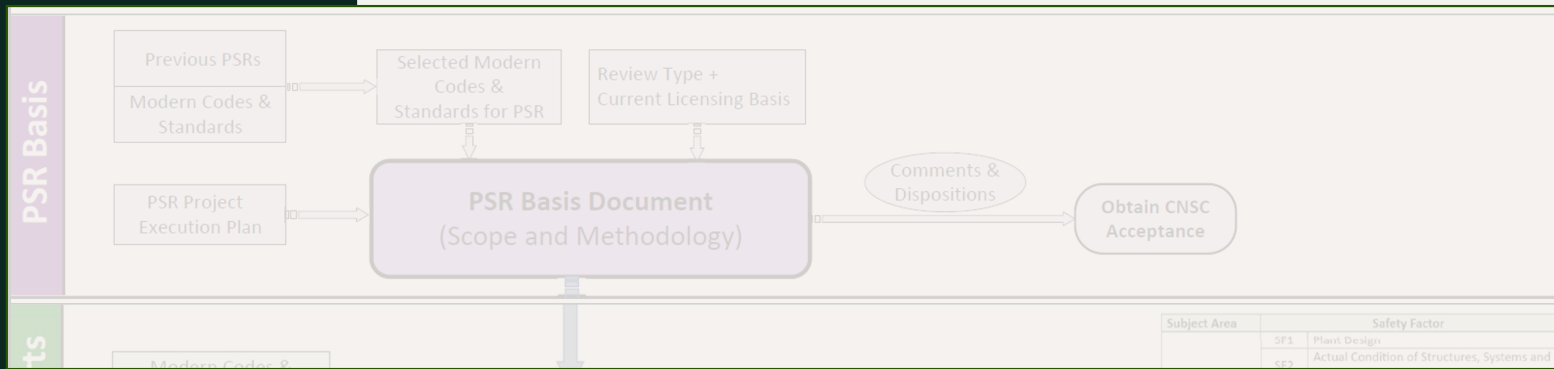




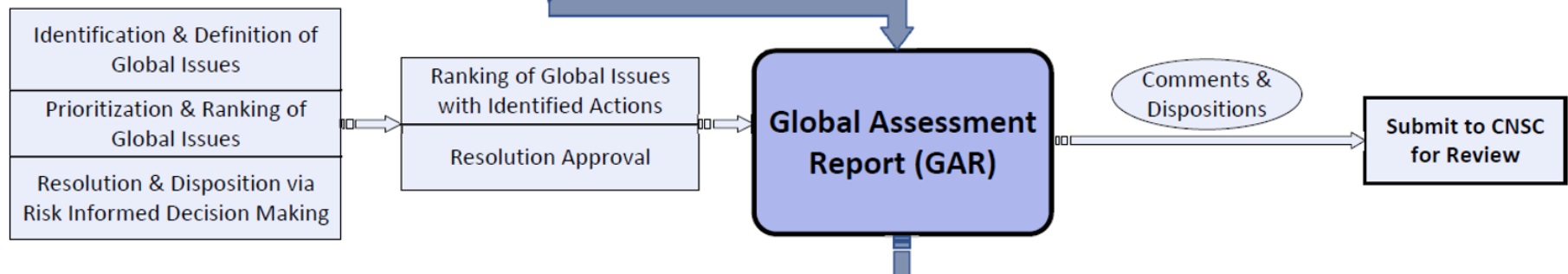


Subject Area	Safety Factor	
The Plant	SF1	Plant Design
	SF2	Actual Condition of Structures, Systems and Components (SSCs) Important to Safety
	SF3	Equipment Qualification (Environmental and Seismic)
	SF4	Aging
Safety Analysis	SF5	Deterministic Safety Analysis
	SF6	Probabilistic Safety Assessment
	SF7	Hazard Analysis
Performance and Feedback from Operating Experience	SF8	Safety Performance
	SF9	Use of Experience from other Plants and Research Findings
Management	SF10	Organization, the Management System and Safety Culture
	SF11	Procedures
	SF12	Human Factors
	SF13	Emergency Planning
Environment	SF14	Radiological Impact on the Environment
Radiation Protection	SF15	Radiation Protection

Periodic



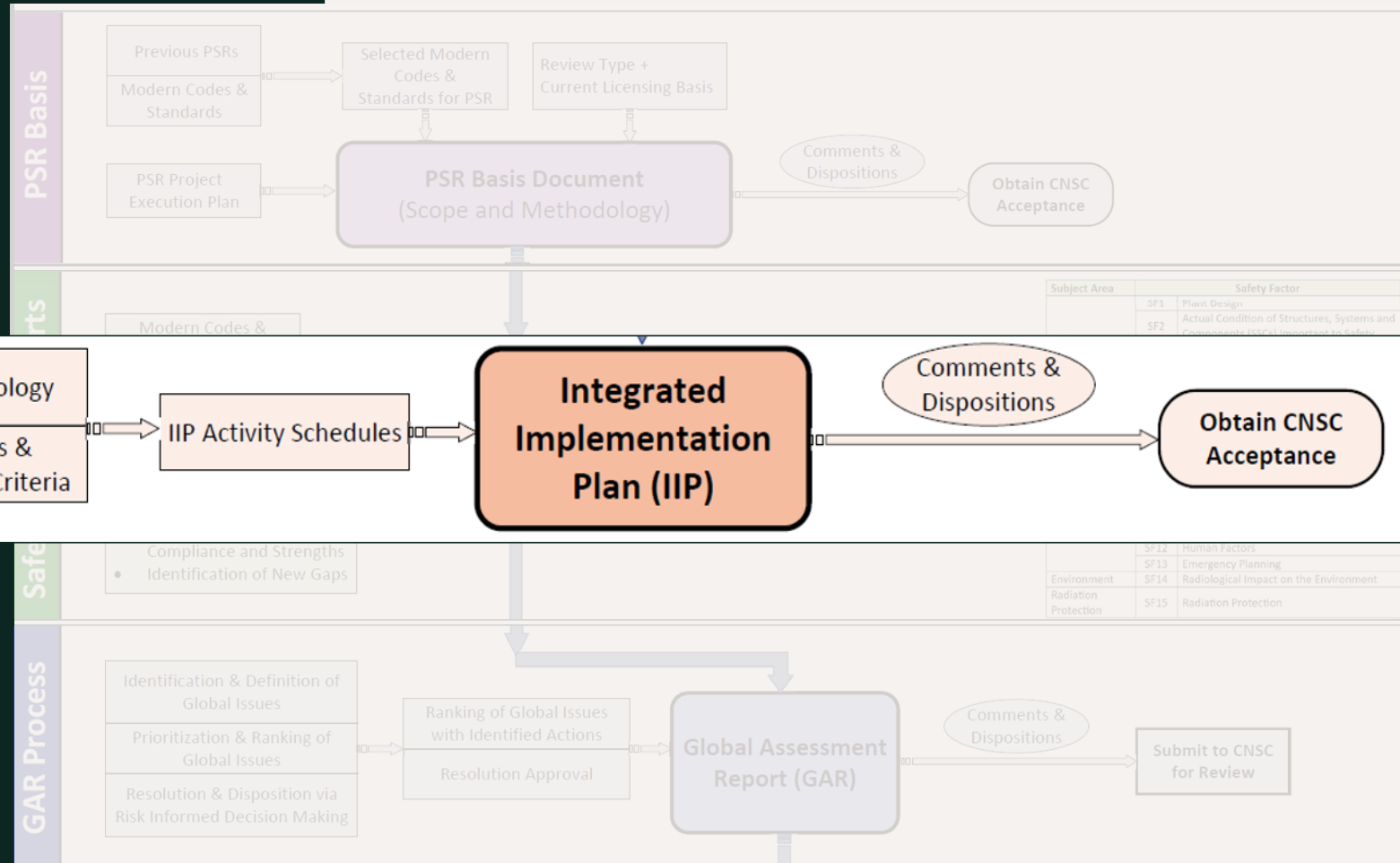
GAR Process



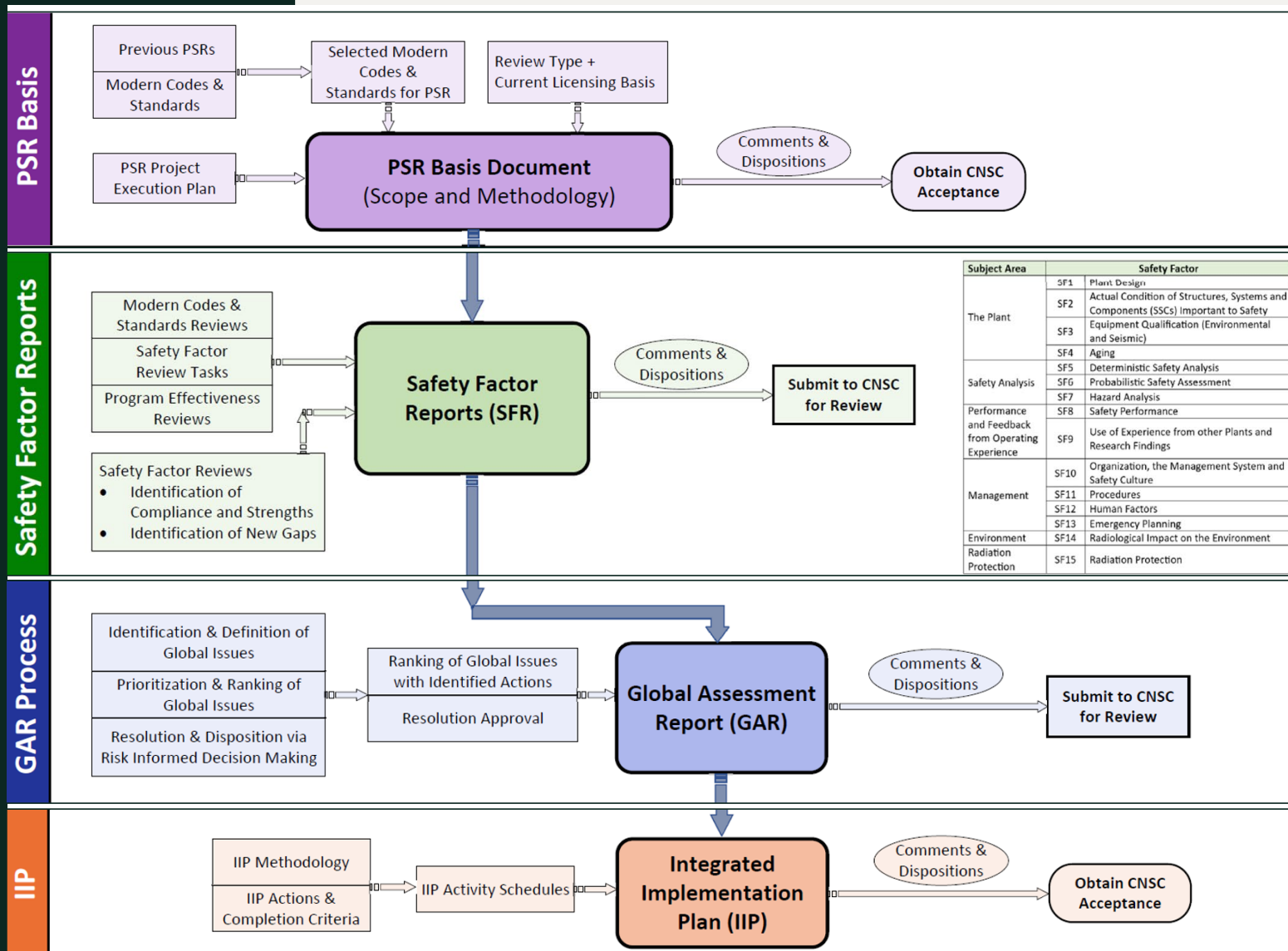
Periodic

IIP

Process



Periodic Safety Review Process



Integrated Implementation Plan

- **PSR3** found no safety concerns for current operation, refurbishment, or post-refurbishment operation of the station.
- **Global Assessment Report** identified no significance issues, supported by the planned replacement of major components during refurbishment.
- **Integrated Implementation Plan (IIP)**, planned for submission in 2027, will formalize actions, accountabilities, schedules and tracking, with many actions already incorporated into refurbishment and safety enhancement programs.

Safety and Control Areas

Management System

- **Nuclear Safety and Security** are prioritized above all else.
- **Structured governance** ensures issues are identified, assigned, escalated and resolved.
- All licensed activities are governed by one **integrated nuclear management system** with defined accountability, independent oversight and escalation mechanisms.





Safety Analysis

- OPG collaborates with industry and make use of its lessons learned
- Includes **comprehensive safety assessments** performed at regular cycles demonstrating regulatory and design requirements are met.
- OPG **collaborates with industry** and applies lessons learned.
- Safety Analysis is **compliant with CNSC** regulatory requirements.
- The Pickering **Probabilistic Safety Assessment** is updated every five years.



Operating Performance

- **Proven track record** of safe and reliable operating performance managed through OPG's effective operations program.
- **Maintenance activities are prioritized** based on operational and safety requirements.
- Recognized with Electricity Canada President's **Award of Excellence for Employee Safety – Generation** for seven consecutive years.

Fitness for Service

Pickering has a robust fitness for service program that ensures:

- **Station reliability** and availability of equipment.
- **Inspection and surveillance** of major components including fuel channels, feeders, boilers, and reactor components and structures.
- A comprehensive **Integrated Aging Management program** is in place.



Staffing and Training

- **Internal and external recruitment programs** to attract a diverse and high performing workforce.
- Effective training program to ensure **workers are trained and qualified** with the appropriate knowledge, skills and behaviours.
- **Succession planning and knowledge transfer** to ensure necessary talent and skills will be available when needed.
- **Operating Experience** from the Darlington Refurbishment Project informed Pickering Refurbishment staffing strategies.





Environmental Protection

- **Mature and robust environmental protection programs** ensuring monitoring and evaluation of environmental parameters.
- The **Environmental Monitoring Program** regularly samples water, air and soil. Results are posted on [opg.com](https://www.opg.com).
- Pickering NGS and PWMF **Climate Change Resilience Assessments** confirmed both facilities can operate safely under future climate conditions.
- The Pickering site has maintained Wildlife Habitat council **Gold-level Certification** since 2020.



Emergency Management

- The Pickering station and PWMF have **effective nuclear, conventional and fire emergency** preparedness and response programs.
- Our station and facilities **meet all standards and regulatory requirements** to ensure our communities are always safe.
- **OPG applies the four Pillars of Emergency Management:** Prevention, Mitigation, Preparedness, Response and Recovery Efforts.

Community Engagement

OPG engages with the local community through its **comprehensive public outreach program** which includes:

- Public Information Centres
- Educational programs and community events
- Committees and councils
- Community partnerships



The Pickering NGS and PWMF have a **proven history** of safe and reliable performance.

The **Pickering Refurbishment Project** enables continued safe operation through the next 30+ years.

OPG continues to be qualified to carry-on our licensed activities and will:

- make adequate provisions to protect the health, safety and security of persons and the environment;
- maintain national security and measures required to implement international obligations.

Pickering NGS and PWMF will continue to operate **safely and reliably**, enabling OPG to meet the growing energy needs expected in the province.

