
November 1, 2023

U.S. Nuclear Regulatory Commission Document
Control Desk
11555 Rockville Pike
Rockville, MD 20852

Re: Submittal of X-energy, LLC, XENITH™ Microreactor Pre-Application Regulatory Engagement Plan (REP)

I am pleased to submit on behalf of X-energy, LLC (X-energy), the enclosed Controlled Unclassified Information (CUI), Export Controlled Information (ECI), and Proprietary version of X-Energy's Next-Generation Integrated Transportable High-Temperature (XENITH) microreactor pre-application Regulatory Engagement Plan (REP). This initial submittal covers a brief technology overview and planned pre-application interactions with the NRC in support of future X-energy XENITH microreactor license application(s).

The enclosed REP includes information on the basic design of the XENITH microreactor as well as the regulatory strategy envisioned. The REP includes our initial proposal of key topic areas that we would like to address through pre-application interactions to allow both X-energy and the Nuclear Regulatory Commission (NRC) to determine the most effective means to license the XENITH microreactor design. Through these interactions, X-energy will continue to update the NRC of our design and deployment plans as they evolve.

This submittal contains CUI, ECI, and Proprietary information of X-energy and is not to be distributed and/or disseminated outside of its intended audience without the consent of the Department of Defense's Strategic Capabilities Office. In conformance with the requirement of 10 CFR Section 2.390, as amended, of the NRC's regulations, we are enclosing with this submittal an Affidavit. The Affidavit sets forth the basis on which the information identified as CUI, ECI, and Proprietary should be withheld from public disclosure.

Sincerely,



Michael I. Dudek
Licensing Manager, XENITH Microreactor Program
X-energy, LLC

Enclosures:

- (1) Affidavit
- (2) X-energy XENITH Microreactor Pre-Application Regulatory Engagement Plan (CUI, ECI, and Proprietary)


Letter - XENITH Microreactor Regulatory Engagement Plan - Rev1


Final Audit Report


2023-11-01


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"Letter - XENITH Microreactor Regulatory Engagement Plan - Rev1" History

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Enclosure 1: Affidavit Supporting Request for Withholding from Public Disclosure (10 CFR 2.390)

I, Travis Chapman, Director, Reactor Licensing & Regulatory Affairs, of X Energy, LLC (X-energy) do hereby affirm and state:

1. I am authorized to execute this affidavit on behalf of X-energy. I am further authorized to review information submitted to or discussed with the U.S. Nuclear Regulatory Commission (NRC) and apply for the withholding of information from disclosure. The purpose of this affidavit is to provide the information required by 10 CFR 2.390(b) in support of X-energy's request for proprietary treatment of certain commercial information submitted in Enclosure 2 to X-energy's letter MRA-00-200-PLAN-2000490 from myself to the NRC which provides the X-energy Regulatory Engagement Plan for the XENITH microreactor.
2. I have knowledge of the criteria used by X-energy in designating information as sensitive, proprietary, confidential, and export-controlled.
3. Pursuant to the provision of paragraph (b)(4) of 10 CFR 2.390, the following is furnished for consideration by the NRC in determining whether the information sought to be withheld from public disclosure should be withheld.
 - a. The information sought to be withheld from public disclosure in Enclosure 2 is owned by X-energy. This information was prepared with the explicit understanding that the information itself would be treated as proprietary and confidential and has been held in confidence by X-energy.
 - b. The information sought to be protected in Enclosure 2 is not available to the public.
 - c. The information contained in Enclosure 2 is of the type that is customarily held in confidence by Xenergy, and there is a rational basis for doing so. The information X-energy is requesting to be withheld from public disclosure includes technical information related to the design, analysis and operations associated with our XENITH high-temperature, gas-cooled, microreactor design that directly impact our business development and commercialization efforts. X-energy limits access to this proprietary and confidential information in order to maintain confidentiality.
 - d. Enclosure 2 contains information about the planned activities of X-energy related to the development of the XENITH design bases, TRISO-X fuel design bases, forecast design development timeframes, and relates to the commercialization strategy for our XENITH microreactor. Public disclosure of the information contained in Enclosure 3 would create substantial harm to X-energy because it would reveal valuable technical information regarding X-energy's design development, competitive expectations, assumptions, current position and strategy. Its use by a competitor could substantially improve the competitor's position in the design, manufacture, licensing, construction, and operation of a similar competing product.
 - e. The Proprietary Information contained in Enclosure 2 is transmitted to the NRC in confidence and under the provisions of 10 CFR 2.390; it is to be received in confidence by the NRC. The Export-controlled Information contained in Enclosure 2 is transmitted to the NRC in confidence and under

the provisions of 10 CFR 810 and 10 CFR 110; it must be withheld from disclosure and is to be received in confidence by the NRC.

- f. Enclosure 2 contains Controlled Unclassified Information (CUI) under Department of Defense (DoD) Distribution Statement F. Further Dissemination only as directed by The Strategic Capabilities Office, Meadows 1 4755 Meadow Wood Lane, Chantilly, VA 20151, 29 December 2022 or higher DoD Authority.

I declare under the penalty of perjury that the foregoing is true and correct. Executed on this 1st day of November 2023.

Sincerely,



Travis Chapman (Nov 1, 2023 12:32 EDT)

Travis Chapman
Director, Reactor Licensing & Regulatory Affairs
XENITH
X Energy, LLC






Enclosure 1 - Affidavit

Final Audit Report

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"Enclosure 1 - Affidavit" History

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