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January 30, 2025 XO1-25-001

ATTN: Document Control Desk US Nuclear Regulatory Commission Washington, DC 20555-000

Subject: Energy Northwest Regulatory Engagement Plan, Revision 1

This letter transmits Revision 1 of the Regulatory Engagement Plan (REP) for Energy Northwest's (EN) New Nuclear Small Modular Reactor (SMR) project.

The REP contains business sensitive information related to proposed scheduled activities. EN requests that portions of the REP be withheld from public disclosure in accordance with 10 CFR 2.390, "Public inspections, exemptions, request for withholding," paragraph (a)(4).

An affidavit providing the basis for this request is provided in Enclosure 1. Enclosure 2 is the non-public version of the REP which contains non-redacted business sensitive information. Enclosure 3 is the public (redacted) version of the REP.

This letter contains no commitments. If you have any questions or need any additional information, please contact Don Gregoire at dwgregoire@energynorthwest.com or (509)-377-8616.

Sincerely,

Signed by:

isa Williams

Operations, Licensing, & Environmental Manager

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Energy Northwest Regulatory Engagement Plan, Revision 0

Enclosures:

- 1) Affidavit Supporting Request for Withholding from Public Disclosure
- 2) Energy Northwest Regulatory Engagement Plan, Rev 1 (Proprietary)
- 3) Energy Northwest Regulatory Engagement Plan, Rev 1 (Non-Proprietary)

CC:

Greg Cullen, EN VP ES&D Ken Langdon, GM Nuclear Development Theresa Howell, Env Planning Supervisor Denise McGovern, NRR/DANU/UAL2 Joseph Giacinto, NMSS/REFS/EPMB3

Enclosure 1 Affidavit Supporting Request for Withholding from Public Disclosure

I, Lisa Williams, Manager, Operations, Licensing, and Environmental for Energy Northwest (EN) New Nuclear Projects do hereby affirm and state:

- I have knowledge of the criteria used by EN in designating information as proprietary and am authorized to execute this affidavit on behalf of EN. I am further authorized to review information submitted to or discussed with the U.S. Nuclear Regulatory Commission (NRC) and apply for the withholding of information from disclosure.
- 2. The purpose of this affidavit is to provide the information required by 10 CFR 2.390(b)(1) in support of EN and the project's request for proprietary treatment of certain commercial information submitted in Enclosure 1 to this letter which is requested to be withheld under the provisions of 10 CFR 2.390(a)(4).
- 3. Pursuant to the provisions set forth in 10 CFR § 2.390(b)(4), the following is provided for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - a. The information sought to be withheld in Enclosure 1 has been held in confidence by EN as confidential financial and commercial information.
 - b. The information is of a type that is customarily held in confidence by EN based on the rationale described in this affidavit.
 - c. The information is being transmitted to and, pursuant to 10 CFR 2.390, received by the NRC in confidence.
 - d. No public disclosure of the information has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or contractual agreements that provide for maintenance of the information in confidence.
 - e. The information requested to be withheld contains information about the planned activities of EN related to development of the project, project development time frames, and relates the commercial strategy for the project. Release of the information requested to be withheld would reveal valuable information regarding development, competitive expectations, assumptions, current position and strategy. Its use by a competitor could substantially improve the competitor's position in licensing and construction of a similar project and harm continued financial support for this project.

I declare under the penalty of perjury that the foregoing is true and correct. Executed on this 30 day of January 2025.

-Signed by:

Lisa Williams

Lisa Willams

Operations, Licensing, and Environmental Manager

Energy Northwest

Enclosure 2

Energy Northwest Regulatory Engagement Plan, Rev 1 (Proprietary)

Enclosure 3

Energy Northwest Regulatory Engagement Plan, Rev 1 (Non-Proprietary)



Small Modular Reactor Project

Regulatory Engagement Plan

(Revision 1)

January 2025

1.0 INTRODUCTION

1.1 Purpose and Objective

Energy Northwest (EN) intends to construct and operate up to 12 Xe-100 small modular reactor (SMR) units on the Department of Energy's Hanford Reservation, at a site adjacent to Columbia Generating Station in Benton County, Washington, for the purpose of addressing electrical demand in the Pacific northwest. This endeavor will be referred to as the "EN SMR Project".

This Regulatory Engagement Plan (REP) identifies the licensing approach and regulatory engagements, including face-to-face and remote meetings, audits, and submittal of topical reports and white papers, that EN foresees in the implementation of its licensing strategy. Engagements will be with federal, state, and local agencies, including the US Nuclear Regulatory Commission (NRC), the Department of Energy (DOE) Hanford Field Office (DOE-HFO), the DOE Loan Program Office (DOE-LPO), and the Washington State Energy Facility Site Evaluation Council (EFSEC). This REP also provides a brief overview of EN SMR Project, the project structure, and the Xe-100 SMR technology.

The objectives of this REP are to:

- Facilitate and enhance EN communication with and between the NRC, DOE-HFO, DOE-LPO, and EFSEC,
- Reduce regulatory uncertainty,
- Promote project stability and predictability, and
- Minimize regulatory review timelines to obtain the necessary agreements, permits, and licenses.

These objectives are accomplished through early and frequent interactions with NRC staff and other agencies and through submittals that:

- Enhance the regulator's understanding of the EN SMR Project,
- Permit early identification and resolution of licensing/permitting issues, and
- Enable the regulator to appropriately plan resources to support the project schedule.

These objectives support the goal that the EN SMR Project provide economical electrical power to subscribers of the project.

EN, as the applicant, is responsible for all interactions with regulators such as the NRC, DOE-HFO, DOE-LPO, EFSEC, and other federal, state, and local regulatory and permitting agencies relative to project activities.

X-energy, as the designer of the Xe-100, is currently engaged with the NRC in pre-application activities related to the Xe-100 design, analysis, and licensing basis under NRC Docket 99902071. As such, the engagements relative to the generic design, analysis, and licensing basis of the underlying advanced reactor technology are contained in X-energy's REP.

Specifically, the following topics are covered in X-energy's REP:

Xe-100 Principal Design Criteria Licensing

- Risk-Informed Performance-Based Licensing Basis: X-energy's Approach to NEI 18-04 Implementation
- TRISO-X Pebble Fuel Qualification Methodology
- Xe-100 Mechanistic Source Term Methodology
- Transient and Safety Analysis Methodology
- Probabilistic Risk Assessment Technical Adequacy

The EN REP is not intended to duplicate that effort. This REP identifies those engagements specific to the EN SMR Project including the plant configuration and site-specific activities. EN intends to update this REP at least annually to reflect changes in planned engagements. The REP should be used by NRC and other agencies to identify expected timeframes for regulatory submittals and planned interactions preceding the submittals.

This REP was developed with consideration of the Nuclear Energy Institute (NEI) draft "Industry Guideline for Development of a Regulatory Engagement Plan" and Appendix A to the NRC's DANU-ISG-2022-01, "Interim Staff Guidance, Review of Risk-Informed, Technology-Inclusive Advanced Reactor Applications – Roadmap," March 2024.

1.2 EN SMR Project Contact Information

To facilitate communication between EN and the NRC, the following key contact information is applicable for EN in support of licensing activities:

Energy Northwest P.O. Box 968, MD:1035 Richland, WA 99354-0968 www.energy-northwest.com 509-372-5000

Greg Cullen
Vice President, Energy Services and Development
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1.3 EN SMR Project Development Organization

EN is a non-profit joint operating agency formed by the Washington State legislature in 1957, representing the convergence of small and big public power. EN's consortium of public utility districts and municipalities across Washington takes advantage of economies of scale and shared services that help the utilities run their operations more efficiently and at lower cost, to the benefit of more than 1.5 million customers. The agency owns and/or operates various electricity generating facilities including solar/battery energy storage, wind, and hydro facilities in addition to the nuclear-powered Columbia Generating Station.

Oversight of EN operations is provided by an 11-member executive board and a board of directors that is comprised of representatives from each of its members. The EN SMR Project is being developed by EN's Nuclear Development department within EN's Energy Services and Development division.

1.4 EN SMR Project Selected Reactor Technology

The EN SMR Project has selected the Xe-100 high-temperature gas-cooled reactor (HTGR) SMR technology supplied by X-Energy, LLC, (X-energy) of Rockville, MD. The Xe-100 HTGR is a pebble-bed reactor using X-energy's TRISO-X fuel, which is designed to contain fission products within the fuel under operating and accident conditions thereby contributing to an inherently safe reactor design. The steady-state design of the Xe-100 utilizes high assay low enriched uranium (HALEU) TRISO-X fuel with online refueling. The Xe-100 design utilizes the physical properties of reactor neutronics, heat transfer, fluid flow, and gravity to keep the reactor intrinsically safe under all licensing basis events without requiring electrically powered active safety systems. Regulatory dose limit targets ensuring adequate protection of public health and safety and protection of the environment will be met at an Exclusion Area Boundary (EAB) that is anticipated to be located entirely within the site boundary.

EN intends to construct between four and twelve Xe-100 SMRs on the site over time as power demand increases. Each unit is rated at 200 MWt (~80 MWe). The modular approach enables EN to incrementally increase project capacity in tandem with electrical load growth.

1.5 EN SMR Project Proposed Site Location

The proposed project site is located about 10 miles north of the City of Richland, Washington, in Benton County, and approximately two miles west of the Columbia River. The site is within the boundary of the DOE's Hanford Reservation, an area consisting of 586 square miles established by the federal government in 1943 to produce nuclear materials for national defense purposes. The project site has been leased by EN from DOE-HFO since 1975 for the purposes of energy production. The current lease expires June 30, 2032, with options to extend to January 1, 2052.

The proposed site is adjacent to and east of the Columbia Generating Station (NRC Docket 05000397), a boiling water reactor in operation since 1984 that is currently licensed to operate until 2043. The proposed site houses two legacy nuclear facilities: WNP-1 (NRC Construction Permit CPPR-134), a 1250 MWe pressurized water reactor that was under construction but halted in the 1980s and later cancelled, and WNP-4 (NRC Construction Permit CPPR-174), a twin to WNP-1 that was also canceled while under construction in the 1980s. Restoration work on the site is currently nearing completion, and the site is available for future development. As such, the site has been subjected to a number of historical environmental and site characterization activities

that document the suitability of the site for the construction and operation of nuclear power plants in the vicinity of the proposed EN SMR Project.

1.6 EN SMR Project Strategic Licensing Approach

The EN SMR Project will use the two-step 10 CFR Part 50 licensing process, beginning with a construction permit application (CPA) followed by an operating license application (OLA). This approach allows EN to begin construction while detailed design and licensing activities continue in parallel for the expected second-of-a-kind Xe-100 SMR project. This licensing approach will provide maximum flexibility to adjust for improved designs and emergent design issues during the design and construction periods relative to the alternative one-step 10 CFR Part 52 licensing process.

The first deployment of the Xe-100 technology is expected to occur under the DOE's Advanced Reactor Demonstration Program (ARDP) in which Dow Chemical plans to deploy four Xe-100 SMRs at its site in Seadrift, TX, under the name of the Long Mott project. The EN SMR Project is planning to be a "fast follower" to Dow's project to utilize, to the extent practical, licensing precedents and lessons learned from licensing, procurement, construction, and commissioning.

Environmental reviews and permits will be coordinated between the NRC, DOE-HFO, DOE-LPO, EFSEC. DOE-HFO leases the site to EN and will need to revise the lease to allow the construction and operation of the EN SMR Project. EN is applying for a loan from the DOE-LPO for the construction of the EN SMR Project. Note: the DOE-LPO approved Part I of EN's loan application, which allows EN to continue in the loan process with preparation and submittal of the Part II loan application. Since the project is on federal property and will use federal funds, it is a federal action and DOE-HFO and DOE-LPO require completion of an Environmental Impact Statement (EIS) to satisfy their obligations under the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA). EFSEC is responsible for siting nuclear energy facilities in Washington State and issuing a Site Certification Agreement (SCA) to authorize construction and operation of the EN SMR Project in WA State thereby demonstrating compliance with the WA State Environmental Policy Act (SEPA). It is expected that the NRC will be the lead agency for the environmental reviews and that DOE-HFO and EFSEC will act as cooperating agencies. It is desired that DOE-LPO also be a cooperating agency thereby streamlining the overall NEPA process.

Energy Northwest expects that the EN SMR Project will involve novel or unique licensing approaches. These approaches will be specifically addressed in engagements with the NRC as identified in Section 3.

1.7 Deployment Overview

Deployment of the EN SMR Project will proceed along several parallel lines of development as described briefly below.

1. Preapplication Phase

- Begin pre-application engagement with the NRC, DOE-HFO, DOE-LPO, and EFSEC.
- Engage affected communities, stakeholders, and tribes.
- Submit white papers and License Topical Reports (LTRs)in key topical areas.
- Develop Quality Assurance Program Description (QAPD) and implementing procedures.

- Conduct necessary site characterization activities.
- Complete necessary design and analysis of the Xe-100 SMR.
- Prepare Part II of the DOE loan application.
- Prepare Environmental Report (ER).
- Participate in preapplication readiness assessments from NRC and EFSEC.
- Engage with DOE-HFO on lease amendment authorizing construction and operation.
- Prepare the Application for Site Certification.
- Prepare draft Preliminary Safety Analysis Report (PSAR).
- Participate in preapplication readiness assessments from NRC.
- Submit CPA to NRC.

2. CPA Review Phase

- Respond to NRC requests for information.
- Continue engagement with affected communities, stakeholders, and tribes.
- Continue submittal of white papers and LTRs in key topical areas.
- Develop Quality Assurance (QA) implementing procedures for construction activities.
- Finalize the design and analysis of the Xe-100 SMR.
- Begin operator training and development of site operating organization.
- Obtain EIS and Record of Decision (ROD) from NRC.
- Obtain revised lease agreement from DOE-HFO.
- Obtain SCA from EFSEC.
- Begin non-nuclear site preparation and construction allowed by revised lease and SCA.
- Obtain NRC construction permit (CP).
- Conduct remaining site characterization activities to support OLA submittal.
- Begin preparation of Final Safety Analysis Report (FSAR) and ER Revision for OLA

3. Construction/OLA Prep and Review Phase

- Participate in preapplication readiness assessments from NRC.
- Submit OLA.
- Prepare license applications for material licenses under 10 CFR 30 (byproduct material),
 10 CFR 40 (source material), and 10 CFR 70 (special nuclear material).
- Respond to NRC RSIs and RAIs.
- Process necessary changes to the design and periodically update the OLA FSAR.
- Participate in NRC audits of construction activities.
- Complete EN SMR project construction

4. Startup and Commissioning Phase

- Perform system lineup, preoperational, and initial startup test program.
- Receive fuel onsite once the Operating License (OL) is approved.
- Complete commissioning activities, including power testing.

The proposed schedule is provided in Table 1 below.

Table 1: Projected Milestone Dates

Milestone	Estimated Date
Begin regulatory engagement	Jan 2024 (completed)
Submit Construction Permit Application Part 1 Supporting Early Partial Environmental Decision	[[]] ^p
Submit Construction Permit Application Part 2	[[]] ^p
Receive Construction Permit	[[]] ^p
Submit Operating License Application	[[]] ^p
Complete Construction, Receive Operating License (1st unit)	[[]] ^p
Commercial Operation (1st unit)	[[]] ^p

1.8 Construction Permit Application

The requirements in 10 CFR 2.101 govern the requirements for filing of an application. DANU-ISG-2022-01, Appendix C, contains guidance on the required contents of the CPA that will be implemented for the EN SMR Project CPA:

- ER
- PSAR Chapters 1-12
- Program/additional information including:
 - QAPD
 - Information Security Plan
 - Emergency Planning analysis
 - Aircraft Impact Assessment
 - Fitness for Duty Program
 - Applicable Research and Development Programs
 - Fuel Qualification
 - Regulatory Exemptions
- General information including:
 - Applicant information
 - Financial qualification information
 - Project schedule information
 - Project interface information
 - o Filing fee

1.9 Environmental Report

The ER will be written to satisfy the NRC staff's obligations under the National Environmental Policy Act (NEPA) as described in 10 CFR 51, DOE-HFO and DOE-LPO needs as described in 10 CFR 1021, and EFSEC needs under chapter 43.21C RCW (Revised Code of Washington). Regulatory Guide (RG) 4.2, "Preparation of Environmental Reports for Nuclear Power Plants,"

describes an acceptable method to satisfy ER requirements. RG 4.7, "General Site Suitability Criteria for Nuclear Power Stations," describes an acceptable method to implement site suitability requirements and provides guidelines for determining the suitability of a candidate site for nuclear power stations. The ER will follow NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants," which contains guidance for NRC staff review of an ER.

It is anticipated that NRC will act as the lead agency in reviewing the ER and developing an EIS with DOE-HFO as a cooperating agency. It is desired that DOE-LPO also be a cooperating agency thereby streamlining completion of the NEPA process. EFSEC's review of the EN SMR Project's application will proceed in parallel with the NRC's review of the ER. EN will facilitate discussions between the NRC and EFSEC to develop a memorandum of understanding (MOU) and division of responsibility (DOR) for the environmental reviews to minimize duplication of effort. A crosswalk between ER content as directed by NUREG-1555 and content required by Washington Administrative Code (WAC) 463-60 will be provided with the ER. Information that is required by EFSEC but not by the NRC may be provided in an appendix to the ER. EFSEC may issue a state supplement to the NRC EIS to cover state-specific topics.

EN plans to report results of recent studies and on-going groundwater monitoring in the vicinity of the site in the ER. If needed, EN will install additional wells on the site and provide groundwater monitoring results after submittal of the CPA. The site environment and groundwater have been extensively monitored for decades and new studies are expected to confirm past results.

In order to facilitate federal and state authorization to proceed with non-nuclear construction and to release federal funding for such activities, EN wishes to obtain the final EIS as early as possible. As such, EN will explore regulatory options for submitting the ER portion of the CPA in advance of the information required by 10 CFR 50.34(a). EN expects that the balance of the CPA submittal would occur within 6-18 months of the initial submittal. EN may submit an exemption request to the requirements of 10 CFR 2.101(a)(5) to authorize the ER portion of the CPA be submitted in advance of the information required by 10 CFR 50.34(a) and allow greater than six months between the two parts of the submittal.

1.10 Preliminary Safety Analysis Report

The development of the PSAR will be based on two activities: the advanced reactor content of application project (ARCAP), and the technology-inclusive content of application project (TICAP) as described below from DANU-ISG-2022-01.

- ARCAP, which is broad and encompasses several industry-led and NRC-led guidance development efforts, will be used to provide guidance for the <u>complete</u> non-LWR application.
- TICAP will be used to provide guidance for the appropriate scope and depth of information related to the specific portions of the safety analysis report (SAR) that describe the fundamental safety functions of the design and details the safety information pertinent to a facility using the Licensing Modernization Program (LMP) approach. The EN SMR Project will implement the LMP approach as described in NEI 18-04, "Risk-Informed Performance-Based Technology Inclusive Guidance for Non-Light Water Reactor Licensing Basis Development," Revision 1, which is endorsed by NRC RG 1.233, "Guidance For A Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform The Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors," Revision 0.

Because of the limited scope of the TICAP guidance, it is encompassed by and supplemented by the ARCAP guidance, which will cover the areas of the SAR that are outside the scope of the LMP process and TICAP. Figure 1 below illustrates the relationship between guidance produced under ARCAP and TICAP and other guidance for the review of non-LWR applications. The ARCAP guidance is contained in NRC's Interim Staff Guidance (ISG) DANUISG-2022-01, "Review of Risk-Informed, Technology-Inclusive Advanced Reactor Applications – Roadmap," March 2024, and a series of ARCAP ISGs.

Industry-led TICAP **NRC-led TICAP** • NEI 21-07, Revision 1. Focused on · NRC regulatory guide endorsing, with appropriate additions and RG Chapters 1-8 portions of the license application Safety Analysis Report for nonclarifications, industry TICAP I LWR designs related to the TICAP guidance. Licensing Modernization Project. Includes supplemental TICAP guidance for areas outside of the LMP process for the first eight SAR chapters (e.g., site information). ARCAP Roadmap ISG Chapters 9-12 NRC-led SAR Guidance Focused on remaining portions of the license application Safety Analysis Report not related to LMP. ARCAP ISGs that include an overall Roadmap ISG and separate ISGs for SAR Chapters 2, 9, 10, 11, and 12 For example: Other parts of the application o Technical Specifications ISG, o Inservice Inspection/Inservice testing ISG, o Fire Protection for Operations ISG Additional guidance found in ARCAP roadmap ISG · Emergency Plan · Security Plan · Financial Protection

Figure 1: Relationship between ARCAP, TICAP, and the Content of an Application

The PSAR is planned for submittal following submittal of the ER. As discussed above, EN is exploring the timing of the PSAR submittal relative to the ER.

EN plans to report results of relatively recent geotechnical studies in the vicinity of the site in the PSAR. In particular, this will include the specific ground motion response spectrum (GMRS) for the site, which will be based on known characteristics of the site. The GMRS presented in the PSAR and used for plant design is expected to bound the site-specific GMRS. A GMRS based on new geotechnical studies will be included with the OLA. Since the site has been extensively studied over many decades and the lithology is relatively uniform, new studies are expected to confirm the previous results.

1.11 Operating License Application

The OLA consists primarily of the Final Safety Analysis Report (FSAR), a supplement to the ER as needed to address new and significant information, and other program documents required by the Code of Federal Regulations. The FSAR follows the same guidance identified for the PSAR

Regulatory Engagement Plan

above plus the requirements of 10 CFR 50.34(b). The FSAR will provide sufficient information for the NRC to draw a conclusion of reasonable assurance that the health and safety of the public will be protected. The submitted FSAR will be amended periodically during the construction phase and NRC staff review in response to design changes and NRC requests. EN expects that each Xe-100 unit will have its own Class 103 license issued through review of a common application. Shared SSC license conditions are expected for each unit. Additional information on the contents of the OLA will be provided in subsequent updates to this REP.

2.0 DOE-HFO AND EFSEC SITE APPROVAL

Beyond NRC licensing approval processes, two additional approvals are required to support project construction and operation: DOE-HFO Written Approval and EFSEC Site Certification Agreement, both of which are subject to environmental review. Regulatory engagement with these two organizations will be conducted in parallel with the NRC engagement activities to facilitate coordinated environmental review support between the agencies.

2.1 DOE-HFO Written Approval

The proposed project site, which is located on the DOE Hanford Reservation, is currently being leased by EN from the DOE-HFO. The current lease agreement authorizes site remediation efforts and will expire in 2032 with the option to extend until 2052. Written authorization including a lease amendment is required to authorize project construction and to support an operational licensed life beyond 2052.

2.2 EFSEC Site Certification Agreement

Nuclear power facility siting in the state of Washington falls under the purview of the EFSEC. Their function, roles, and requirements are described in RCW Chapter 80.50 and the Washington Administrative Code (WAC) Title 463. State permission for nuclear power facility construction and operation is granted through the issuance of a Site Certification Agreement as outlined in WAC 463-060.

3.0 ENGAGEMENT PLAN

3.1 Preapplication Engagement

Pursuant to the objectives outlined above, the EN plans extensive pre-application engagement with the NRC, DOE-HFO, and EFSEC. The following table presents the planned interactions with the NRC staff. As noted previously, engagements relative to the generic design, analysis, and licensing basis of the Xe-100 reactor technology are contained in X-energy's REP and are not repeated here.

3.2 Routine Engagement

Beginning in the third quarter of 2024, EN expects to enter into interactive meetings with NRC staff on licensing topics relevant to the EN SMR project. Routine interactions with the staff on project updates will be established to support timely communication and coordination of project related licensing activities.

3.3 Specific Preapplication Engagement Topics

EN has identified specific preapplication engagement topics to help reduce future licensing activity uncertainty through targeted technical and policy topical area reviews. These topics will be introduced to NRC and other stakeholders using one or more of the following methods:

- Licensing Topical Reports
- White Papers
- Closed and Open Meetings

A listing of preapplication submittals and meetings is provided in the following tables.

Table 2: Prospective Licensing Topical Reports

Engagement	Tentative Dates	Objectives
Quality Assurance Program Description Rev. 0 (LTR)	Submitted Dec 2024	Obtain NRC approval of the overall quality assurance (QA) program for the EN SMR Project and enable EN to implement the QA procedures early in the project to reduce regulatory uncertainty.
Control Room Staffing Analysis Approach (LTR)	Meeting: [[]] ^p Submittal: [[]] ^p	Present methodology used to justify control room staffing for operation of up to 12 units. Will require revision to X-energy LTR.

Table 3: Prospective White Papers

Engagement	Tentative Dates		Objectives
Xe-100 Licensing Application Content and Regulatory Analysis	[[]] ^p	Review planned content of CPA to identify the applicability of regulation

Engagement	Tentative Dates		Objectives
Handling of Safeguards Information]]]]p	Facilitate early access to and exchange of safeguards and security information.

Table 4: Prospective Preapplication Engagement Topics

Engagement	Tentative Dates	Objectives
Regulatory path for obtaining early decision on environmental impacts	complete	Obtain alignment on regulatory process to be used to obtain the EIS and ROD for the EN SMR Project to facilitate lease revision and non-nuclear construction schedules.
Approach to multi-unit licensing and phased construction	[[]] ^p	Provide proposed approach to licensing application submittal, construction permit issuance, operating license issuance, and construction timeline.
Plant and site information, site selection process	[[]]P	Familiarize regulators with the EN SMR Project and identify potential siting issues early to reduce regulatory uncertainty and minimize review schedules.
Qualification requirements for fuel and graphite use at EN	[[]]P	Discuss process for EN to use fuel and graphite while qualification activities following reactor operations at FOAK have not been completed.
Cooling water availability, alternatives, environmental effects	[[]] ^p	Provide information on water consumption and facilitate a meeting with the NRC staff and the water permitting agency (WA Department of Ecology).
Presentation of results of NHPA and environmental surveys	[[]] ^p	Present survey results to NRC, DOE, and EFSEC prior to completion of reports to ensure all necessary content is provided and adequately supported to minimize review schedules.
Use of existing data for groundwater monitoring	[[]] ^p	Discuss available data and on-going monitoring programs to demonstrate regulatory objectives are met.
Use of existing geotechnical data for characterization of site hazards for CPA	[[]] ^p	Discuss available data and recent hazard evaluations to demonstrate regulatory objectives are met for the CP.
Preapplication Readiness Assessment – ER	[[]] ^p	Identify potential gaps early enough to correct them before submittal to facilitate NRC acceptance review.

Engagement	Tentative Dates		Objectives
Volcanic hazards Assessment	[[]]p	Describe engineering analysis approach to reduce regulatory uncertainty.
Emergency planning zone analysis	[[]] ^p	Obtain alignment on emergency planning analyses to facilitate program development.
Operator licensing and training program development	[[]] ^p	Obtain early alignment of approach to operator licensing and qualification program.
Decommissioning planning and funding	[[]] ^p	Describe plans for decommissioning and plans for developing decommissioning funding estimates.
Use of seismic isolators	[[]] ^p	Discuss use and analysis of seismic isolators to reduce regulatory uncertainty
Preapplication Readiness Assessment – PSAR	[[]] ^p	Identify potential gaps early enough to correct them before submittal to facilitate NRC acceptance review.

Table 5: Planned Management Engagements

Engagement	Tentative Date	Objective
Licensing Activity Update	Drop-in: Aug 2024	Provide a status update on licensing planning activities, pathway considerations, and design development schedule to reduce regulatory uncertainty by early identification and resolution of any project challenges.
Licensing Activity Update	Drop-in: [[]] ^p	See above.
Licensing Activity Update	Drop-in: [[]] ^p	See above.
Licensing Activity Update	Drop-in: [[]] ^p	See above.
Environmental Updates	Monthly	Provide status updates on environmental report development and supporting siting activities to align expectations and identify and resolve potential issues.

3.4 Post-Application Engagement

To be included in future updates to the REP.