



Oral Presentation

Exposé oral

**Written submission from
Terrestrial Energy**

**Mémoire de
Terrestrial Energy**

In the Matter of the

À l'égard de

Darlington New Nuclear Project

**Projet de nouvelle centrale nucléaire de
Darlington**

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

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

TERRESTRIAL ENERGY

April 28, 2020

Canadian Nuclear Safety Commission
Secretariat
Canadian Nuclear Safety Commission
280 Slater Street, P.O. Box 1046
Ottawa ON K1P 5S9

**Subject: Ontario Power Generation Site Preparation Licence Renewal Application
to Support Darlington New Nuclear Project**

On behalf of Terrestrial Energy, this letter is in support of Ontario Power Generation's site preparation licence renewal application for the Darlington New Nuclear Project.

Terrestrial Energy is a Canadian based nuclear engineering company, and developer of the Integral Molten Salt Reactor (IMSR), a Generation IV (advanced reactor) technology. We are headquartered in Oakville, Ontario and directly employ 80 scientists and engineers. Terrestrial Energy was incorporated in Canada in 2013 to develop and deploy our advanced reactor technology targeting the Canadian market. Beyond the dynamic market for nuclear power in Canada, Terrestrial Energy decided to locate in Ontario as it provides access to world-class nuclear engineering talent, as well as commitment to nuclear safety that is overseen by the Canadian Nuclear Safety Commission, an internationally respected regulator. Terrestrial Energy commenced the regulatory process over 5 years ago via the CNSC's Vendor Design Review program. Canada also offers a locale with established nuclear capability, including an expert supply chain with a reputation for operational excellence under the watch of nuclear operators such as Ontario Power Generation and Bruce Power.

"Nuclear safety is paramount" – it is not just a statement of intent but also the way in which we manage our work and decisions at Terrestrial Energy. Our commitment to safety-first goals is shared amongst our personnel and with our partners in the Canadian and international supply chain. This attitude is directly related to the Darlington application for renewal of the Site Preparation Licence and manifests itself in three ways.

Terrestrial Energy Inc.
2275 Upper Middle Rd. East Suite 201 Oakville Ontario L6H 0C3 CANADA
www.TerrestrialEnergy.com

First, many of our employees come equipped with this attitude having been trained in the nuclear business at OPG and Bruce Power where standards of excellence are nurtured. To be more specific, the current operations at Darlington are recognized as one of the best-in-class by the World Association of Nuclear Operators. The Darlington Refurbishment project, which is breathing new life into this asset of Ontario and Canada, is marked by its safety record while achieving its project goals. These attributes arise from the outstanding commitment from the top of the house down, to the operators, engineers and highly skilled workforce that run day-to-day affairs.

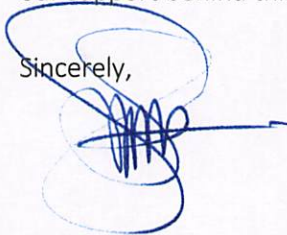
Second, Terrestrial Energy is one of three SMR developers under evaluation by OPG for deployment of our technology at the Darlington site. This work has been in progress since the announcement by OPG in October 2020 and involves a systematic and thorough assessment of each technology with respect to strict compliance with Canadian regulations, codes and standards and within the requirements of the site preparation licence. In this assessment nuclear safety is at forefront as it will be throughout the entire life-cycle of the plant with both public safety and worker safety as critical measures of success. Nuclear safety does not stop at regulatory limits but strives to exceed these especially as it relates to public safety.

Third, Terrestrial Energy has witnessed firsthand the depth and breadth of the original studies undertaken and how OGP has progressed long-lead regulatory commitments, such as protecting the bank swallow habitat or identifying new flora growth. Community impacts are also an important dimension of the licence renewal and we have supported OPG's community engagement plan not only within their strategy but also with our own outreach to communities and Indigenous community representatives.

The objectives of public and worker safety, management of environmental impacts, community and indigenous engagement and involvement are clearly articulated in OPG's original "Application for a Licence to Prepare Site", where OPG undertook extensive studies, assessments and consultations with Indigenous communities and stakeholders to complete the site evaluation studies and develop OPG's Environmental Impact Statement (EIS). This level of diligence is a hallmark of the nuclear industry in Canada and a tribute to the diverse group of people who are dedicated to the nuclear effort and to the cause of making Canada a climate change leader and at the same time re-establishing Canada as an advanced nuclear technology leader. It is widely accepted at home and abroad that nuclear power is part of the solution that helps create the pathway to net-zero emissions. The deployment strategy developed by OPG embodies the positive attributes for the local communities, for Ontario and for Canada. SMR technology is not technologically different, but it does offer more far-reaching deployment models. These are relevant not just to Darlington but ultimately to other parts of Canada where fossil fuels dominate the landscape.

Terrestrial Energy and our employees are proud to be part of the Canadian nuclear heritage and to throw our support behind this licence renewal application, as a destiny issue for all Canadians.

Sincerely,



Simon Irish
CEO
Terrestrial Energy