

NuScale Small Modular Reactors Diverse Energy Platform (NuDEP)

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Nonproprietary

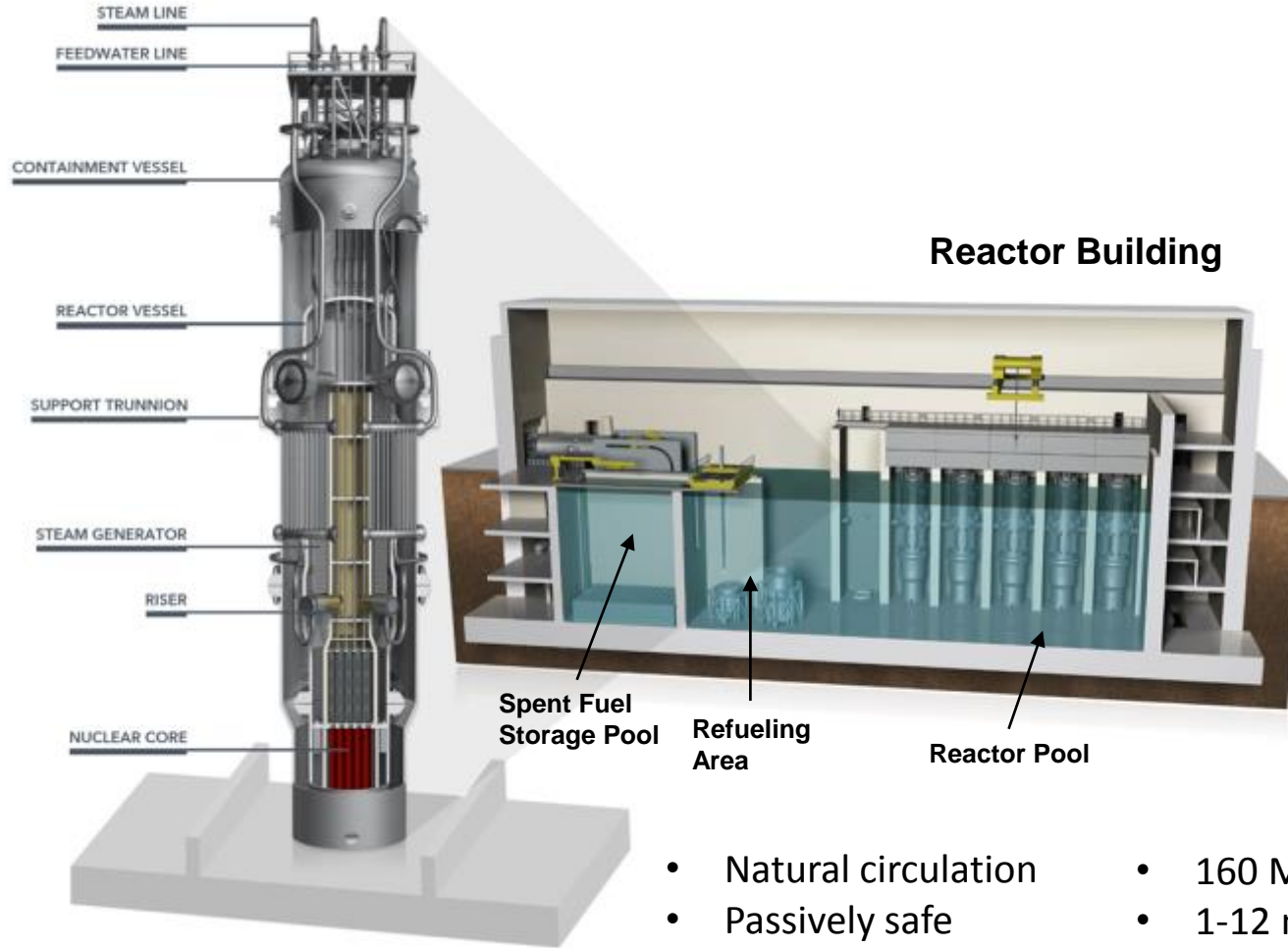


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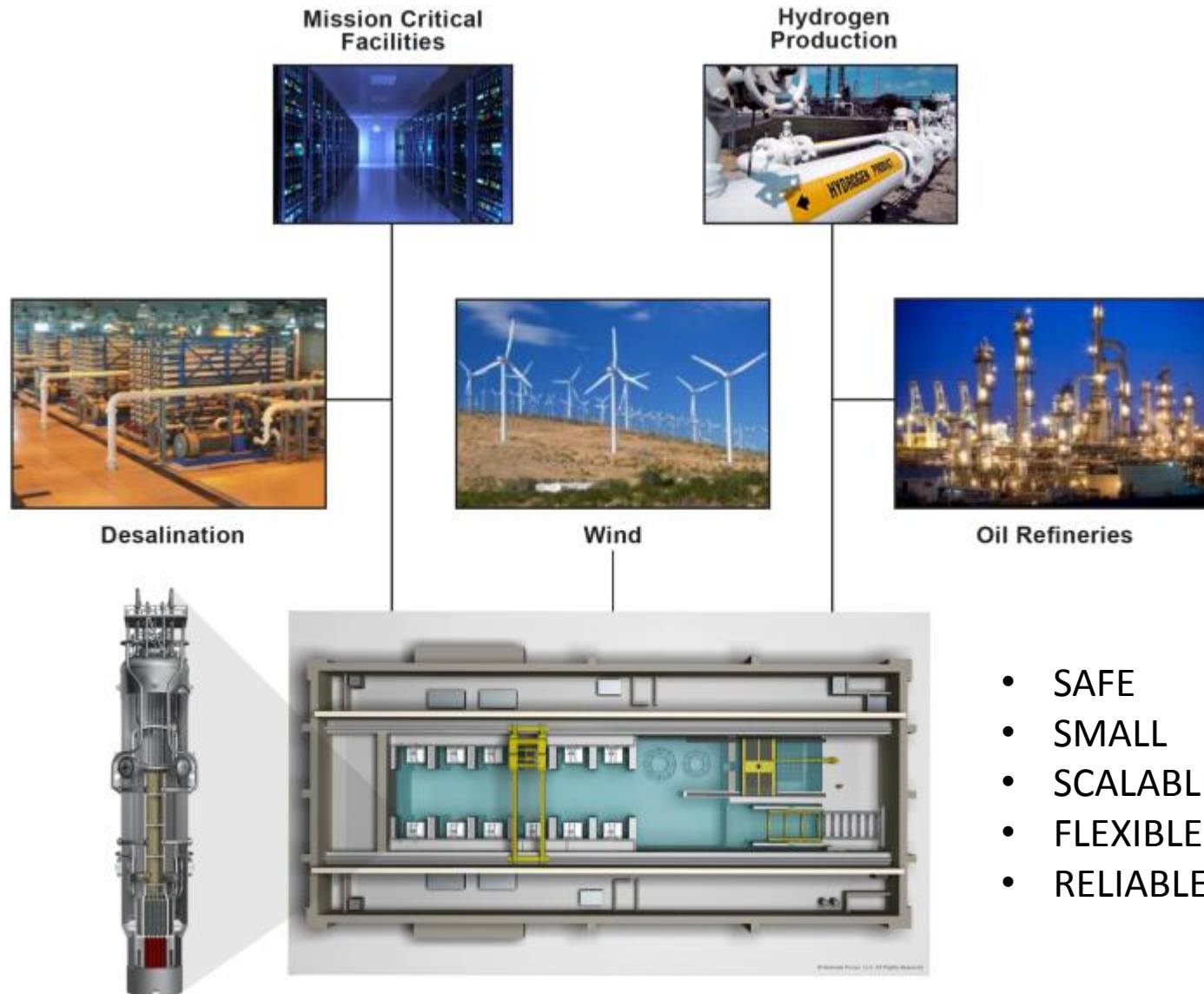
NuScale Modular Plant

NuScale Power Module



- Natural circulation
- Passively safe
- 2 Year Refueling per module
- 160 MWt/module
- 1-12 modules/plant

NuScale Diverse Energy Platform (NuDEP) Initiative



NuScale Diverse Energy Platform - Completed Studies

Oil Refineries Study - Reduction of Carbon Emissions (Fluor and NuScale)

10-Module Plant coupled to a 250,000 barrels/d refinery

Integration with Wind Study - Horse Butte Site (UAMPS, ENW and NuScale)

1-Module dedicated to UAMPS 57.6 MW wind farm



Hydrogen Production Study – High-Temperature Steam Electrolysis (INL and NuScale)

6-Module Plant for Emission Free Hydrogen Production

Desalination Study – Sized for the Carlsbad Site (Aquatech and NuScale)

8-Module Plant can produce 50 Mgal/d (190K m³/d) of clean water plus 350 MWe



Program WIN

- Program WIN (Western Initiative for Nuclear) is a multi-western state collaboration to deploy a series of NuScale Power projects
- Involved Program WIN participants: NuScale, UAMPS, Energy Northwest
- 5 Other projects: WIN-WA, WIN-UT, WIN-AZ, WIN-NM, WIN-WY
- Targeting Operation of the first module of a 12-Module Plant in 2023



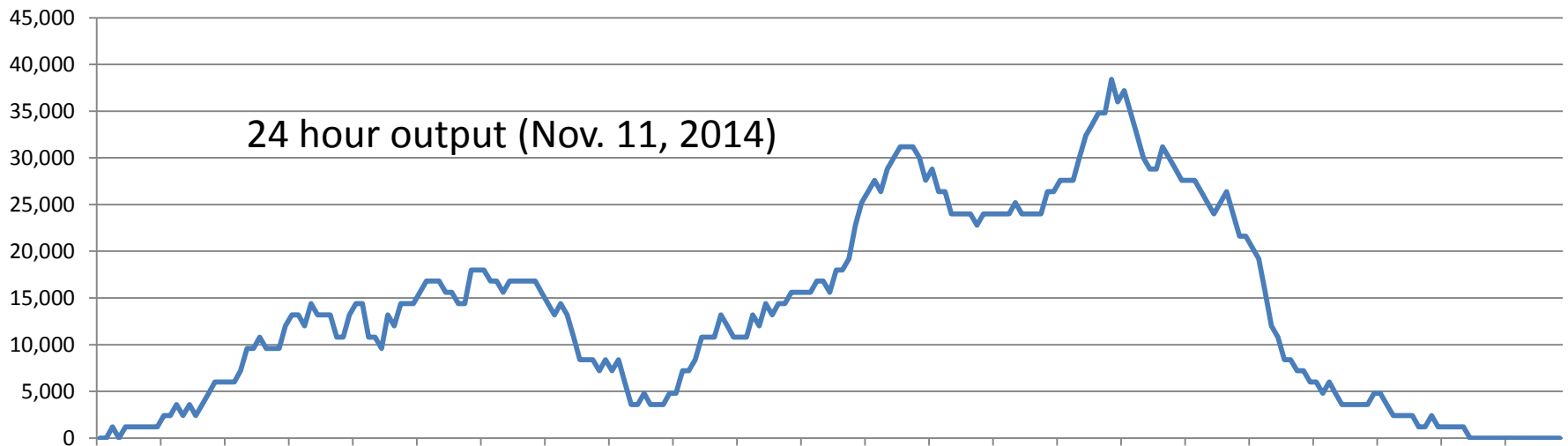
NuScale/UAMPS/ENW Study on Integration with Wind Farm

- NuScale includes unique capabilities for following electric load requirements as they vary with customer demand and rapid output variations from renewables: NuFollow™
- There are three means to change power output from a NuScale facility:
 - **Dispatchable modules** – taking one or more reactors offline for extended periods of low grid demand or sustained wind output
 - **Power Maneuverability** – adjusting reactor power for one or more modules (intermediate time frames)
 - **Turbine Bypass** – bypassing turbine steam to the condenser (short time frames)
- Explored integration with Horse Butte wind farm in Idaho
- Partnered with Utah Associated Municipal Power Systems and Energy Northwest



Horse Butte Wind Farm

- Commissioned in 2012
- 32 Vestas V100 turbines
- 1.8 MWe capacity per turbine
- 57.6 MWe total capacity
- 17,600 acres



Target Output for NuScale Module

