



**Oral Presentation**

**Exposé oral**

**Written submission from  
CANDU Owners Group Inc.**

**Mémoire de  
CANDU Owners Group Inc.**

In the Matter of the

À l'égard de

**Darlington New Nuclear Project**

**Projet de nouvelle centrale nucléaire de  
Darlington**

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Application to renew the nuclear power  
reactor site preparation licence for the  
Darlington New Nuclear Project

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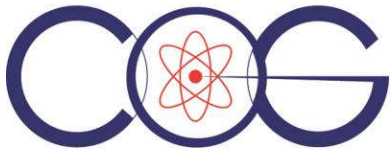
Demande de renouvellement du permis de  
préparation de l'emplacement d'une centrale  
nucléaire pour le projet de nouvelle centrale  
nucléaire de Darlington

**Commission Public Hearing**

**Audience publique de la Commission**

**June 10, 2021**

**10 juin 2021**



May 3, 2021

Canadian Nuclear Safety Commission  
Secretariat  
c/o Louise Levert  
Canadian Nuclear Safety Commission  
280 Slater Street, P.O. Box 1046  
Ottawa, ON K1P 5S9  
Email: [cns.interventions.ccsn@canada.ca](mailto:cns.interventions.ccsn@canada.ca)

Subject: Application for the Renewal of OPGs' nuclear power reactor site preparation license for the Darlington New Nuclear Project {Ref. 2021-H-04}

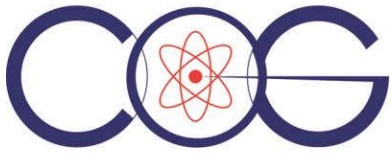
Dear Ms. Levert,

I am writing on behalf of the CANDU Owners Group (COG) in support of Ontario Power Generation's application to renew its Darlington New Nuclear Plant (DNNP) site license for a ten-year period. I also wish to indicate my interest in attending the hearing in June 2021 to provide an oral presentation. My presentation will elaborate on the points below.

### **The benefits of continued licensing**

The renewal of DNNP's Site Preparation Licence, the only one in Canada, is critical to Canada's ongoing plan to achieve net-zero by 2050. Nuclear power generation provides safe, reliable, low-carbon baseload electricity generation, and is a key contributor to Ontario's low-emitting electricity grid. OPG has included new nuclear generation and Small Modular Reactors in its Climate Change Plan issued in late 2020. Using the Darlington site for new nuclear will enable the next generation of grid-scale nuclear power plants in Canada faster than at any other location, a key pillar in fighting the climate change crisis.

OPG carried out extensive studies, assessments and consultations with stakeholders to complete site evaluation studies in support of its original PRSL application, clearly demonstrating the suitability of the DNNP site for a new NGS. They were similarly thorough in their review in support of the PRSL renewal, reviewing the initial site



evaluation using new regulatory documents, current codes and standards referenced in the licensing basis and undertaking consultations with Indigenous communities and the public. Their review confirmed that the validity of the existing licensing basis for the next licensing period, and that the site continues to be suitable for new nuclear.

The development of new nuclear projects will contribute significantly to Ontario's sustainability and prosperity through the creation of well-paying jobs and associated economic benefits, the potential to strengthen the supply of medical isotopes worldwide, and the versatile use of new nuclear in many industrial applications. The nuclear Industry in Canada will soon be celebrating 50 years of safe, clean and reliable service to the people of Ontario. In that period, OPG has demonstrated itself as an exemplary operator of its present fleet of reactors and a great neighbour in the communities where it operates. The company has demonstrated its respect for the interests of Indigenous communities and for the current and next generation of Ontarians, Canadians and other stakeholders who have shared interests, through their commitment to environmental study and stewardship.

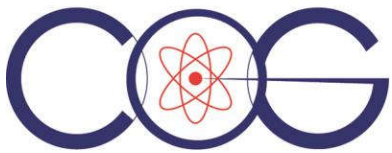
### **Collaboration through the CANDU Owners Group**

This submission speaks to some of OPG's efforts to continuously strengthen the Nuclear Industry through its leadership in collaborative efforts. In particular, I will speak to those undertaken in collaboration with other CANDU operators through COG.

COG is a non-for-profit organization with membership from all CANDU operators both in Canada and internationally. Our mission is "To improve performance of CANDU stations worldwide through member collaboration" with a vision to create excellence.

To fulfill this mission and vision, COG is organized around the following four operational program areas:

- Nuclear Safety and Environmental Affairs
- Research and Development
- Information Exchange
- Joint Projects



In addition, COG has developed a leadership and knowledge management training program to strengthen leadership and management skills amongst high-potential technical managers in the nuclear industry.

COG members spend approximately \$70 million a year in R&D and Joint Projects to strengthen the safety, reliability, environmental and cost performance of the CANDU nuclear plants. Investment into R&D is made by our members in proportion to the number of operating units, which makes OPG the largest current contributor to COG's R&D program. This in turn, benefits the entire CANDU community, both domestic and international.

The work facilitated by COG on behalf of its members relies on capable, knowledgeable, suppliers with deep expertise, human capacity and facilities to undertake ground-breaking nuclear science. This research, and the associated engineering activity, is undertaken mostly in Canada by organizations such as Canadian Nuclear Laboratories, Kinectrics, SNC Lavalin and Stern Laboratories.

**\*SMRs:** COG's fully-formed collaboration model and infrastructure offer an ideal mechanism to collaborate on development of new nuclear technologies such as SMRs, approaches and common input into regulatory frameworks.

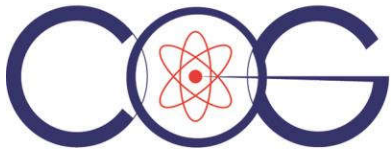
COG members, and the nuclear industry as a whole, are pursuing the future prospect of advanced technologies and small modular reactor (SMR) deployment in Canada and worldwide.

In response to this, COG established a set of SMR activities consisting of:

- The SMR Technology Forum (SMRTF) and related SMR Task Teams;
- The COG SMR Vendor Participant Program (SMR VPP); and
- The CEO SMR Forum.

These groups were established to drive a collaborative effort to accelerate the development and implementation of SMRs – for both flexible on-grid application and to provide energy self-sufficiency in remote areas. An integrated and collaborative approach brings advantages by de-risking plans for all partners.

Other SMR program activities include participation in SMR workshops, joint projects, international harmonization initiatives and COG peer group engagement.



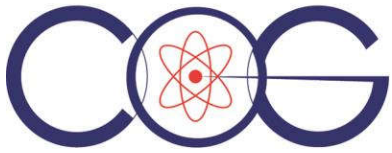
COG's SMR program is contributing to Canadian collaboration and to advance SMR technology and strengthen industry alignment on deployment strategies. Through COG's Nuclear Safety and Environmental Affairs (NSEA) line of business, COG has taken a leadership role in facilitating information exchange and development on SMR activities from many of the members of Team Canada engaged in SMRs, who are also signatories to Canada's SMR Action Plan.

COG has launched collaborative initiatives in areas of mutual interest to its Members under the CEO SMR Forum, CEO SMR Working Group, and SMRTF. At a very high-level, these forums and working group were established for electricity generating utilities including OPG to work in partnership to develop a Canadian SMR strategy, identify and contribute to the resolution of challenges facing SMR deployment, and to enable innovative SMRs to play a key role in Canada and the world's low-carbon future, while opening opportunities for regional development, expanding the supply chain and creating high quality jobs for Canadians.

The commitment to collaborative exchanges does not end with the operators. Additionally, collaborative activities and priorities for SMR technology developers have been identified in the COG SMR VPP including inter-forum dialogue with other stakeholders and COG groups on important issues such as fuel supply, nuclear security and radioactive waste. Through the creation of the VPP, COG recognizes that SMR technology developers are critical contributors to the dialogue to resolve challenges and maximize the SMR opportunity for Canada domestically, and abroad.

The renewal of DNNP's site licence is key to progressing the development of SMRs for continued reliable, baseload, clean, nuclear power; supporting the future of the Canadian nuclear industry by providing sustained opportunities for industry supply chain companies and promoting direct and indirect employment (including STEM and other high-tech disciplines, skilled trades); and continuing collaboration across Canada through COG for a pan-Canadian deployment strategy for SMRs. Starting with DNNP, it is expected that additional grid-scale SMRs could be deployed subsequently by collaborating partners building on the experience of OPG.

In short, the collective efforts and commitment of COG participants and members are contributing to the successful development of new nuclear technology in Canada. Together, we are advancing new nuclear technology and strengthening industry



alignment on deployment strategies to successfully bring it to market and maximize the benefits to Canadians. OPG is a leader in these efforts.

I look forward to elaborating on aspects of this letter during my presentation in June.

Sincerely,

A handwritten signature in grey ink, appearing to read 'S. Smith', with a long horizontal flourish extending to the right.

Stephanie Smith  
President and CEO  
COG