



Supplementary Information

Oral presentation

Presentation from Canadian Nuclear Society

In the Matter of the

Ontario Power Generation Inc.

Application to extend the operation of
Pickering Nuclear Generating Station
Units 5 to 8 until December 31, 2026

Commission Public Hearing

June 2024

Renseignements supplémentaires

Exposé oral

Présentation de la Société Nucléaire Canadienne

À l'égard d'

Ontario Power Generation Inc.

Demande visant à prolonger l'exploitation
des tranches 5 à 8 de la centrale nucléaire de
Pickering jusqu'au 31 décembre 2026

Audience publique de la Commission

Juin 2024



Canadian Nuclear Society
Soci t  Nucl aire Canadienne

Intervention:
Ontario Power Generation's Request for
Authorization to Operate Pickering NGS
Units 5 to 8 Beyond 2024

Neil Alexander, Head of Communications



The Canadian Nuclear Society

- A society of learned experts promoting the exchange of information and technical insights and encouraging education and knowledge sharing in areas related to nuclear science, nuclear technologies, and their peaceful applications including nuclear power generation.
- Around 1000 members from across the Canadian nuclear industry including engineers and scientists, consultants, academics, and others interested in nuclear technologies.
- Many of our members work close to the Pickering Nuclear Generating Station and live nearby with their families. Safety is important both to them and to the Society.



The Need

- Increasing recognition by the federal and provincial governments of nuclear power as being essential to support the reliability, affordability, and sustainability of Canada's electricity systems.
- The need to maintain Ontario's existing capacity is supported by the predictions of electricity demand made by the Independent Electricity System Operator (IESO).
- Commercial nuclear power plants are identified in Canada and internationally as necessary for rapid and sustained reductions in global greenhouse gas emissions.
- The recent COP28¹ agreement recognized the need for “Accelerating zero- and low-emission technologies including, inter alia,... nuclear, ...”.
- Extending operation of existing plants is a safe, reliable, and cost-effective way to contribute to the Ontario roadmap and its pathway to meet electricity needs, considering the Paris Agreement objectives.

¹COP28 = 28th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change



Generic Comments on Safety

- Canada has enjoyed a long record of safe nuclear energy production overseen by a strong, competent regulator.
- Publicly available Regulatory Oversight Reports provide an overview of the historical safety of Pickering NGS and its design and operation. Based on a review of those reports, the Society can see Pickering NGS has been consistently operated by Ontario Power Generation in a safe way and OPG has retained the capacity to continue in this way.
- The CNSC staff environmental protection review of Pickering NGS from 2016 to 2022 provides the scientific and evidence-based conclusion that the potential risks to the environment from operating the Pickering NGS are low to negligible. CNSC staff found that human health is not impacted by operations at the Pickering NGS site and that health effects are indistinguishable from health outcomes found in the public.



Periodic Safety Reviews and Assessments

- Periodic Safety Reviews (PSR) are a systematic and comprehensive safety assessment of a nuclear power plant. They are carried out regularly, typically every 10 years, and they include reviews of plant design, station condition, and operational elements for everything related to nuclear safety.
- A Probabilistic Safety Assessment (PSA) provides an indicator of nuclear plant safety risk for a variety of internal and external hazards and considers the design features of a plant and how the plant is operated and maintained.
- Information about PSAs and how they are used in the Canadian and international nuclear regulatory framework are well-described in Section 2 of CMD 16-M46.
- The summary of PSAs for each nuclear power plant in Canada are publicly disclosed per regulatory requirements.



PSR and PSA at Pickering

- The most recent PSR for Pickering NGS was re-assessed to evaluate the impact of extended operating period to the end of 2026 and identifies improvement actions to be completed by the end of 2024.
- The 2022 PSA summary for Pickering NGS demonstrates safety goals are met and overall risk to the public is low.

This comprehensive PSR gives the Society a high degree of confidence in the ongoing nuclear safety and robustness of Pickering NGS beyond 2024.



Conclusions

Based on the information available to the Canadian Nuclear Society through this CNSC hearing, the Society concludes;

- Pickering NGS units 5 through 8 have been, and continue to be, safe and fit for service, and Ontario Power Generation remains qualified to operate the units.
- The cost-effective, emissions-free, reliable electricity generated by the station is needed to support the reliability, affordability and sustainability of our energy system.

As a result, the Society sees considerable advantages arising from the continued safe operation of the station and supports Ontario Power Generation's request to operate to the end of 2026.