



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

August 9, 2023

Travis Chapman  
Director, Reactor Licensing  
and Regulatory Affairs  
X Energy, LLC  
801 Thompson Avenue  
Rockville, MD 20852

SUBJECT: X ENERGY, LLC – U.S. NUCLEAR REGULATORY COMMISSION  
OBSERVATIONS REGARDING XE-100 WHITE PAPER: SEISMIC DESIGN  
METHODOLOGY (EPID L-2022-TOP-0047)

Dear Mr. Chapman:

On February 10, 2023, X Energy, LLC (X-energy) submitted to the U.S. Nuclear Regulatory Commission (NRC) "Xe-100 Licensing White Paper Seismic Design Methodology" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23044A310).

X-energy requested that the NRC staff review this white paper and provide feedback regarding X-energy's proposed approach to support Xe-100 plant licensing efforts. The NRC staff completed its review of the submittal.

The NRC staff's observations provided in the enclosure, are specific to the white paper as submitted. The NRC staff encourages further pre-application engagement, especially for novel design, site features, or planned licensing approaches that differ from current operating reactors.

T. Chapman

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If you have questions regarding this matter, please contact Stephanie Devlin-Gill at (301) 415-5301 or Stephanie.Devlin-Gill@nrc.gov.

Sincerely,



Signed by Wentzel, Michael  
on 08/09/23

Michael Wentzel, Chief  
Advanced Reactor Licensing Branch 2  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

Project No.: 99902071

Enclosure: As stated

cc: X-Energy Xe-100  
via GovDelivery

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**ADAMS Accession No.:**

**Package: ML23188A149**

**Letter: ML23188A091**

**Enclosure: ML23188A092**

**NRR-106**

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<b>NAME</b>	SDevlin-Gill	CSmith	MWentzel
<b>DATE</b>	7/10/2023	8/9/2023	8/9/2023

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