

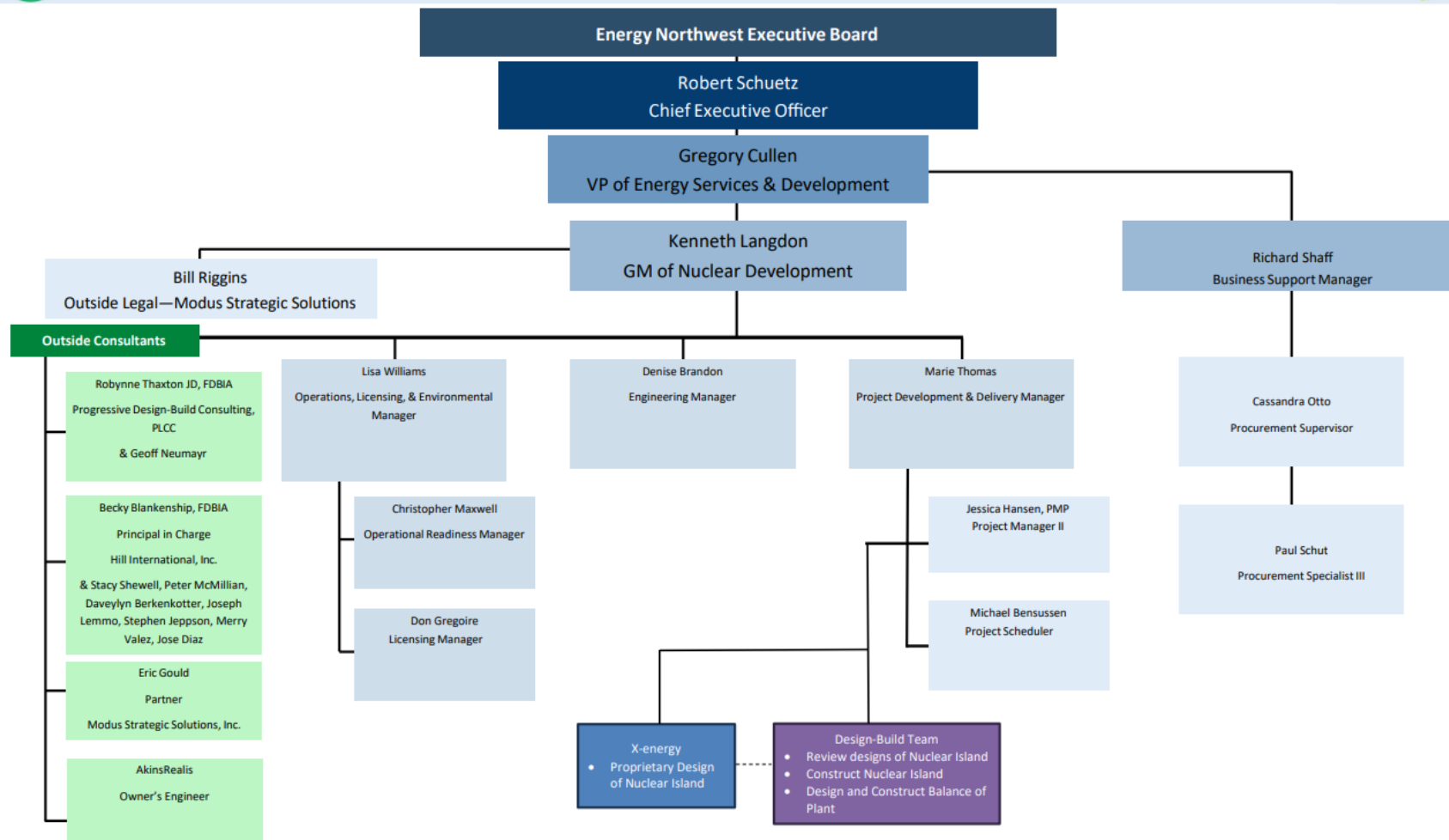


**ENERGY
NORTHWEST**

Small Modular Reactor

Project Review
Committee Presentation





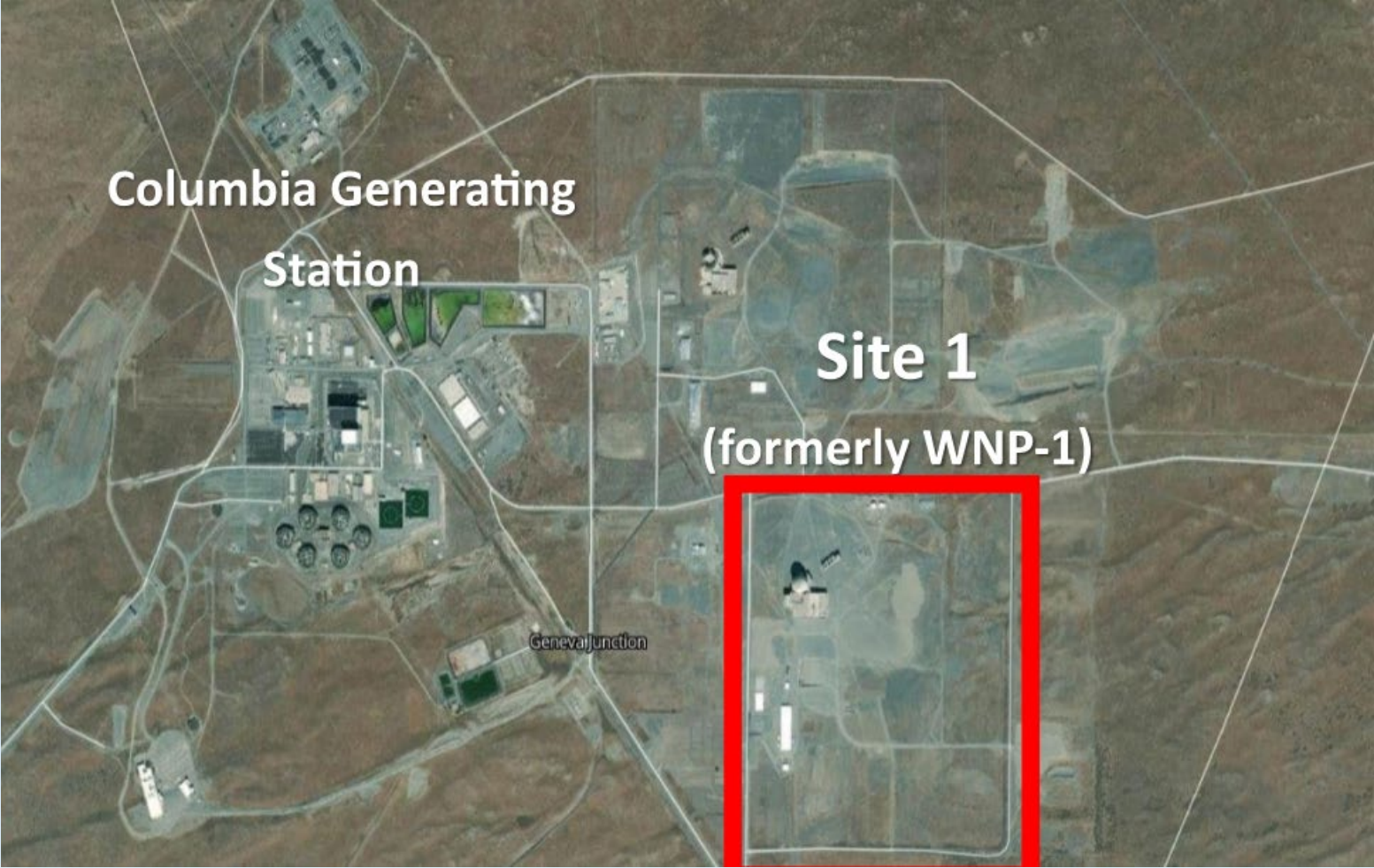
Project Need

- ✦ **Diversify Washington's energy mix:** This project will diversify Washington State's energy portfolio with a reliable, low-carbon nuclear power source.
- ✦ **Support Carbon Reduction Goals:** The SMR aligns with Washington's carbon-neutral goals by providing clean, low-emission energy.
- ✦ **Enhance Energy Security and Reliability:** SMRs improve energy reliability and security by providing consistent power, especially during peak demand.
- ✦ **Economic Development and Job Creation:** This SMR project will boost the local economy by creating jobs and supporting regional businesses.
- ✦ **Innovative Technology and National Leadership:** Investing in SMR technology positions Washington as a leader in innovative nuclear energy.

Project Overview

- ✦ Four Xe-100 advanced small modular reactor units initially, with the potential for up to 12 units in eastern Washington
- ✦ Potential generation of up to 960 MW of carbon-free electricity
- ✦ First of a kind technology that requires complex and sophisticated understanding of the design and construction of nuclear facilities

Site Plan



Proposed Location



Present Day - Proposed Location

Preliminary Project Budget

(Cost in Millions)

Costs for professional services (A/E, Legal, etc.)	\$ 140.0
Estimated project construction costs (including construction contingencies) – Est. Design-Builder allocation: \$633M	\$ 1,007.0
Equipment and furnishing costs	\$ 1,684.8
Off-site costs	\$ 176.30
Contract administration costs (owner, CM, etc.)	\$ 199.1
Contingencies (design & owner)	\$ 651.6
Related costs	\$ 412.2
Sales Tax	\$ 33.4
Total	\$ 4,304.4

Preliminary Project Schedule

Procure Owner Engineer [in negotiations]	Aug 2024
Project Review Committee (PRC) Meeting/Anticipated Approval	Sept 26, 2024
Request for Qualifications (RFQ) Advertisement	December 2024
Shortlist Finalized/ Issue Request for Proposals (RFP)	March 2025
Proposals Due/ Select DB Team	June – July 2025
Preliminary DB Services Start	August 2025
Anticipated Construction Start	February 2028
Substantial Completion	September 2033

Benefits of PDB Delivery

Highly specialized construction activities and a critical DB approach

- ✦ Few projects are as specialized as a nuclear facility, requiring a design-build team with expertise in constructing X-energy's proprietary design and designing a facility that integrates seamlessly with it. While other delivery methods were considered, only progressive design-build offers the flexibility needed. The constructor must have specific nuclear experience to integrate the design and implement specialized construction methods unique to the industry. This approach ensures compliance with strict nuclear permitting requirements, creating significant efficiencies and resulting in a more successful project.

RCW 39.10.300(1)(b) "Greater innovation or efficiencies between designer and builder"

- ✦ Integrating both an experienced designer and constructor will allow for greater innovation and efficiency by integrating X-energy's proprietary design with the overall facility design and incorporating highly specialized construction methods. With new technology and only the second project of its kind, Energy Northwest will engage a collaborative, agile team to address potential issues in both design and construction.

Benefits of PDB Delivery

RCW 39.10.300 (1)(c) “Significant savings in project delivery time”

- ✦ Because this project is one of the first of its kind, it is unknown whether significant time savings will be achieved over similar projects; however, progressive design-build provides time savings and efficiencies in integrating the design and construction team, as well as a shortened period of time for procurement.

RCW 39.10.280(2)(a) “Substantial Fiscal Benefit”

- ✦ Total project estimate = \$3.5 and \$4.3 billion. Design-build team portion estimate - \$633 million. Projects of this size are extraordinarily difficult to both price and manage the risk. Without using progressive design-build, the construction industry will either refuse to submit proposals or bids or inflate the cost of the work to account for unknowns/risks.
- ✦ The most efficient and fair way to make sure that the risk is allocated appropriately is to work with the design-build team to do a deep dive into the risks that are specific to the project and then negotiate the allocation of each risk.
- ✦ As the project is utilizing new technology, having the design-builder work collaboratively with both Energy Northwest and X-energy will provide relevant, timely information on costs that will inform and allow for the efficient development of the project’s final commercial terms.

Preparation for PDB

- ✦ In negotiations with Owner's Engineer (technical nuclear and permitting/license review)
- ✦ Talking with other owners
- ✦ Workshops and training
- ✦ Ongoing process

Energy Northwest Workshops

- ✦ Half Day PDB specific workshop
- ✦ Two-Day Workshop covering:
 - Structure of team and decision making
 - Project Goals
 - RFQ/RFP process and deliverables
 - Specific PDB processes (Target Value Delivery and Scheduling/Pull Planning)
- ✦ Scheduling more workshops with AtkinsRealis

Project Team Structure:

Owner

Energy Northwest

- Decision making, Overall project strategy, Funding

Progressive Design-Build
Consulting

- PDB strategy, Procurement and contract with DB

Hill International

- PDB implementation, Procurement

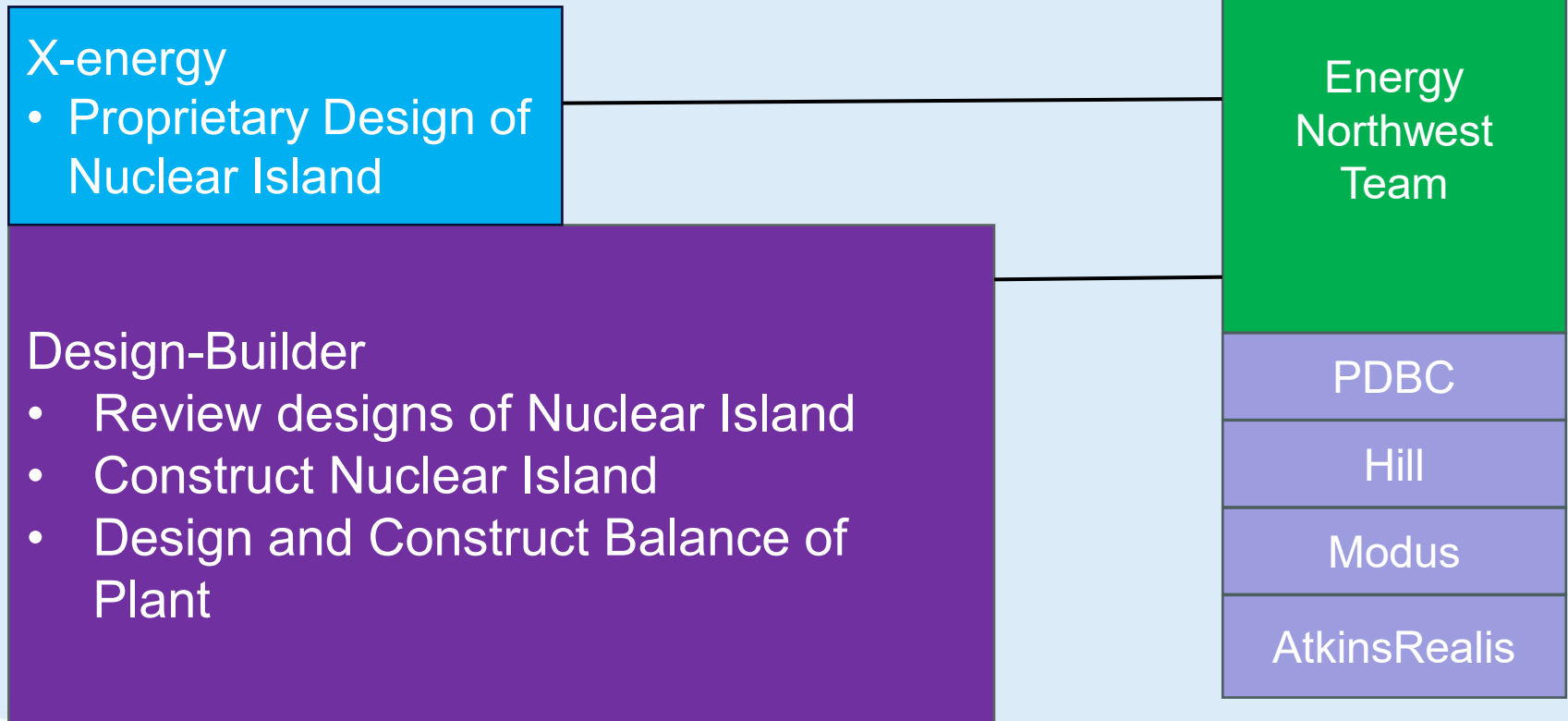
Modus Strategic
Solutions

- Nuclear Energy strategy, Contract with DB and X-energy

AtkinsRealis

- Technical implementation of nuclear design and construction

Project Team Structure: Design and Construction



PDB Procurement Approach

Request for Qualifications

- ✦ Successful experience with projects of similar scope and complexity
- ✦ NQA-1 Certification (Nuclear Quality Assurance)
- ✦ Team organization
- ✦ Experience developing Guaranteed Maximum Price collaboratively with Owner
- ✦ Software capability/use of modern data tracking tools
- ✦ Past performance utilizing certified small, veteran, minority-owned, women-owned businesses

Confidential Meetings & Interactive Meetings

- ✦ Multiple confidential meetings with finalists for Q&A on draft contract
- ✦ Interactive meetings to allow Energy Northwest to evaluate team collaboration & owner engagement

PDB Procurement Approach

Request for Proposals

- ✦ Project plans including: Management, Communications, Project Controls, Design Management, Safety, QA/QC, Permitting, Commissioning
- ✦ Statutorily required evaluation factors, certified business inclusion & tracking plan, dedicated inclusion champion
- ✦ Cost or price-related factor (under development, to include OH & profit fee %)
- ✦ Industry Standard Honorarium

Interviews – As Needed

- ✦ DB team explanation/clarification of proposal content
- ✦ Energy Northwest questions

Scoring & Selection

- ✦ Consensus scoring
- ✦ Evaluation strictly in accordance with criteria established in RFQ/RFP

Outreach & Inclusion Strategy

Request for Qualifications/Proposals - Expectations

- ✦ RFQ - Past utilization performance on completed projects
- ✦ RFP – Inclusion Plan that focuses on both outreach and support, including (but not limited to):
 - ✦ Right sizing work scopes
 - ✦ Increasing number of certified businesses
 - ✦ Mentoring and training (industry specific and PDB)
 - ✦ Support with business terms (insurance, bonding, invoicing)
- ✦ Federal funding – will have specific federal DBE requirements

New Opportunity

- ✦ Energy Northwest sees this project as an opportunity to affect significant change and expand the number of certified businesses, working together with the DB team

Outreach and Inclusion

Energy Northwest DIB Champion:
Denise Brandon

- ✦ Diversity, Inclusion, and Belonging Council
- ✦ Women in Nuclear
- ✦ Society of Women Engineers
- ✦ Veterans Recognition

THANK YOU

