



**Written submission from
Ontario Power Generation**

**Mémoire de
Ontario Power Generation**

In the Matter of

À l'égard de

McMaster University

Université McMaster

Application to renew its McMaster Nuclear
Reactor Class IA non-power reactor operating
licence

Demande concernant le renouvellement de son
permis d'exploitation d'un réacteur de catégorie
IA non producteur de puissance pour le réacteur
nucléaire McMaster

Public Hearing - Hearing in writing based on
written submissions

Audience publique - Audience fondée sur des
mémoires

April 2024

Avril 2024

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March 12, 2024

Tribunal Officer, Commission Registry
Canadian Nuclear Safety Commission
280 Slater Street
PO Box 1046 Stn B
Ottawa, ON K1P 5S9
Email: intervention@cnsccsn.gc.ca

RE: McMaster University request to renew its McMaster Nuclear Reactor Class IA non-power reactor operating licence (licence #NPROL-01).

To the CNSC Commission:

Ontario Power Generation (OPG) wishes to submit this intervention in writing to express support for McMaster University's application to the Canadian Nuclear Safety Commission (CNSC) for a 20-year renewal of the McMaster Nuclear Reactor (MNR) Class IA non-power reactor operating licence.

OPG has worked collaboratively with McMaster University, fostering advancements in safety culture, work practices and innovation for over half a century of nuclear generation.

OPG has observed the safety culture at McMaster University through collaborations including the Western Clean-Energy Sorting and Recycling (WCSR) building, a collaboration between OPG and our subsidiary Laurentis Energy Partners. The operation of this facility is based on learnings from our research partnership with McMaster University. Working together, Laurentis and McMaster are exploring new methods and technologies, such as automated sorting and optimized radiation detection methods, to further sort and help divert more nuclear byproducts to re-use and recycling.

In addition, OPG has partnered with the University Network of Excellence in Nuclear Engineering (UNENE) at McMaster University and the Organization of Canadian Nuclear Industries (OCNI) to advance clean energy solutions in Ontario and support collaborative research on Small Modular Reactors (SMRs).

McMaster University, specifically the UNENE research, has supported not only OPG, but is a trusted and valuable collaborator to industry and research partners across Canada and internationally. Some of this research includes, but is not limited to:

- More than 20 years as Research Chair on nuclear safety and thermal hydraulics.
- A Research Cooperative Project (RCP) on topics such as improved understanding of inter-subchannel thermal submixing, mathematical modelling of inter-subchannel thermal mixing and computational fluid dynamics.
- UNENE University Research Chair in *Nuclear Safety Uncertainty Development Project*.
- McMaster Project in collaboration with the Ontario Research Fund and OCNI on small modular reactor deployments in Ontario.

- Upcoming RCP on laser decontamination technologies and life extension of type 304L stainless steel components in CANDU moderator systems.

The MNR research facility is one of the premier nuclear research universities in the world and allows faculty, students and staff to apply and expand their expertise in nuclear technologies, while meeting the demands of industry. McMaster is a national leader and has been recognized globally for their track record of excellence in safety, nuclear research and training.

McMaster has more than 60 years of experience operating a community-based nuclear reactor safely and efficiently, and the subsequent health, research and economic benefits continue to advance the performance of the nuclear industry. With the growing understanding of the importance for the long-term advancement and sustainability of nuclear power, the research underway at McMaster will continue to advance efforts to help Canada meet its net-zero emissions targets.

OPG has confidence in the ongoing CNSC oversight and regulatory processes to ensure continued safe operations throughout the proposed 20-year licence term. The CNSC has multiple regulatory tools to use throughout any licence duration to ensure licensees remain compliant with their licence conditions.

In conclusion, based on McMaster University's strong record which demonstrates a sustained commitment to the highest standards of safety and quality performance, and considering the CNSC's strength as a regulator, OPG supports a 20-year renewal of the MNR operating licence.

On a personal note, I am a proud Engineering graduate of McMaster University who personally benefited from McMaster's Nuclear Engineering courses and McMaster's Nuclear Reactor. I can attest to the impact it had on the direction I took in the field of Engineering and the industry I ended up working in after obtaining my degree. Today I oversee all aspects of the Nuclear Business for Ontario Power Generation, including operation of the Pickering and Darlington Nuclear Generating Stations and strategic direction for OPG nuclear growth.

Yours sincerely,



Steve Gregoris
Chief Nuclear Officer
Ontario Power Generation