

# TERRESTRIAL ENERGY USA

April 2<sup>nd</sup>, 2020

Project Number: 99902076  
TEUSA Letter: #200402

US Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

**Subject: Terrestrial Energy USA, Inc. Report 200310: IMSR® Core-unit Definition – Applicable Structures, Systems and Components**

To Whom it May Concern,

Please find enclosed for NRC review and comment, the Terrestrial Energy USA (TEUSA) white paper entitled “IMSR® Core-unit Definition – Applicable Structures, Systems and Components.” The white paper provides an overview of major plant structures, systems, and components that make up the IMSR® power plant. In addition, the white paper provides details related to the design and operation of important plant structures, systems and components that comprise the IMSR® Core-unit.

TEUSA respectfully requests that NRC review the subject white paper and provide written comments on areas where the white paper does not provide sufficient enough detail for NRC to have a clear understanding of the design basis and operation of the IMSR® Core-unit. Written comments should be limited to additional areas of discussion that will be necessary to support a future license application. Since the Core-unit covers many systems, TEUSA expects that the NRC review will involve a multi-disciplinary technical team. However, because this white paper is an overview of the system design and not a formal application, TEUSA requests that the NRC complete its multi-disciplinary review in no more than 80 staff hours.

TEUSA requests that NRC complete its review and provide its written comments on the subject document within 60 days of receipt of this letter. If the TEUSA schedule and resource requests cannot be met, TEUSA is prepared to discuss the outcomes sought, the staff resource requirements, and the schedule for completing the review.

Portions of the enclosed white paper are proprietary, and TEUSA requests that it be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390. Enclosure 1 provides the proprietary version of the white paper and Enclosure 2 provides the non-proprietary white paper. An affidavit supporting the withholding request is provided in Enclosure 3.

If you have any questions or need any additional information, please contact Robin Rickman by email at [rrickman@terrestrialusa.com](mailto:rrickman@terrestrialusa.com) or by phone at 646-687-8212 ext. 523.

Sincerely,



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Simon Irish  
Chief Executive Officer, Terrestrial Energy USA

**Enclosures:**

**Enclosure 1: "IMSR® Core-unit Definition – Applicable Structures, Systems and Components" (Proprietary)**

**Enclosure 2: "IMSR® Core-unit Definition – Applicable Structures, Systems and Components" (Non-proprietary)**

**Enclosure 3: Affidavit Supporting Request for Withholding from Public Disclosure**

**CC:**

***John Monninger*, Director - Division of Advanced Reactors and Non-Power Utilization Facilities (DANU)–  
Office of Nuclear Reactor Regulation (NRR)**

***Brian Smith*, Deputy Director – DANU-NRR**

***John Segala*, Branch Chief - Advanced Reactors Policy Branch – DANU-NRR**

***Benjamin Beasley*, Branch Chief - Advanced Reactors Licensing Branch - DANU-NRR**

***Adrian Muniz*, Project Manager - Advanced Reactor Licensing Branch – DANU-NRR**

***Michelle Hayes*, Branch Chief, Advanced Reactors Technical Branch – DANU-NRR**