



**Written submission from  
Terrestrial Energy Inc.**

**Mémoire de  
Terrestrial Energy Inc.**

In the Matter of

À l'égard de

**Decision on the scope of an environmental  
assessment of the proposed Micro Modular  
Reactor Project at the Canadian Nuclear  
Laboratories Ltd., in Chalk River**

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**Décision sur la portée de l'évaluation  
environnementale pour le projet de  
microréacteur modulaire aux Laboratoires  
Nucléaires Canadiens ltée, à Chalk River**

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Hearing in writing based on written  
submissions

Audience par écrit fondée sur des mémoires

**June 2020**

**Juin 2020**

# TERRESTRIAL ENERGY

June 1, 2020

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

**Subject: Notice of an Opportunity to Submit a Written Intervention on the Scope of an Environmental Assessment**

Nuclear power has a long and successful history in Canada since 1945 when the ZEEP reactor went critical for the first time at the Chalk River Laboratories of Atomic Energy of Canada Limited. ZEEP (for Zero Energy Experimental Pile) was the first reactor to operate outside the USA. Thereafter, the development of the Candu system across the next five decades has established a world-class fleet of reactors, which are the backbone of electricity production in both Ontario and New Brunswick.

Nuclear power technology is subject to the most rigorous safety and regulatory standards of any industrial process, and the Canadian Nuclear Safety Commission provides this level of oversight. The combination of domestic nuclear capability, including a robust domestic supply chain, and a strong regulatory framework, provides Canada with the clear opportunity to lead the next generation of nuclear power development.

Terrestrial Energy is a Canadian-based company developing this next generation technology; the Company's Integral Molten Salt Reactor (IMSR). The IMSR is a Generation IV reactor that delivers grid-sized electric power (195 MWe) and can be configured to deliver high-quality heat (600°C) for industrial process applications. This design employs the Company's proprietary Advanced Reactor technology called the Integral Molten Salt Reactor (IMSR). IMSR has the potential to be more cost-competitive than fossil fuel combustion and represents a highly scalable source of clean energy for industrial heat and electric power provision. The Company is working towards the first commercial deployments in Canada in this decade.

Terrestrial Energy actively support the activities outlined in Canada's SMR Roadmap and the Company is an interested party in the developments at Chalk River. Global First Power's proposal to site their first Micro Modular Reactor (MMR) at Chalk River project is consistent with the objectives of Generation IV nuclear technology and will be a positive step towards the demonstration of a viable alternative to using fossil fuels to provide safe, reliable energy for remote mining and communities, while reducing Canada's carbon footprint and achieving climate change goals. A successful MMR project could prove that nuclear energy – specifically, small modular reactors – is a viable alternate energy solution for Canada and worldwide.

Terrestrial Energy offers this letter of support for the Global First Power demonstration project at Chalk River. Canada's history of successful innovation in the nuclear power sector, its strong regulatory framework and its commitment to indigenous and community engagement on environmental and community issues should be leveraged to support clean, cost-effective energy sources such as those provided by Generation IV nuclear technologies.

Yours sincerely,

A handwritten signature in blue ink, appearing to be 'S. Irish', written over a light blue grid background.

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Simon Irish  
Chief Executive Officer  
cc: William Smith, Terrestrial Energy