



**Oral Presentation**

**Exposé oral**

**Written submission from  
Atomic Energy of Canada Limited**

**Mémoire d'  
Énergie atomique du Canada limitée**

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**

2021 May 3

Record Number: CGR-318658460-7943

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

**Re:** Ontario Power Generation's Application for the renewal of the Site Preparation Licence to support the Darlington New Nuclear Project

Dear members of the Commission,

This letter represents Atomic Energy of Canada Limited's (**AECL's**) written intervention on the application by Ontario Power Generation (**OPG**) for the renewal of the Site Preparation Licence (**PRSL**) to support the Darlington New Nuclear Project (**DNNP**).

AECL is supportive of OPG's efforts towards new nuclear generation and Small Modular Reactors (**SMRs**) as part of its Climate Change Plan. Indeed, AECL also considers nuclear to be an important part of Canada's clean electricity production today, and a critical component of clean electricity systems going forward. This is consistent with the International Energy Agency's 2019 report that highlighted that without nuclear investment, achieving a sustainable energy system will be much harder. For Canada specifically, we have a responsibility to develop and implement options to address future clean electricity needs in order to meet our national greenhouse gas reduction goals. OPG, an experienced nuclear operator, already contributes in large part to the clean energy generation in Ontario. It is therefore critical that OPG maintains its opportunity for new nuclear on a well-understood, and existing nuclear site. Indeed, OPG has nuclear operating experience dating back almost 60 years with the commissioning and operation of the Nuclear Power Demonstration (**NPD**) reactor – Canada's first reactor to supply electricity to the grid.

Moreover, the PRSL and the DNNP maintain an important opportunity for Canada to explore the potential value of on-grid small modular reactors (**SMRs**) in Canada. There is growing interest worldwide in small modular reactor technologies because of their potential to offer clean, safe, non-emitting energy options. AECL is a federal Crown corporation with a mandate to enable nuclear science and technology. In this context, AECL sees the DNNP as a critical opportunity for Canada to bring to bear its significant nuclear know how and experience to demonstrate new technologies; better assess the potential for these to contribute to the urgent need for clean energy and economic growth priorities; and take advantage of the experience and expertise of an established nuclear operator and an experienced nuclear workforce locally and across the Canadian supply chain.

AECL and OPG have worked alongside one another to bring nuclear technology to market in Canada since the beginnings of NPD, and this continues today. The significant investments made by OPG into research and

development, through the CANDU Owners Group, much of which is performed by Canadian Nuclear Laboratories (CNL) at AECL's Chalk River site, are vital to the continuous improvement of the industry in efficiency, safety and environmental protection. Looking forward, strong collaboration across the nuclear sector will be foundational to ongoing Canadian leadership in all aspects of the nuclear lifecycle. To that point, OPG is collaborating with AECL and CNL to advance decommissioning and waste management as a means of addressing environmental protection and remediation responsibilities.

Thank you for this opportunity to provide input on this licence application. I would be pleased to answer any questions you may have.

Sincerely,

4/29/2021

X *F. Dermarkar*

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Fred Dermarkar  
President & CEO, AECL  
Signed by: Fred Dermarkar

Fred Dermarkar  
President and CEO / Président et Premier Dirigeant  
Atomic Energy of Canada Ltd / Énergie atomique du Canada limitée