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## **Oral Presentation**

## **Exposé oral**

### **Written submission from the Canadian Association of Physicians for the Environment**

### **Mémoire de la Canadian Association of Physicians for the Environment**

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

Senior Tribunal Officer, Secretariat  
Canadian Nuclear Safety Commission  
280 Slater Street, P.O. Box 1046, Station B  
Ottawa, Ontario K1P 5S9

Sent by email [cns.interventions.ccsn@canada.ca](mailto:cns.interventions.ccsn@canada.ca)

Dear Sir or Madam:

**Re: Canadian Association of Physicians for the Environment (CAPE) -  
Comments on Ontario Power Generations Nuclear Power Reactor  
Site Preparation Licence for the Darlington Site (Ref. 2021-H-04) –  
prepared by Dr. Cathy Vakil**

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CAPE submits this intervention in response to the CNSC's Revised Notice of Public Hearing dated March 1, 2021 requesting comments on Ontario Power Generation's request for a renewal of its nuclear power reactor site preparation licence for the Darlington New Nuclear Project. A hearing for this licence amendment application is scheduled for June 9-10, 2021.

CAPE is a non-profit public interest organization of physicians, other health professionals and citizens whose goal is to ensure good health for all Canadians by ensuring the health of the planet, through education and advocacy.

Nuclear energy poses significant threats to human health, whether it be through low level exposure to residents living near nuclear facilities, risk of major accident, its link to nuclear proliferation, or the ongoing dilemma of

dealing with the highly toxic radioactive long lasting nuclear waste. CAPE continues to lobby for protection of health and safety regarding the issue of nuclear energy.

Ontario, unlike anywhere else in the world, has chosen to locate its nuclear reactors in the most densely populated region in the country, on the largest body of fresh water in the world. This poses extraordinary risk to health and safety of much of the Canadian population as well as the millions of Americans who rely on the Great Lakes for their drinking water. The CNSC must be mindful of this unusual situation when granting approval for nuclear activities to proceed at the Darlington location.

OPG has not yet chosen a reactor type that it will use on the DNNP site. How can the CNSC judge whether the site is suitable when it is not known what the site will be used for? Different reactors carry with them different requirements for the site, different environmental challenges and different risks to safety of workers, the public and the environment. It would be premature for the CNSC to approve the site until the OPG announces the reactor type it will use, as well as details about its design, type and volume of nuclear waste, planning for emergency response in the event of an accident needing immediate evacuation of the local population and also for subsequent drinking water needs for possibly tens of millions of people in the case of radioactive contamination of Lake Ontario. Only when the OPG provides this information should the OPG apply for site approval. The CNSC should hold public hearings at that time so the public has the opportunity to give their input with all the information available to them.

It is clear from previous statements from OPG that it plans to use the site for small modular nuclear reactors (SMNRs). The OPG states that the original site licence application from Sept. 30, 2009 still applies but clearly the region has changed in terms of population, traffic flow and climate change-induced weather events, so this document would not apply now. A new analysis of the site is required taking into account these changes, and in consideration of the type of nuclear reactor the OPG chooses. For this reason the CNSC should not approve OPG's application for a ten year licence for the DNNP site until the OPG produces an updated site licence application instead of the 12 year old document it repeatedly refers to. This new document should address updated environmental issues, emergency

response issues and radiological risks that all are contingent on the reactor type that is chosen by OPG, and which take into account differences in regional population, traffic and weather patterns that are different from 12 years ago. In addition, ten years is too long for a licence. If granted now, a ten year licence would ensure that the public has no input into the reactor design or site appropriateness for that design, which defeats the purpose of the June 2021 public hearings.

Even though SMNRs do not exist yet, they are problematic. Historically nuclear reactors have gone hugely over budget, sometimes severalfold. Canadian and provincial governments have already spent hundreds of millions of taxpayer dollars that have been gifted to private nuclear companies to design SMNRs, with huge amounts of public money yet to come. The nuclear waste these reactors produce is more radioactive and toxic than present reactors, making the unsolved problem of nuclear waste even more pressing. It will take years to design and build SMNRs, making them completely useless in dealing with our climate emergency, which needs urgent attention immediately.

We already have cleaner cheaper technology to deal with electricity demand that will address our climate emergency and we do not need nuclear energy to meet the demand for electricity. There is no reason to spend vast amounts of public money on this new untested technology that carries with it health and nuclear proliferation risks that cleaner renewable energy does not. Now, when Ontario's nuclear energy facilities are ready to be closed down and decommissioned, we should phase out this outdated mode of electricity generation, and move forward to implement forms of clean cheaper renewable energy. In the least, if Ontario insists on plans to continue using nuclear energy, this is an opportunity to move the site of the new nuclear facility far away from large populations instead of rebuilding in the most populated region of the country.

It is the role of the Canadian Nuclear Safety Commission to ensure that environmental and human health is protected. Upon reading the OPG's material it is very clear that approving the renewal of their licence at the DNNP site would be in contravention of the CNSC's mandate to protect Canadians' health, giving OPG the go ahead to design and build an untested technology that could compromise Ontarians' health and safety.

For these reasons CAPE recommends that the CNSC not approve OPG's request for licence renewal until:

- the OPG decides on the specific reactor it plans to use
- the OPG describes in detail the risk to the environment and human health and safety that their chosen reactor design entails, and gives adequate mitigation plans for these risks, as well as historical information about how the reactor has performed elsewhere

Until these criteria are satisfied, the CNSC should not approve the site preparation licence that OPG is requesting.

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On behalf of Canadian Association of Physicians for the Environment