



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

March 1, 2021

MEMORANDUM TO: Benjamin G. Beasley, Chief  
Advanced Reactor Licensing Branch  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

FROM: Lucieann Vechioli, Project Manager  
Advanced Reactor Licensing Branch  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JANUARY 21, 2021, MEETING BETWEEN THE  
U.S. NUCLEAR REGULATORY COMMISSION STAFF AND  
X-ENERGY, LLC TO DISCUSS THE QUALITY ASSURANCE  
PROGRAM DESCRIPTION FOR THE XE-100 REACTOR  
DESIGN CERTIFICATION

On January 21, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML21008A365](#)), the U.S. Nuclear Regulatory Commission (NRC) staff held a virtual Category 1 public meeting with representatives from X-Energy, LLC (X-Energy) and Energy Northwest. The purpose of the meeting was to discuss X-Energy's Quality Assurance Program Description (QAPD) for the Xe-100 reactor design. The presentation slides can be found at ADAMS Accession No. [ML21022A412](#). The meeting attendees are included as an enclosure to this document.

The meeting began with an overview of the QAPD and the Energy Northwest Quality Assurance program. The accepted XEQAPD-NP-A, "Quality Assurance Program Description" Revision 3-A (ADAMS Accession No. [ML20343A088](#)), addresses the quality assurance requirements for a Design Certification application. However, the U.S. Department of Energy selected X-Energy as one of the awardees for its Advanced Reactor Demonstration Program and it is more likely that a site-specific licensing pathway will be utilized. This licensing pathway will be under Title 10 of the *Code of Federal Regulations* Part 50, construction permit and operating license or Part 52 for a combined license application.

CONTACT: Lucieann Vechioli, NRR/DANU/UARL  
(301) 415-6035

To address the differences between the licensing pathways, X-Energy is assessing any possible gaps so there is no reduction in commitments. X-Energy plans to submit a revision to the QAPD for clarification purposes and to adequately address all requirements considering the licensing pathway options.

Another topic discussed during the meeting was about the structures, systems, and components (SSCs) classification methodology and the path forward. The Xe-100 QAPD is based on Nuclear Energy Institute's (NEI) previous templates and NRC Regulatory Guide 1.29. X-Energy will revise the QAPD to pursue the SSC safety classification via implementation of NEI 18-04 and Regulatory Guide 1.233.

As part of the work design, X-Energy is designing the plant such that it can be sited at the Washington Nuclear Project Number 1 site. Energy Northwest leases this site. Energy Northwest has a supporting role at the moment and X-Energy is the near-term lead for the licensing process until Energy Northwest is possibly identified as the applicant.

The meeting ended with an open discussion among the participants. X-Energy and Energy Northwest will continue discussions with NRC staff related to the QAPD and other pre-application activities, as necessary.

Project No.: 99902071

Enclosure:  
List of Attendees

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**NRC-001**

OFFICE	NRR/DANU/UARL/PM	NRR/DANU/UARL/LA	NRR/DANU/UARL/BC	NRR/DANU/UARL/PM
NAME	LVechioli	SLent	BBeasley	LVechioli
DATE	2/24/2021	2/24/2021	2/24/2021	3/1/2021

**OFFICIAL RECORD COPY**

### List of Attendees

<b>NAME</b>	<b>ORGANIZATION</b>
Lucieann Vechioli	Nuclear Regulatory Commission (NRC)
Joseph Sebrosky	NRC
John Segala	NRC
Amy Cubbage	NRC
Ben Beasley	NRC
Kerri Kavanagh	NRC
Michele Hayes	NRC
Travis Chapman	X-Energy LLC (X-Energy)
Martin Van Staden	X-Energy
Theo Odendaal	X-Energy
Dan Lipman	X-Energy
Darren Gale	X-Energy
Donald Gregoire	Energy Northwest
Greg Cullen	Energy Northwest
Zachary Harper	Westinghouse