



October 31, 2023

TP-LIC-LET-0099  
Project Number 99902100

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

**Subject: Request for Preapplication Readiness Assessment of Safety and Environmental Topics of Kemmerer Power Station Unit 1 Construction Permit Application**

**References:**

1. TerraPower, LLC, "Regulatory Engagement Plan for the Natrium™ Reactor<sup>1</sup>," June 8, 2021.<sup>2</sup>
2. TerraPower, LLC, "Updated Kemmerer Power Station Unit 1 Construction Permit Application Anticipated Submittal Date," August 2, 2023.<sup>3</sup>

TerraPower, LLC (TerraPower) confirms the preapplication interactions transmitted in Reference 1 will be completed prior to the construction permit application submittal. These preapplication interactions conform with the guidance contained in DANU-ISG-2022-07, "Review of Risk-Informed, Technology-Inclusive Advanced Reactor Applications – Roadmap<sup>4</sup>," Appendix A, "Pre-Application Engagement Guidance."

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<sup>1</sup> a TerraPower and GE-Hitachi technology.

<sup>2</sup> Agencywide Documents Access and Management System (ADAMS) Accession Number ML21159A221.

<sup>3</sup> ADAMS Accession Number ML23214A199.

<sup>4</sup> ADAMS Accession Number ML22048B546.

TerraPower requests the NRC staff conduct a preapplication readiness assessment of safety and environmental topics prior to the anticipated construction permit application submittal date stated in Reference 2.

TerraPower requests the readiness assessment be conducted starting in January 2024 leveraging the electronic reading room and consistent with the NRC Office of Nuclear Reactor Regulation office instruction, NRR-LIC-116, "Preapplication Readiness Assessment."<sup>5</sup> This assessment will allow the NRC staff to become familiar with the content of the application and identify missing information and technical and regulatory issues that may complicate the review.

TerraPower requests that a nominal review duration of up to six weeks and up to 800 hours be considered and observations be provided in a timely manner to support the construction permit application submittal.

This letter makes no new or revised regulatory commitments.

If you have any questions regarding this letter, please contact Ryan Sprengel at [rsprengel@terrapower.com](mailto:rsprengel@terrapower.com) or (425) 324-2888.

Sincerely,

A handwritten signature in black ink that reads "Ryan Sprengel".

Ryan Sprengel  
Director of Licensing, Natrium  
TerraPower, LLC

cc: Mallecia Sutton, NRC  
William Jessup, NRC  
Nathan Howard, DOE  
Jeff Ciocco, DOE

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<sup>5</sup> ADAMS Accession Number ML20104B698.