



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

August 18, 2022

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

SUBJECT: X ENERGY, LLC – NRC FEEDBACK REGARDING XE-100 WHITE PAPER,  
“PHYSICAL PROTECTION SYSTEM APPROACH,” REVISION 2  
(EPID L-2022-LRO-0006)

Dear Mr. Chapman:

By letter dated April 8, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22098A228), X Energy, LLC (X-energy) submitted for the U.S. Nuclear Regulatory Commission (NRC) staff’s review Xe-100 white paper, “Physical Protection System Approach,” Revision 2. This white paper describes the elements of the approach X-energy is employing to develop a physical security program template for an Xe-100 high temperature, gas-cooled reactor plant. The NRC staff was asked to perform a review of this paper and provide written feedback. The NRC staff completed its review of the white paper and has found no major deficiencies for this stage of the pre-application process. The enclosure of this letter provides the NRC staff’s observations for X-energy to consider.

If you have questions about this matter, please contact Michael Orenak at (301) 415-3229 or Michael.Orenak@nrc.gov.

Sincerely,

Gregory Oberson, Acting Chief  
Advanced Reactor Licensing Branch 1  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

Project No.: 99902071

Enclosure:  
As stated

T. Chapman

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**NRR-106**

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