



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

June 21, 2023

MEMORANDUM TO: Joseph A. Proffitt, Acting Chief
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: Stephanie Devlin-Gill, Senior Project Manager */RA/*
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE APRIL 10, 2023, MEETING WITH
X ENERGY, LLC REGARDING THE STRUCTURE OF THE
XE-100 CONSTRUCTION PERMIT APPLICATION
(EPID L-2018-LRM-0076)

Meeting Information:

Applicant: X Energy, LLC (X-energy)

Project No.: 99902071

Public Meeting Notice Agencywide Documents Access and Management System (ADAMS)
Accession No.: ML23081A491

Applicant Presentation Slides ADAMS Accession No.: ML23080A157

Meeting Attendees: See the enclosure for a list of meeting attendees.

CONTACT: Stephanie Devlin-Gill, NRR/DANU
301-415-5301

Meeting Summary:

The U.S. Nuclear Regulatory Commission (NRC) staff conducted the meeting in accordance with NRC Management Directive 3.5, "Attendance at NRC Staff-Sponsored Meetings" (ML21180A271). The purpose of the meeting was to discuss the structure of X-energy's proposed Xe-100 reactor Construction Permit Application (CPA). The meeting was conducted as a virtual meeting with attendees joining via Microsoft Teams. There were members of the public in attendance during the meeting, but they made no comments nor asked any questions.

The main points of discussion during the meeting were as follows:

- The NRC staff stated that it would like to see more detail about the content of the CPA chapters during future engagements with X-energy.
- The NRC staff mentioned the continued importance of pre-application engagement regarding the safety and environmental content of the CPA.
- The NRC staff mentioned that there is an advantage of submitting the Environmental Report (ER) using the standard format. The NRC is familiar with reviewing ERs using the standard format and, while the NRC could review an ER that is in a different format, the standard format adds efficiencies to the NRC review.
- The NRC staff encouraged X-energy to provide input and feedback to the NRC on the Technology Inclusive Content of Application Project (TICAP) and the Advanced Reactor Content of Application Project (ARCAP) when the next revisions of the documents are released for public comment.
- The NRC staff requested that, as new guidance is discussed and incorporated into the preliminary safety analysis report (PSAR) and other reactor safety-related documents required for the CPA, X-energy should also engage with the environmental review staff to discuss how new guidance may affect the NRC evaluation of the ER.
- X-energy stated that it plans to submit the PSAR approximately six months prior to the submittal of its ER.
- X-energy indicated that specific PSAR site characterization information will likely be submitted with the ER approximately six months after the majority of the PSAR submittal. The initial PSAR site characterization information would, in some cases contain bounding site parameters that would be supplanted by site specific values upon submittal of the ER. The bounding value approach is anticipated to be consistent with that previously reviewed by the NRC staff (ML21323A159).
- The NRC staff encouraged X-energy to continue to engage with the staff to discuss safety and environmental topics during the preapplication process.

No regulatory decisions were made as a result of this meeting.

Project No. 99902071

Enclosure: List of Meeting Attendees

cc: X-Energy Xe-100 via GovDelivery

J. Proffitt

SUBJECT: SUMMARY OF THE APRIL 10, 2023, MEETING WITH X ENERGY, LLC
REGARDING THE STRUCTURE OF THE XE-100 CONSTRUCTION
PERMIT APPLICATION (EPID NO. L-2018-LRM-0076) DATED: JUNE 21,
2023

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KErwin, NMSS

JGiacinto, NMSS

DPalmrose, NMSS

BTravis, NRR

MAudrain, NRR

GOberson, NRR

ADAMS Accession Nos.:

ML23172A228 (Package)

ML23081A491 (Meeting Notice)

ML23172A235 (Meeting Summary)

OFFICE	NRR/DANU/UAL1/PM	NRR/DANU/UAL1/ABC	NRR/DANU/UAL1/PM	
NAME	SDevlin-Gill	JProffitt	SDevlin-Gill	
DATE	06/21/2023	06/21/2023	06/21/2023	

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LIST OF MEETING ATTENDEES

MEETING WITH X ENERGY, LLC REGARDING THE STRUCTURE OF THE XE-100 CONSTRUCTION PERMIT APPLICATION

APRIL 10, 2023

U.S. Nuclear Regulatory Commission

Audrain, Meg
Devlin-Gill, Stephanie
Erwin, Kenneth
Giacinto, Joseph
Jung, Ian
Oberson, Greg
Orenak, Michael
Palmrose, Donald
Proffitt, Andrew
Travis, Boyce
Vechioli Feliciano, Lucieann
Vokoun, Patricia

X Energy, LLC

Chapman, Travis
Bannister, David
Bendt, Tim
Bowers, Harlan
Facemire, Jon
Gorden, Milton
Grant, Eddie
Hultgren, Jessa
Nordby, Ingrid
Reames, Randall
Sanderson, Marcy
Staiger, Maggie
van Staden, Martin

U.S. Department of Energy

Breuninger, James
Kugler, Andy
Natale, Mark
Stuhldreher, Timothy

Breakthrough Institute

Lloveras, Leigh
Smith, Charlyne

CERTREC

Hesebeck, Angela

Electric Power Research Institute

Thornsbury, Eric

Information Systems Laboratories, Inc.

Pope, Steven

Leidos

Speicher, Jim

NRG Energy, Inc

Bergman, Jana

Nuclear Energy Institute

Lipman, Dan

Radiant Nuclear

Korb, Elliott

S&P Global

Hancock, Mary Catherine

Technology Insights

Silady, Fred

TerraPower

Kellenberger, Nick

Tetra Tech, Inc.

Matis, Lisa

Public

Hotchkiss, Marc