ENERGY NORTHWEST

Tacoma Power

Energy Northwest
Energy Development

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Strategy & Portfolio
Development Manager
03/08/26

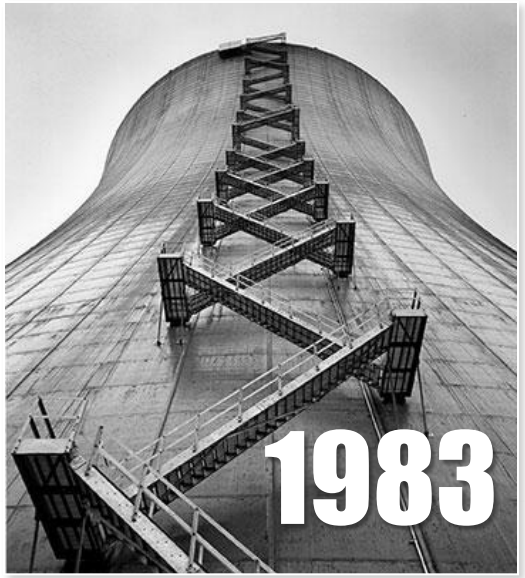
Agenda

- Energy Northwest Members and Service Area
- Cascade 1 Small Modular Reactor Project
- New Energy Portfolio

Public Power's Joint Operating Agency

- Benton
- Chelan
- Clallam
- Clark
- Douglas
- Ferry
- Franklin
- Grant
- Grays Harbor
- Kittitas
- Klickitat
- Lewis
- Mason 3
- Okanogan
- Pacific
- Skamania
- Snohomish

WPPSS Overreach



- **Altered public power landscape**
- **Reshaped the future of the Agency**
- **Provided critical lessons learned**

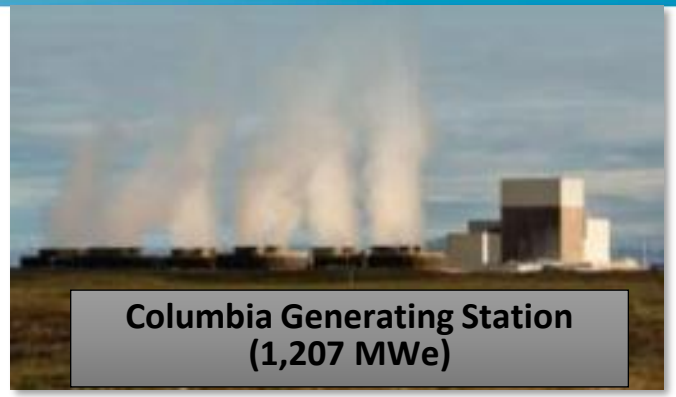
WNP-1 mothballed
WNP-3 mothballed

WNP-4/5 bond default

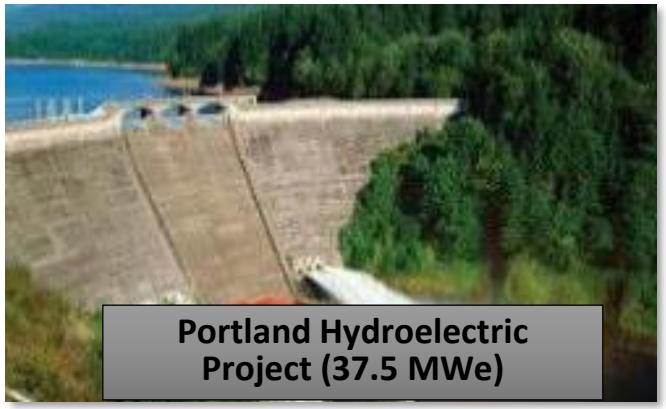
Nuclear Project 2
(Columbia Generating Station)
groundbreaking

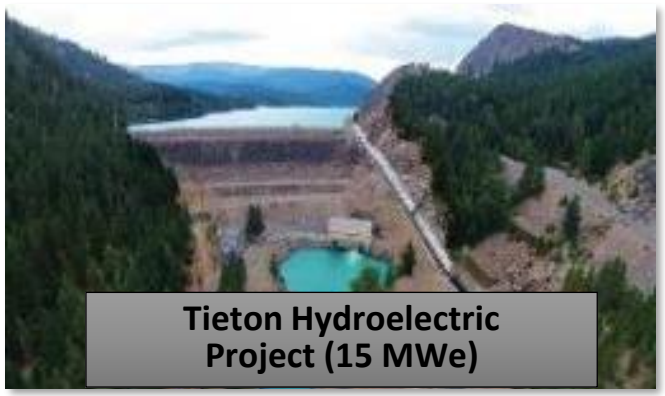
Generation Projects

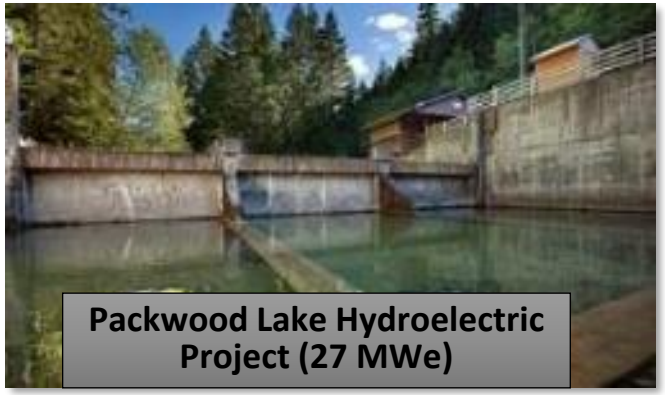

Nine Canyon Wind Project (96 MWe)


Columbia Generating Station (1,207 MWe)

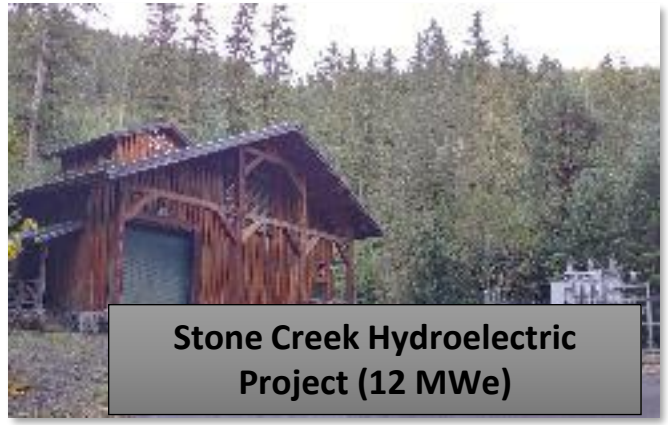

White Bluffs Solar Station (38 KWe)


Portland Hydroelectric Project (37.5 MWe)


Tieton Hydroelectric Project (15 MWe)


Packwood Lake Hydroelectric Project (27 MWe)


Horn Rapids Solar, Storage & Training Project (4MW solar, 1MW/4MWhr)

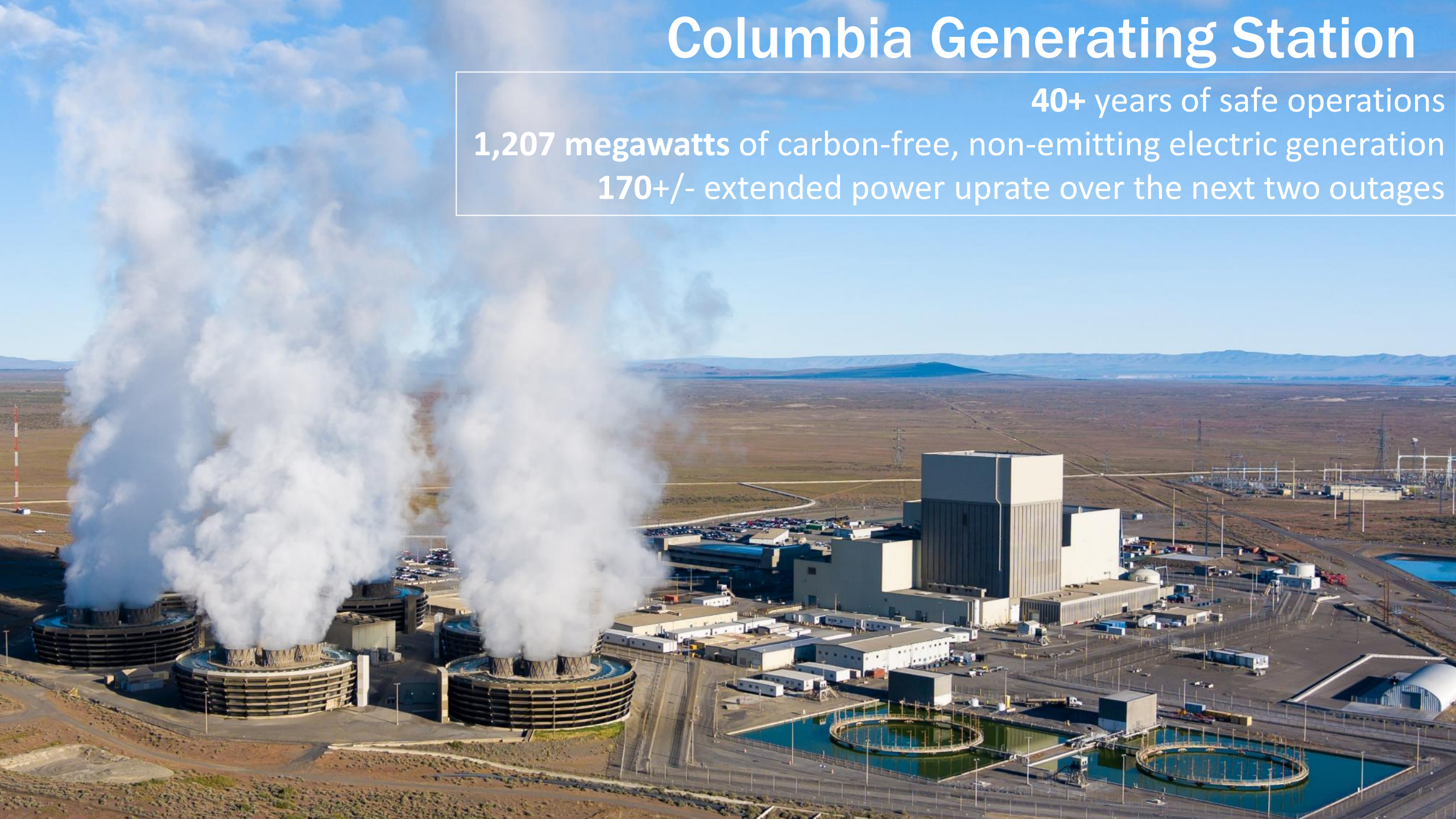

Stone Creek Hydroelectric Project (12 MWe)

Columbia Generating Station

40+ years of safe operations

1,207 megawatts of carbon-free, non-emitting electric generation

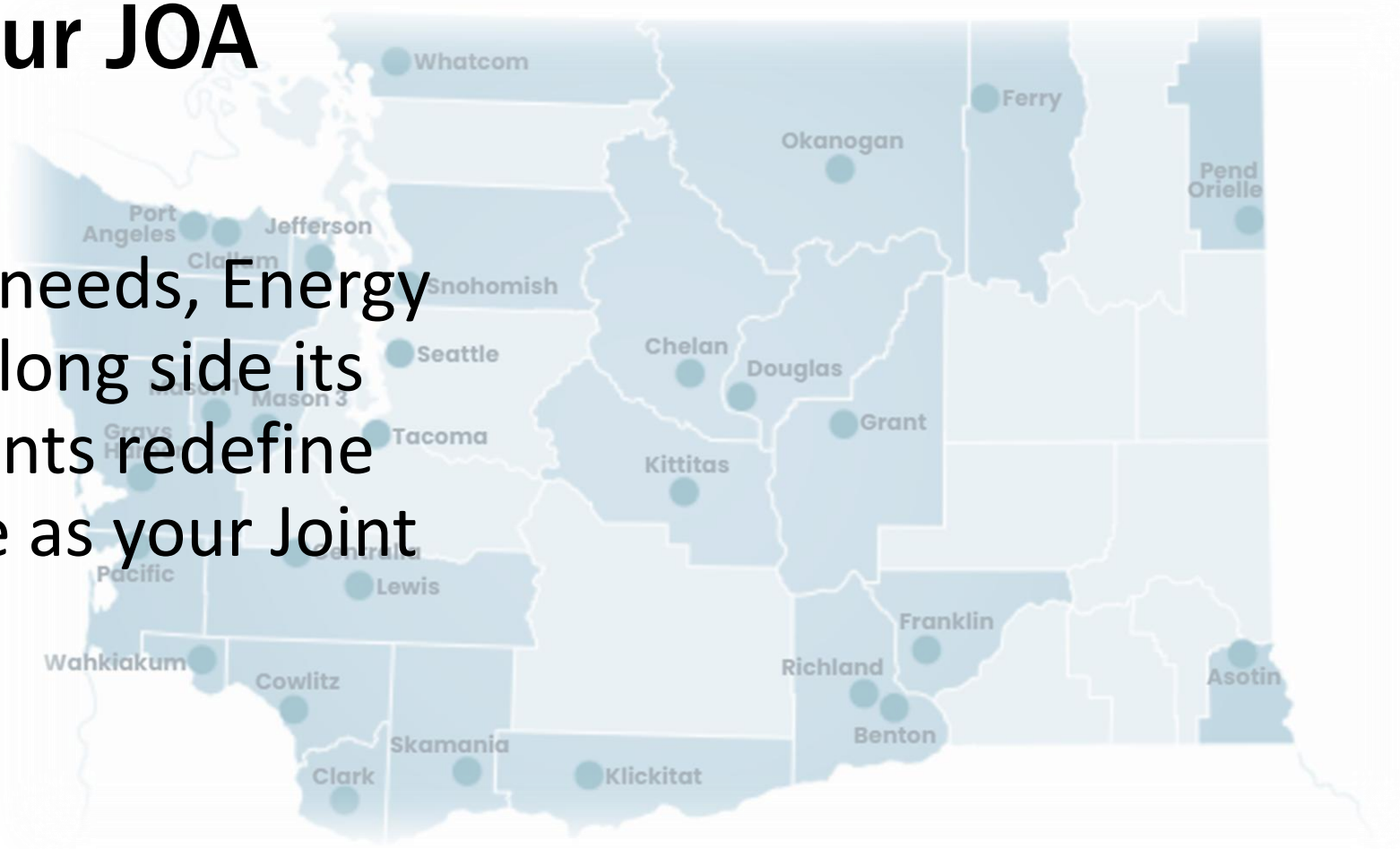
170+/- extended power uprate over the next two outages



Used Fuel Storage

Rediscovering Your JOA

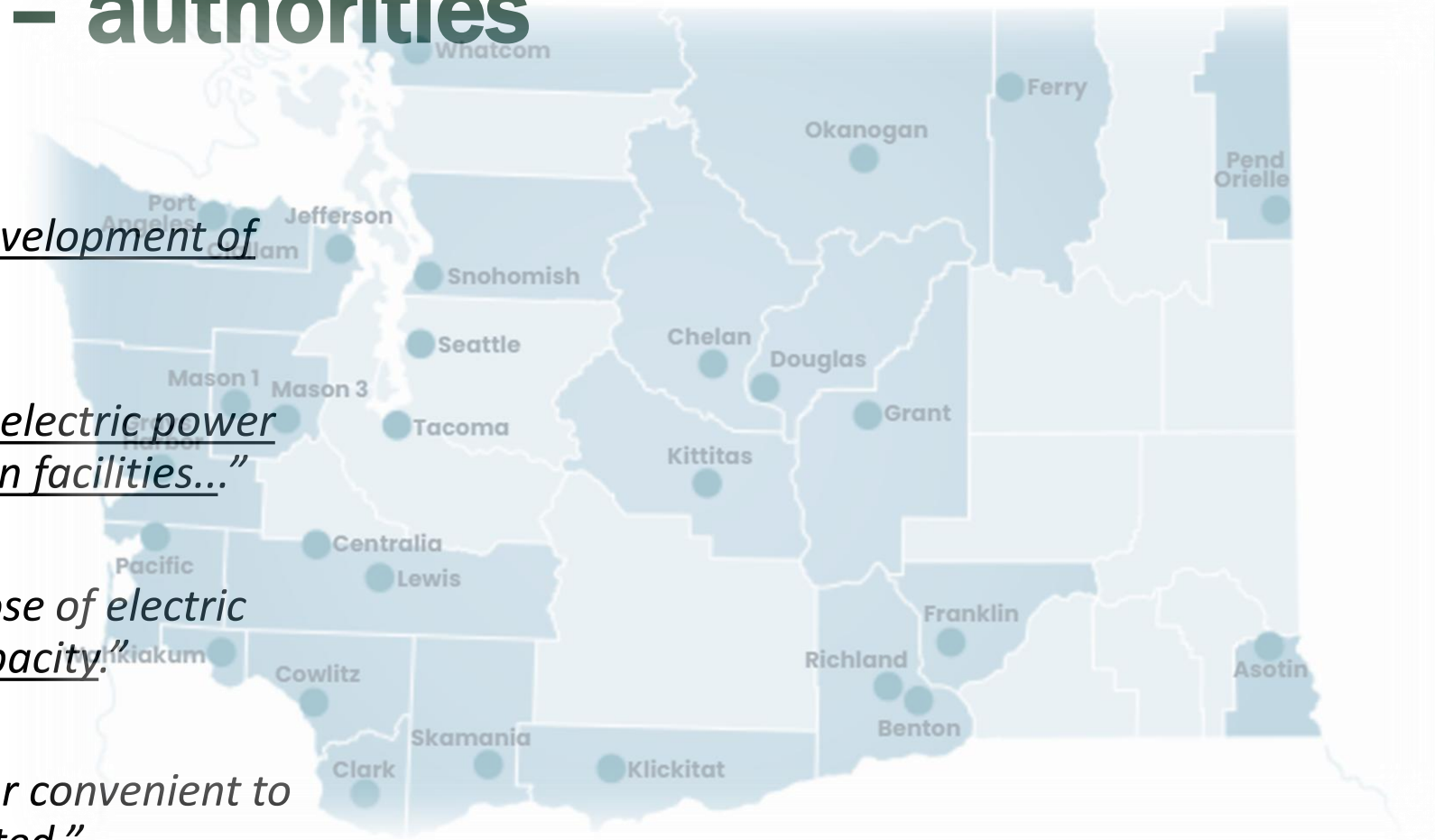
With evolving regional needs, Energy Northwest is working along side its members and participants redefine and modernize our role as your Joint Operating Agency



Energy Northwest – authorities

RCW 43.52.300 - Powers and Duties:

- *"...study, plan, and undertake the development of electric power ..."*
- *"...construct, operate, and maintain electric power generating projects and transmission facilities..."*
- *"...sell, exchange, or otherwise dispose of electric power, energy, and transmission capacity."*
- *"...do all acts and things necessary or convenient to carry out the powers expressly granted."*

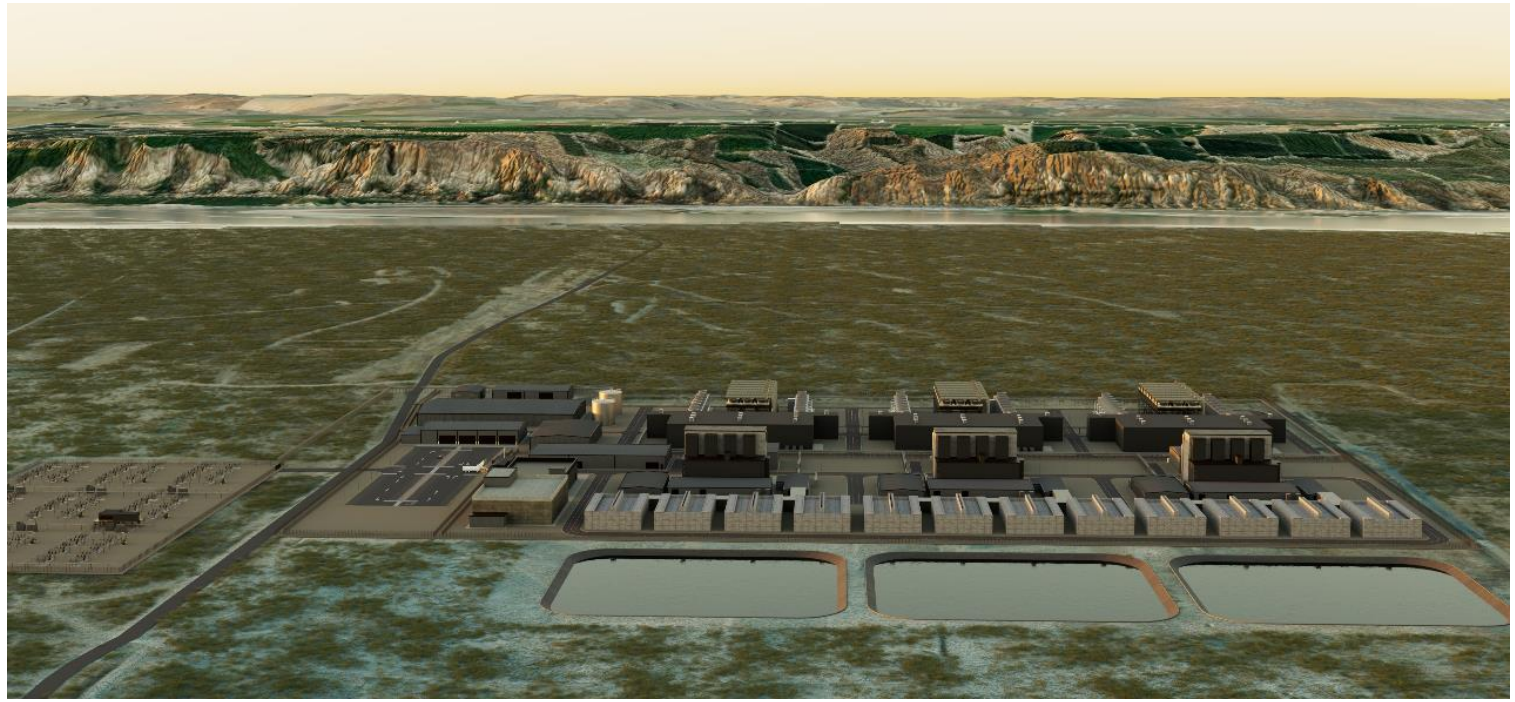


ENERGY NORTHWEST

Cascade Advanced Energy Facility

Washington State Deployment

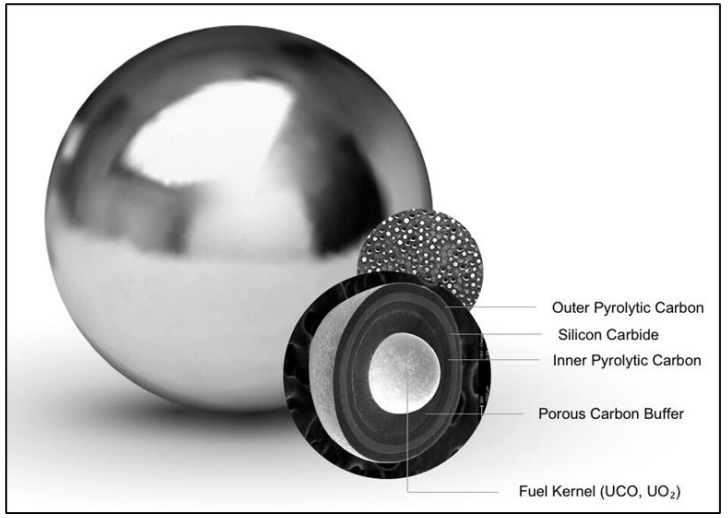
- Four 80 MW reactor facility
- Scalable to 960MW
- Evaluation and Permitting Funding by Amazon
- Public Power access to 50% of off-take



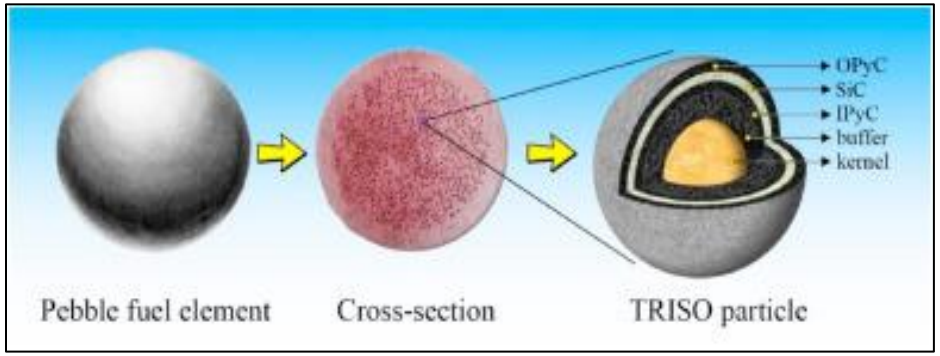
Xe-100 Advanced Reactors

energy

- High temperature gas (Helium) reactor (HTGR) technology
- 60-year design life/100+ year asset
- Modular components built offsite
- Continuous online refueling
- Fuels that cannot melt under any operating scenarios



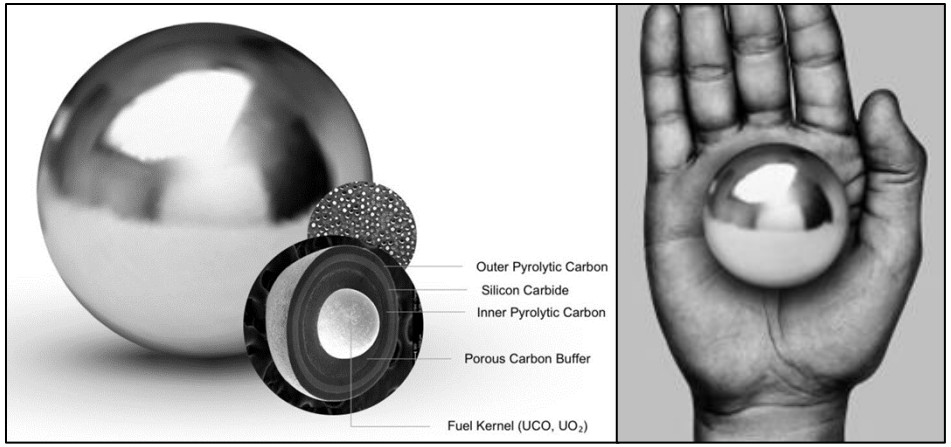
TRISO Fuel



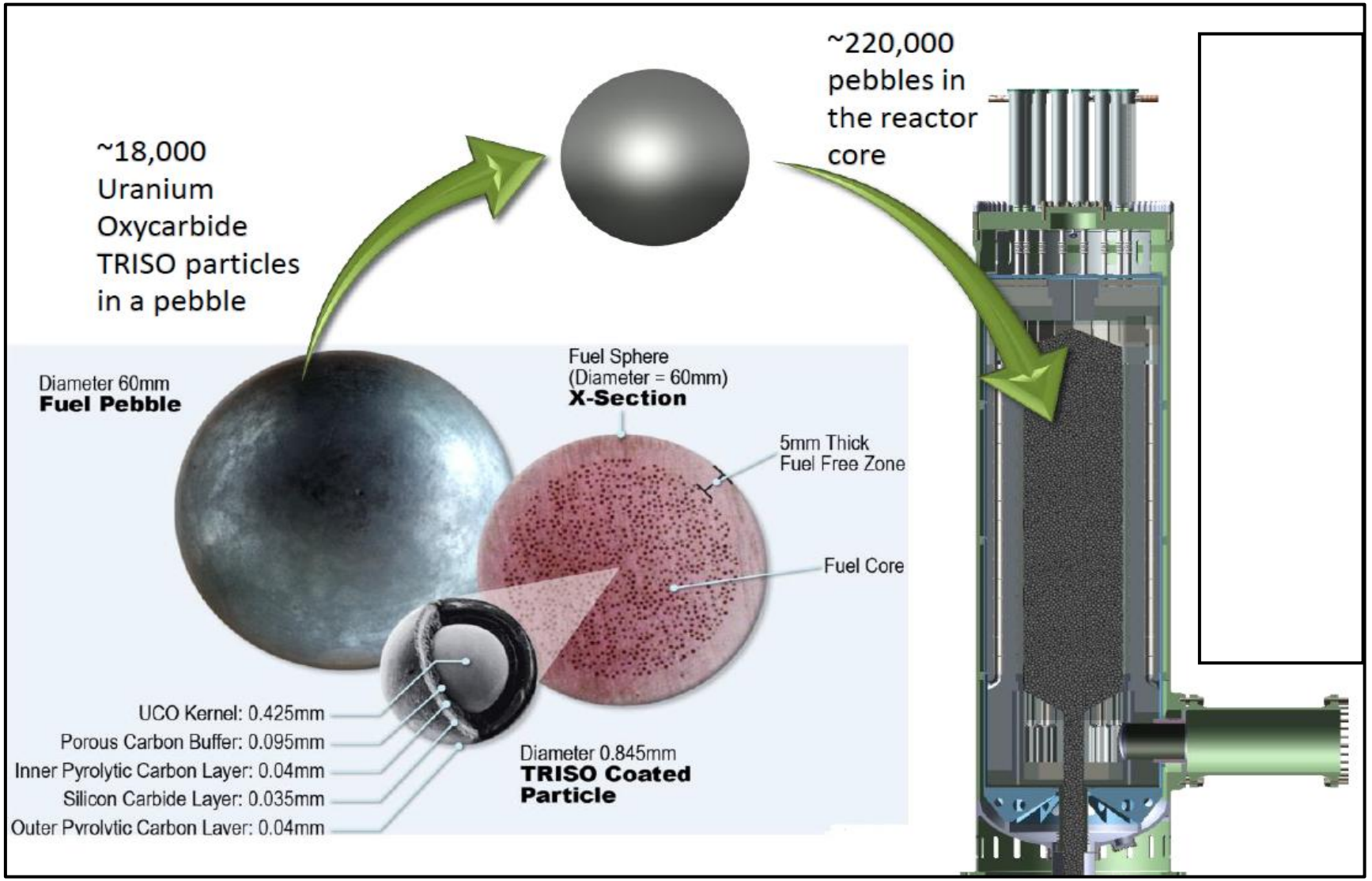
Office of Nuclear Energy

TRISO Particles: The Most Robust Nuclear Fuel on Earth

JULY 9, 2019



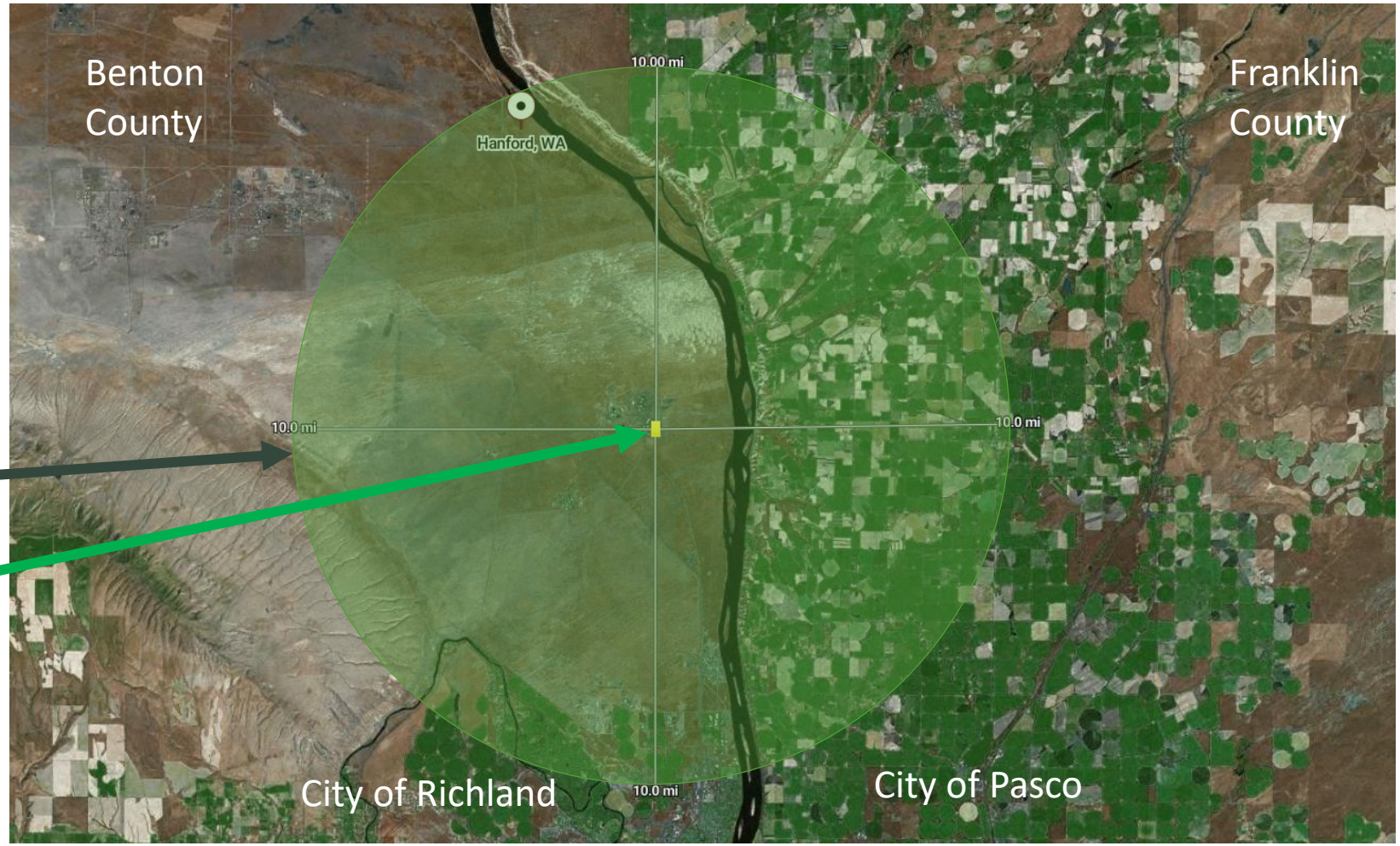
Technology Overview



Protective Zone*

Traditionally Fueled Nuclear Reactor - 10 Miles

Advanced Reactor Fuel (TRISO) - ¼ Mile

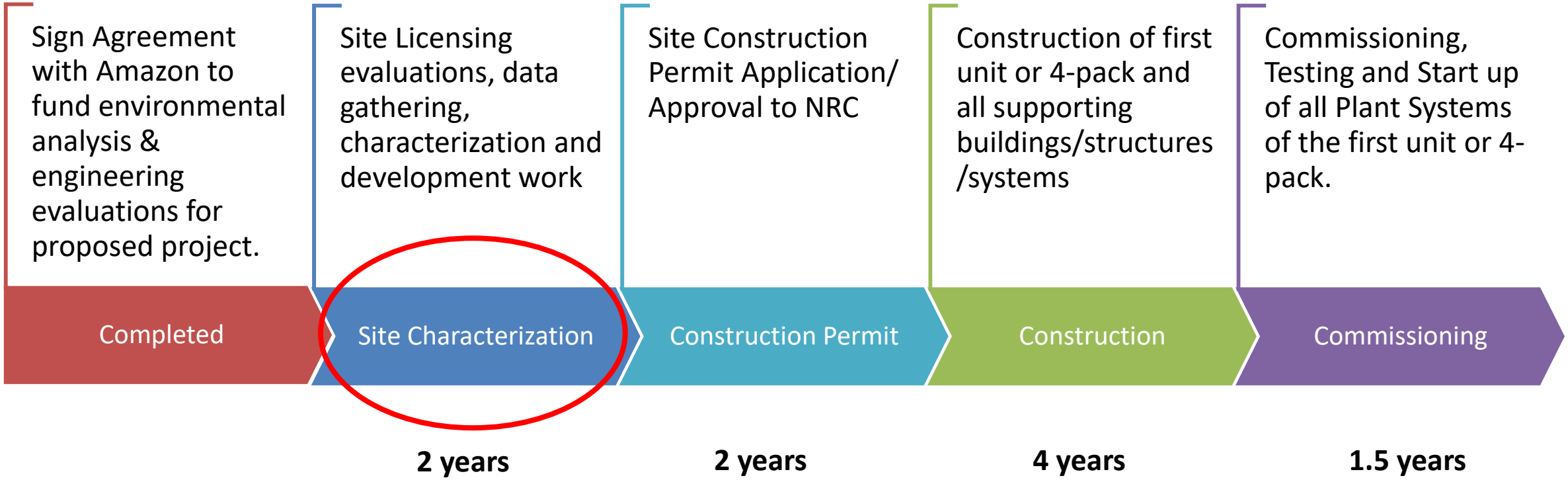


* For Plume Exposure Pathways, Emergency Plans must be capable of supporting personnel evacuation from this area when necessary.

What About the Waste?

- After 6 cycles, the discharged pebbles are loaded into a canister.
- When canister is full, the lid is welded shut & fuel is passively cooled.
- Canisters are stored in a fuel storage building (670 canisters per reactor over 60 years).
- Canisters designed for indefinite storage.

Project Pathway



Member Engagement Options

First 4 Generation Units (320 MW):

Alt 1 - Monitor progress

Alt 2 - Funding utilities information access – feasibility investment required

Alt 3 - Project offtake – Public Power participate up to 50% of the offtake on a pro rata cost/offtake basis

Future:

- Next 4/8 Units
- Site 2, and 2+

Regional Energy Infrastructure Strategy

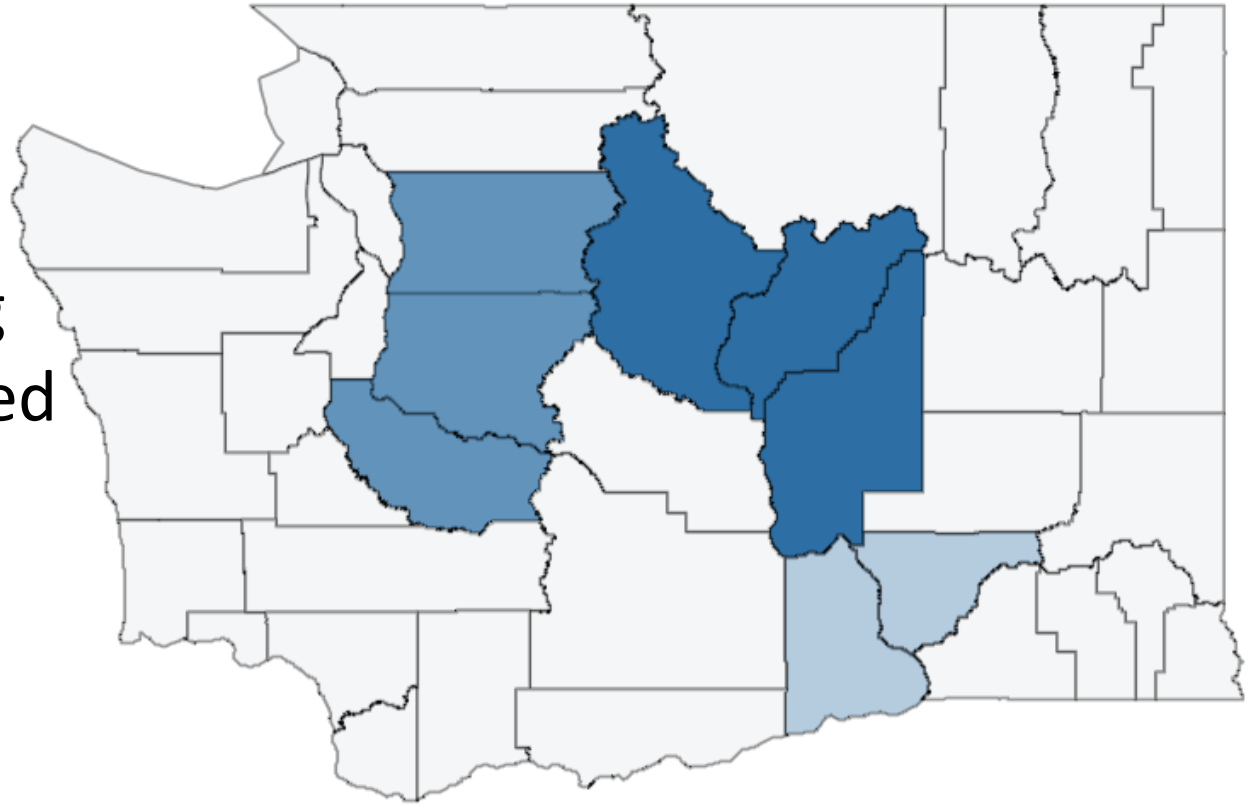
Empowering Public Power Utilities Through Collaboration

Regional Energy Infrastructure Strategy

- **Sub-Regional Alignment:** A member-driven platform that brings neighboring utilities together to plan at a practical, local level — translating high-level regional needs into coordinated, implementable actions.
- **Shared Scale:** Aggregates demand within sub-regions to advance projects utilities couldn't efficiently pursue alone.
- **Public Power, Preserving Local Control:** Built by and for public power, REIS protects each utility's independent decision-making while demonstrating that we are proactively solving our own resource adequacy challenges together.

Regional Energy Infrastructure Strategy (cont'd)

- Mid-C Sub-Region – Final Planning
- Puget Sound Sub-Region - Proposed
- Tri-Cities Sub-Region - Proposed



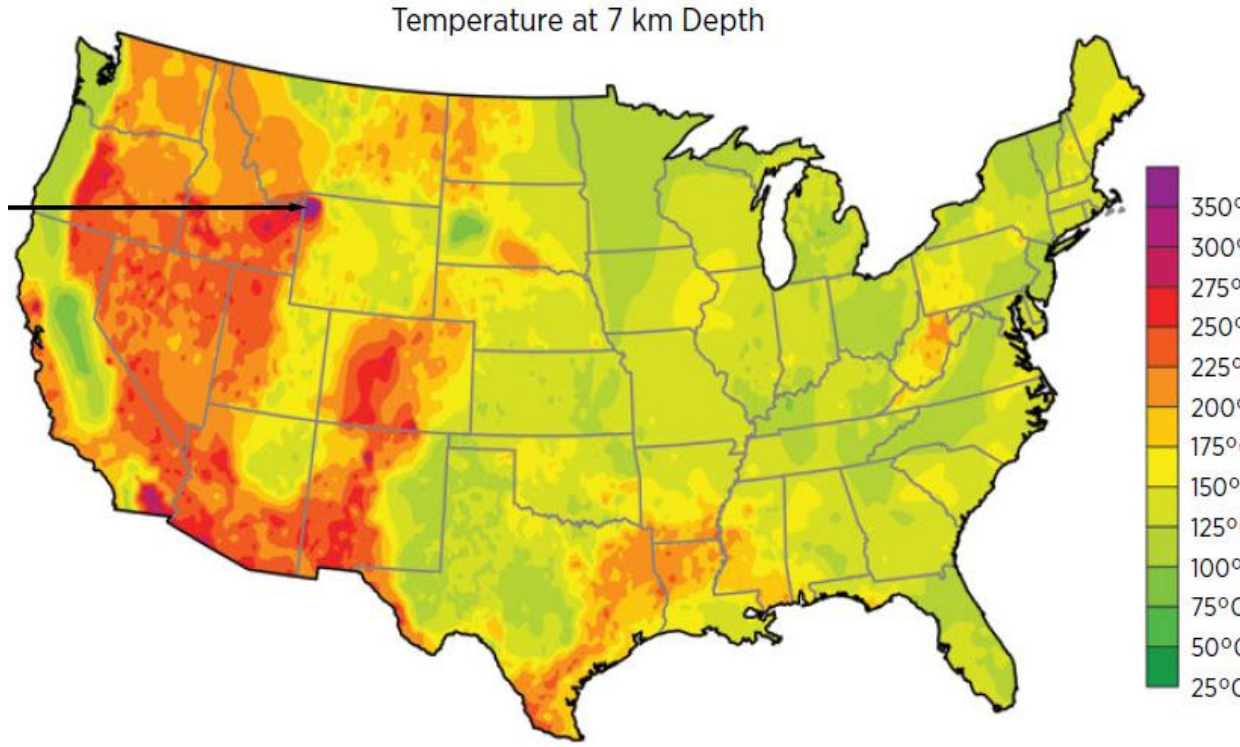
Geothermal Resource Identification

Geothermal Power: The Renewable Baseload Solution

Geothermal Resource Identification

- Four-Phase project to find resources capable of supporting commercially viable geothermal power plants in Washington, Oregon, Idaho and Montana

- Outcome is a full-fledged techno-economic feasibility study to inform decision making on who builds the future power plant, where, and when



Geothermal Project (cont'd)

- Phase 1 Desktop Study has been funded by Chelan, Douglas, and Grant PUDs and is underway
- Phase 2 will kick-off shortly after Phase 1 completion
  - Participant onramps and offramps exist for each Phase
- Seeking other interested parties for domestic and Canadian exploration

Geothermal Project Timeline

- Phase 1: Preliminary Survey - Desktop study to identify potential sites
  - Jan 2026 – June 2026
- Phase 2: Exploration to evaluate power production potential
  - July 2026 – June 2027
- Phase 3: Test Drilling to confirm resource viability
  - July 2027 – June 2028
- Phase 4: Compile feasibility assessment for power plant development
  - July 2028 – Dec 2028

Gravity Energy Storage

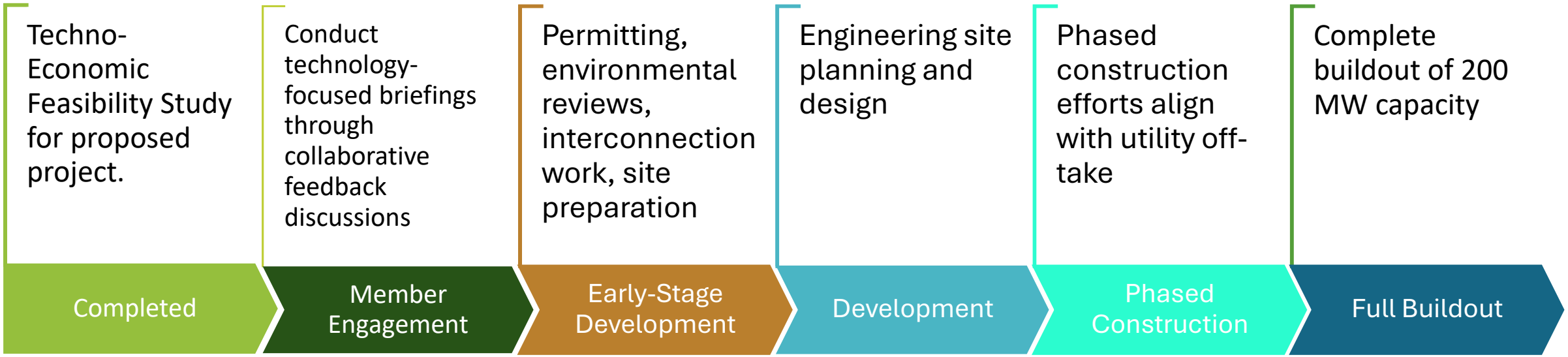
An innovative long-duration energy storage (LDES) solution offering reliable, dispatchable power for a resilient regional grid.

Gravity Storage

ARES Nevada project

- Mechanical, rail-based system using natural elevation change
- Converts potential energy into electricity using mass cars on tracks
- No chemicals, no water, non-flammable
- Uses locally sourced ballast materials
- Components made in America from recycled steel
- Simple mechanical design with minimal environmental impact

Project Action Plan



Questions?

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- Ross Rebich, Project Developer

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Thank you!