

July 7, 2021

Letter #: L210707

Ms. Sarah Eaton, Director  
New Major Facilities Licensing Division  
Canadian Nuclear Safety Commission  
280 Slater Street  
Ontario, Canada

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001  
United States

**Subject: TEI/TEUSA Response to CNSC/NRC Feedback and Questions on IMSR® Postulated Initiating Events White Paper to Support Joint Regulatory Review**

By the letter dated April 27, 2021, the Canadian Nuclear Safety Commission (CNSC) and the United States Nuclear Regulatory Commission (NRC) jointly provided feedback on two documents that described the methodology and selection of postulated initiating events (PIE) for the Integral Molten Salt Reactor (IMSR®) design. The feedback was derived from information that was made available to both regulators through:

- CNSC Phase 2 Vendor Design Review process; and
- TEUSA White Paper related to PIE for the IMSR®

The CNSC/NRC feedback was provided in three separate sections. The first section was a series of questions on the PIE methodology that were applicable to both TEI and TEUSA. The second section was a series of questions on the TEUSA PIE white paper that resulted from the NRC regulatory review of the whitepaper requested by TEUSA. The third section, Appendix A of the attachment to the CNSC/NRC letter, was feedback provided by the CNSC which corresponded to their Vendor Design Review of the IMSR® design.

As requested by the April 2021 CNSC letter, this TEI/TEUSA joint letter and the Enclosures provide a consolidated response to the feedback and questions provided in the attachment to the April 2021 CNSC letter. TEI/TEUSA's response follows the structure of the April 2021 letter attachment. Enclosure 1 contains the proprietary or protected responses to the series of questions provided by the CNSC letter. Enclosure 2 provides the non-proprietary versions of the responses contained in Enclosure 1. Enclosure 3 provides the necessary affidavit that requests that the information be withheld under protocols established under existing NRC regulations.

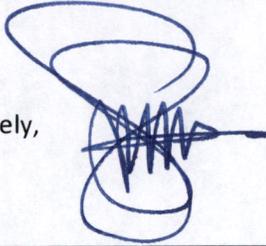
TEI and TEUSA are available to discuss the responses, or any additional information needed after the CNSC and the NRC have completed their review of the provided materials. If you have questions relating to this information, please contact:

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D120  
NRA

Robin Rickman  
V.P. Business Development  
Terrestrial Energy USA  
Phone: 646-687-8212 ext. 531  
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Sincerely,

A handwritten signature in blue ink, appearing to be 'Simon Irish', written over a horizontal line. The signature is stylized and somewhat illegible due to the cursive and overlapping strokes.

Simon Irish  
CEO - Terrestrial Energy Inc.  
CEO - Terrestrial Energy USA

Enclosures:

1. Responses to CNSC/NRC Questions and Information Requests on IMSR® PIE (Proprietary)
2. Responses to CNSC/NRC Questions and Information Requests on IMSR® PIE (non-Proprietary)
3. Affidavit requesting NRC withholding of information as proprietary.

Cc:

Mohammed Shams (NRC)  
Adrian Muniz (NRC)  
Christopher Van Wert (NRC)  
Marcel de Vos (CNSC)  
D. Duchesne (CNSC)  
M. Rickard (CNSC)

Enclosure 3 to Letter L210707

Terrestrial Energy USA Affidavit and Request for Withholding from Public Disclosure  
(10 CFR 2.390)

# TERRESTRIAL ENERGY USA

## AFFIDAVIT

I, **Simon Irish**, state as follows:

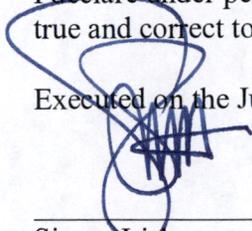
- (1) I am the Chief Executive Officer of Terrestrial Energy USA ("TEUSA") and have reviewed the information described in paragraph (2) which is sought to be withheld, and I am the authorizing official for TEUSA to apply for its withholding.
- (2) The information sought to be withheld, in its entirety, is contained in Enclosure 1 of Letter L210707, "*Responses to CNSC/NRC Questions and Information Requests on IMSR<sup>®</sup> PIE.*"
- (3) I am making this request for withholding, and executing this affidavit in support thereof, pursuant to the provisions of 10 CFR 2.390(b)(1).
- (4) In making this application for withholding of proprietary and commercially sensitive information of which it is the owner or licensee, TEUSA relies upon the exemption from disclosure set forth in the *Freedom of Information Act* ("FOIA"), 5 U.S.C. Sec. 552(b)(4), and the *Trade Secrets Act*, 18 U.S.C. Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for trade secrets (Exemption 4). The material for which exemption from disclosure is here sought also qualifies under the narrower definition of trade secret, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, *Critical Mass Energy Project v. Nuclear Regulatory Commission*, 975 F.2d 871 (D.C. Cir. 1992), and *Public Citizen Health Research Group v. FDA*, 704 F.2d 1280 (D.C. Cir. 1983).
- (5) The information sought to be withheld is considered proprietary and/or commercially sensitive for the reasons set forth in paragraphs (4)b and (4)c shown below. Some examples of categories of information that fit into the definition of commercially sensitive information are:
  - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by TEUSA's competitors without license from TEUSA constitutes a competitive economic advantage over other companies;
  - b. Information that, if used by a competitor, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;
  - c. Information that reveals aspects of past, present, or future TEUSA development plans and programs, resulting in potential products to TEUSA;
  - d. Information that discloses trade secrets or potentially patentable subject matter, or both, for which it may be desirable to obtain patent protection.
- (6) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by TEUSA, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by TEUSA, not been disclosed publicly, and not been made available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions, or to proprietary or confidentiality agreements

that provide for maintaining the information in confidence. The initial designation of this information as proprietary and/or commercially sensitive, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in the following paragraphs 6 & 7.

- (7) Initial approval of proprietary and commercially sensitive treatment of a document is made by the manager of the originating component, who is the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or who is the person most likely to be subject to the terms under which it was licensed to TEUSA. Access to such documents within TEUSA is limited to a "need to know" basis.
- (8) The procedure for approval of external release of such a document typically requires review by a vice president for technical content, competitive effect, and determination of the accuracy of the proprietary and/or commercially sensitive designation. Disclosures outside TEUSA are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary or confidentiality agreements, or both.
- (9) The information identified in paragraph (2), above, is classified as proprietary and/or commercially sensitive because it contains detailed information regarding TEUSA's licensing plans and technical details about the Integral Molten Salt Reactor (IMSR<sup>®</sup>) which TEUSA is developing for US deployment.
- (10) Public disclosure of the information sought to be withheld is likely to cause substantial harm to TEUSA's competitive position and foreclose or reduce the availability of profitmaking opportunities. The information contains proprietary technical details of the IMSR<sup>®</sup> design and details regarding TEUSA's licensing strategy. The development of TEUSA's chosen licensing path comprises a substantial investment of time and money by TEUSA. The precise value of the expertise to use in devising this licensing path is difficult to quantify, but it clearly is substantial. TEUSA's competitive advantage will be lost if its competitors are able to use the results of the TEUSA's experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions. The value of this information to TEUSA would be lost if the information were disclosed to the public. Making such information available to competitors without them having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive TEUSA of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing its licensing strategy.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on the July 7<sup>th</sup>, 2021

  
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Simon Irish  
Chief Executive Officer  
Terrestrial Energy USA, Inc.