



**ENERGY
NORTHWEST**

Generation Resources Advisory Council

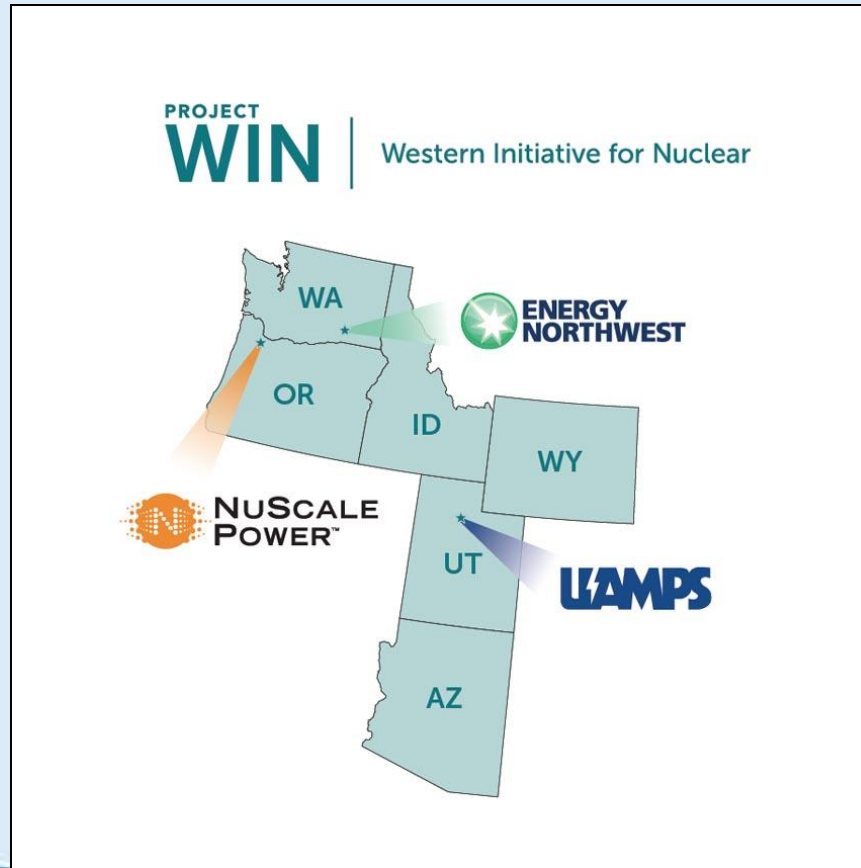
Energy Northwest Small Modular Reactor Update

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Utah Association of Municipal Power Systems “UAMPS” - Carbon Free Power Project (CFPP)



Energy Northwest - Background

- ✦ Joint Operating Agency – Established 1957
- ✦ Current operation and maintenance experience
 - Packwood Hydro – 50 years
 - Columbia Nuclear Generating Station – 30 years
 - Nine Canyon Wind Project – 13 years
 - White Bluffs Solar Demonstration Project – 13 years
 - Tieton Hydro – 1 year
- ✦ Operations and maintenance is an expanding business line for Energy Northwest

CFPP Responsibilities

✦ UAMPS:

- Project lead, owner, and licensee
- Develop power purchase agreements

✦ NuScale

- Design development
- Nuclear plant provider
- Fluor as EPC contractor

✦ Energy Northwest

- Consultant role during development
- First right O&M service provider

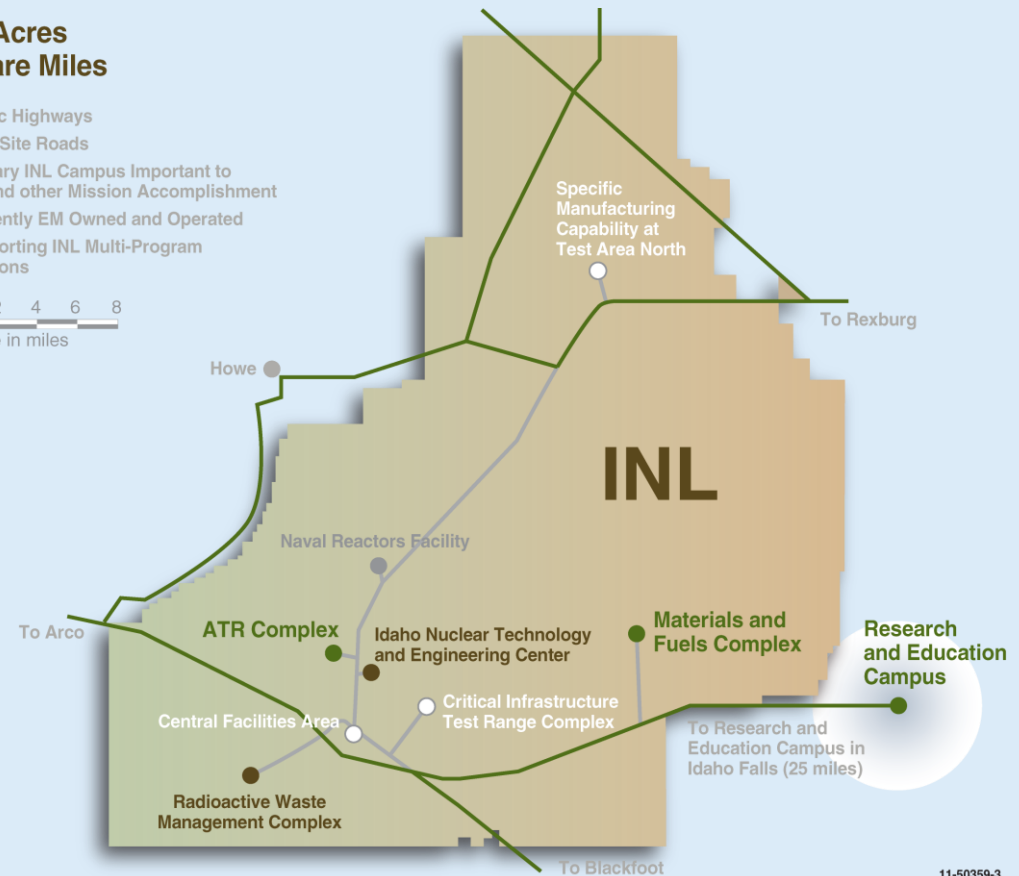
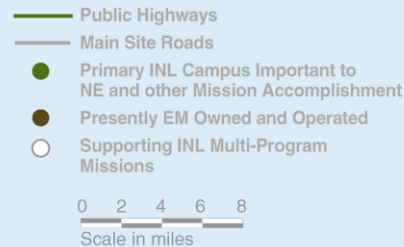
CFPP Current Project Activity

- ✦ Teaming agreement (UAMPS/NuScale/EN) in 2013
- ✦ UAMPS Regulatory legal counsel in place
- ✦ Project Bi-weekly coordination meetings
- ✦ Focusing region of interest at Idaho National Laboratory (INL)
- ✦ Site analysis work starts first quarter 2015
- ✦ NuScale completing Design Certification Application (DCA)

Overview of Idaho National Laboratory Site

- 889 square miles
- Five campuses
- 111 miles of power line
- 177 miles of paved roads
- 14 miles of railroad tracks
- 584 buildings and structures (3.2 million square feet)
- 3,200 BEA employees
- Multiple missions
- Multiple stakeholders

569,135 Acres
889 Square Miles

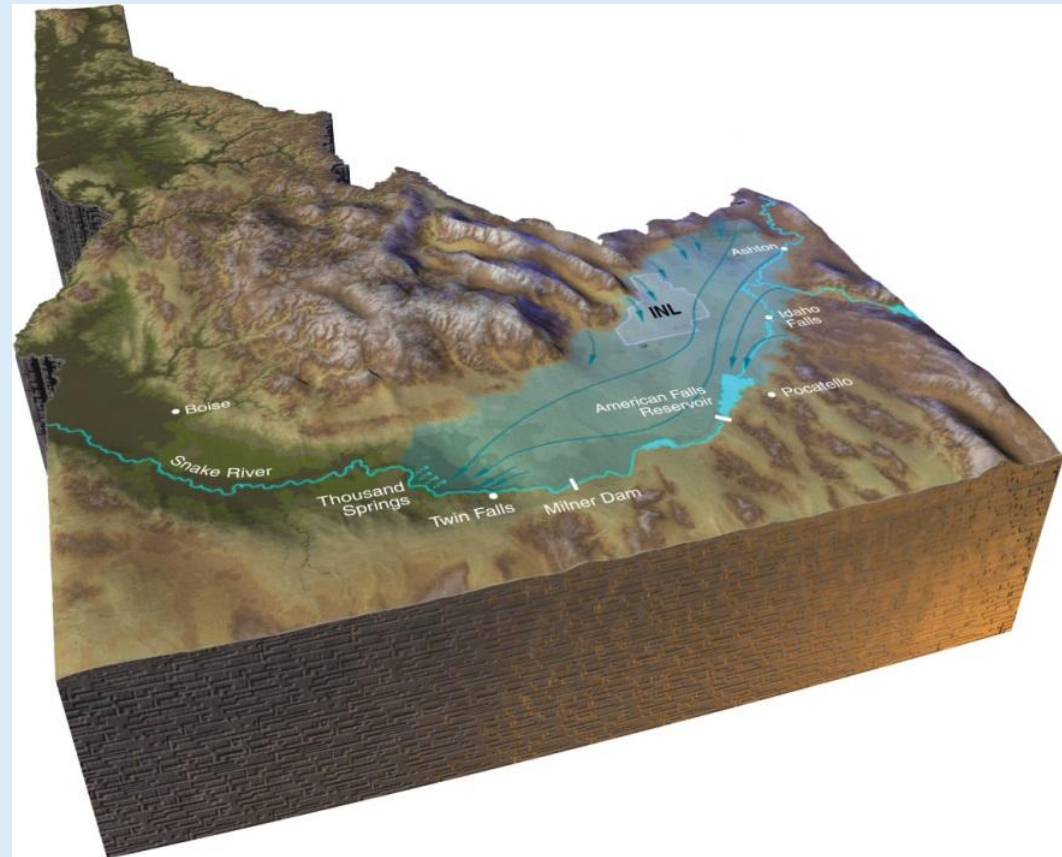


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The Department of Energy's National Nuclear Capability

INL Site Characteristics

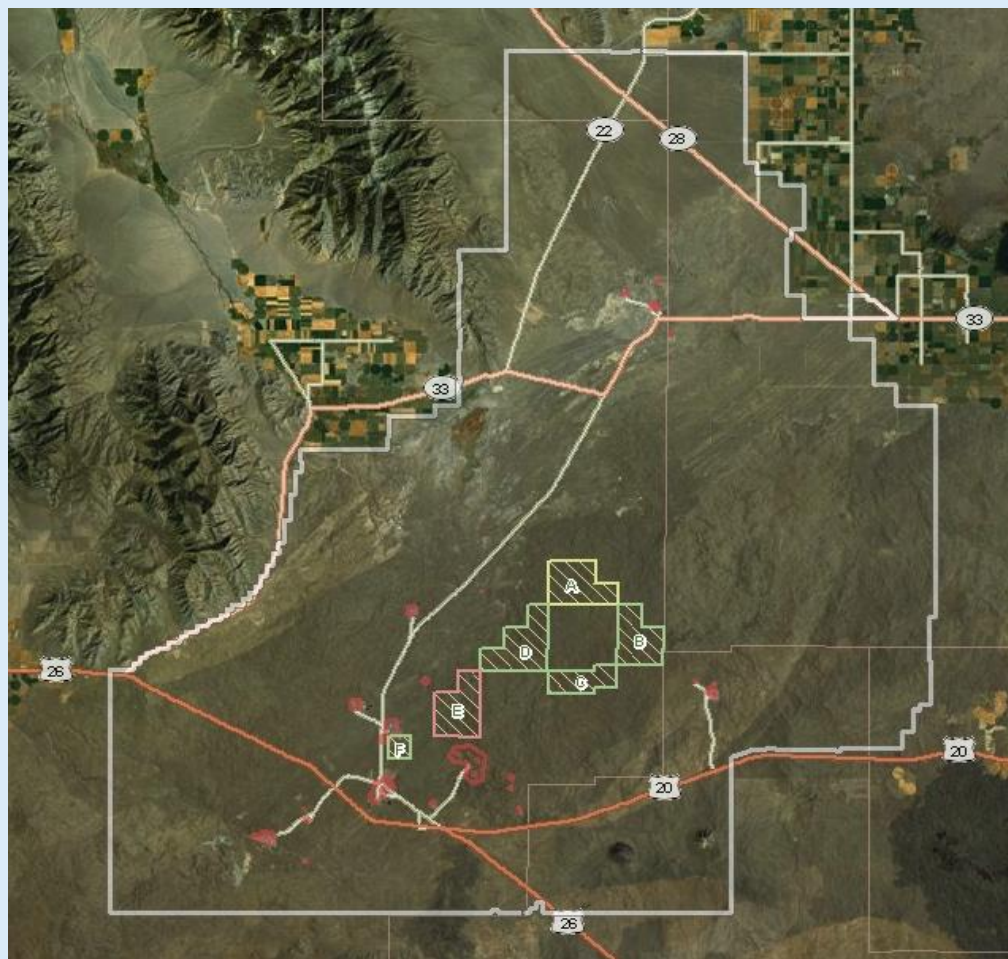
- ✦ DOE land would accommodate siting of a commercial generation facility
- ✦ Surface: shallow soil and basalt outcrops
- ✦ Water from the Snake River Plain aquifer is 475 feet deep



Key INL Reactor Site Selection Criteria

1. Subsurface water availability/well depth
2. Volcanic/seismic fault exclusionary zones
3. Maximize distance from INL site boundaries
4. Geotechnical considerations
5. Minimize length of new roads
6. Minimize length of new transmission lines
7. Environmental acceptability (land use, ecology)

Proposed Siting Locations



CFFP Milestone Schedule

- ✦ NuScale submits Design Certification Application (DCA) - 2016
- ✦ UAMPS submits Combined Operating License Application (COLA) - 2017
- ✦ NRC approves/issues DCA and COLA - 2020
- ✦ Fuel load Module 1 - 2023
- ✦ CFFP full commercial operation - 2024

Economics

- ✦ Cost of Power will be competitive with alternatives
 - Natural gas is the short term exception
- ✦ Capital cost \$2.5 - 3 billion (570 MW)
- ✦ Levelized cost estimate \$85-95 per MWh
- ✦ First of a kind project has 10-20% cost add

Washington Nuclear Energy Task Force

- ✦ Task Force legislation enacted in 2014
- ✦ Determine feasibility of displacing fossil fuel generation
- ✦ Four meetings were held in 2014
- ✦ Task Force Report completed in December 2014
- ✦ Task Force extended through 2015

New Nuclear in Tri-Cities

- ✦ \$500,000 Washington Department of Commerce grant awarded to Tri-City Development Council in 2013
- ✦ Purpose: Analyze the Hanford site for SMR development
- ✦ Contracted with URS Corporation to evaluate the benefits
- ✦ Report completed in Fall 2014 (tridec@tridec.org)

Questions

