



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 18, 2022

Mr. Travis Chapman
Manager, U.S. Licensing Xe-100 Program
X Energy, LLC
801 Thompson Avenue
Rockville, MD 20852

SUBJECT: X ENERGY, LLC – THE U.S. NUCLEAR REGULATORY COMMISSION STAFF
FEEDBACK REGARDING XE-100 LICENSING WHITE PAPER MAINTENANCE
STAFF OPTIMIZATION (EPID NO. L-2021-LRO-0066)

Dear Mr. Chapman:

On December 28, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21362A751), X Energy LLC (X-energy) submitted to the U.S. Nuclear Regulatory Commission (NRC), "Xe-100 Licensing Maintenance Staff Optimization White Paper." On January 10, 2022, the NRC staff met with X-energy representatives in a public meeting where X-energy provided an overview of the white paper. This white paper presents X-energy's approach to determining the maintenance staffing plan at an Xe-100 site. The meeting summary and presentation slides can be located at ADAMS Accession No. ML22021B658.

X-energy requested the NRC staff to review this white paper and provide feedback. The NRC staff completed its review of the submittal and noted that, in general, X-energy provided a useful perspective about how to conduct maintenance in unique ways. Future interactions regarding the human factors program should address how maintenance tasks will be addressed during human factors analysis and testing. The enclosure of this letter provides the staff's detailed observations for X-energy to consider.

The NRC staff's comments provided in the attachment are specific to the white paper as submitted. The NRC staff encourages further pre-application engagement, especially for novel design features or planned approaches that differ from currently operating reactors. Early discussions help to facilitate the NRC staff understanding of the unique aspects of the X-energy concept of operation. This will be helpful when considering other related topics such as control room staffing and other subsequent submittals.

T. Chapman

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If you have questions about this matter, please contact Lucieann Vechioli at (301) 415-6035 or via email at Lucieann.VechioliFeliciano@nrc.gov.

Sincerely,



Signed by Kennedy, William
on 05/18/22

William B. Kennedy, Acting Chief
Advanced Reactor Licensing Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Project No.: 99902071

Enclosure:
As stated

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Enclosure: ML22095A060

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