



# **NuScale Power Overview**

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Chief Financial Officer and Chief Strategy Officer

#### Who is NuScale Power?

- NuScale has developed a groundbreaking small modular reactor (SMR)
  - A fully factory-fabricated NuScale Power Module™ capable of generating 77 MW of electricity
- In August 2020, NuScale received approval of its Design Certification Application from the NRC – the first and only SMR to ever do so
- The NuScale plant is the <u>only</u> near-term deployable and commercially viable advanced nuclear generation solution for states across the country that seek a reliable, safe, and carbon-free solution
- NuScale Power was formed in 2007 for the sole purpose of completing the design and commercializing a small modular reactor (SMR) – the NuScale Power Module™
- Total investment in NuScale to date is greater than US\$1B
- >560 patents granted or pending in nearly 20 countries
- >400 employees in 5 offices in the U.S. and 1 office in the U.K.



**NuScale Engineering Offices Corvallis** 



One-third Scale NIST-2 Test Facility



**NuScale Control Room Simulator** 



120 ft

#### **Advanced Small Modular Reactors**

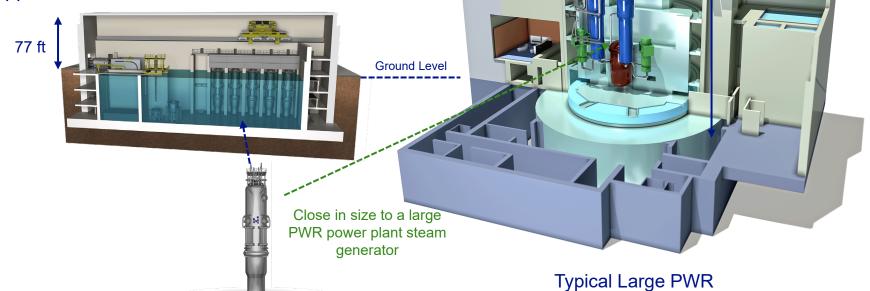
Smaller-less than 300 Mwe

Modular- reactor and containment shipped from factory to plant site

Safer- low accident frequency and off-site impact

Affordable- manageable capital cost and life-cycle economics

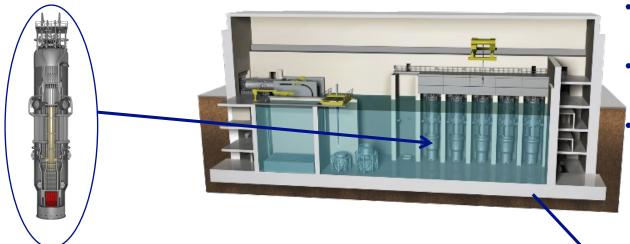
Flexible- complements renewables, non-utility applications



NuScale Power Module™

200 ft

#### NuScale Advanced Small Reactor Overview

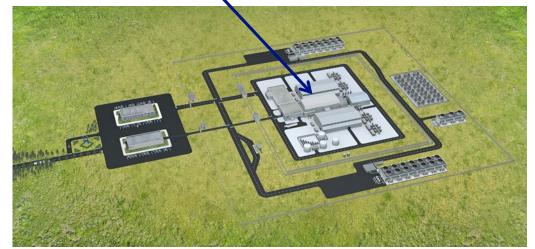


- Each module produces up to 77 MWe
- Up to 12 modules for 924
   MWe gross plant output
- Smaller power plant solutions available for 4-module (308 MWe) and 6-module (462 MWe) plants

NuScale Plant can safely shut down with:

- No operator or computer actions
- No AC/DC power
- No additional water

Emergency planning zone (EPZ) ends at site boundary





## Used Fuel Storage & Disposal

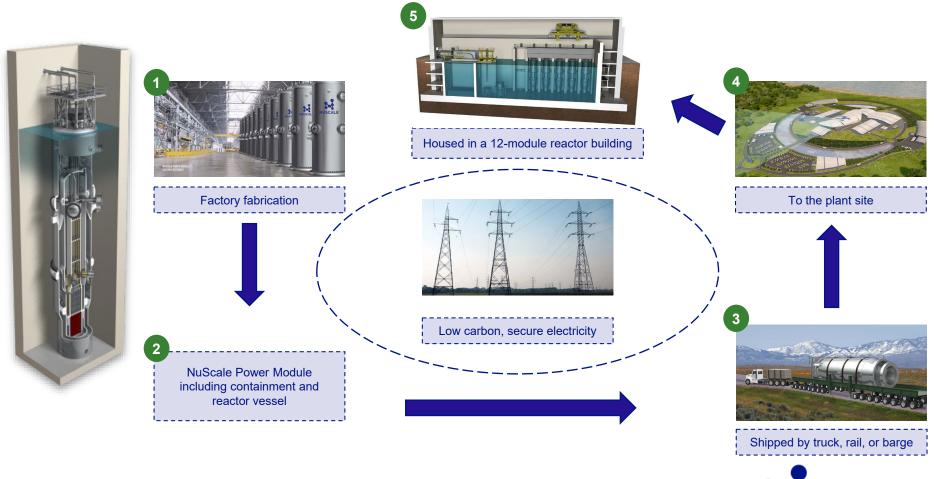


- After cooling in the spent fuel pool, used fuel is placed into certified casks steel containers with concrete shells on site of the plant.
  - NRC's Waste Confidence Rule states that dry cask storage is a safe and acceptable way to store used fuel for an interim period at the plant up to 60 years beyond the licensed life of any reactor (i.e., for up to 120 years).
  - NuScale's standard facility design includes an area for the dry storage of all of the spent fuel produced during the 60-year life of the plant.
- U.S. Department of Energy (DOE) has responsibility for the final disposal of used fuel under the Nuclear Waste Policy Act.
  - Under the Act, the generators of electricity from nuclear power plants must pay into a fund to be used for the long-term disposal of this used fuel; over \$40 billion is currently in the Nuclear Waste Fund.



## A New Approach to Construction and Operation

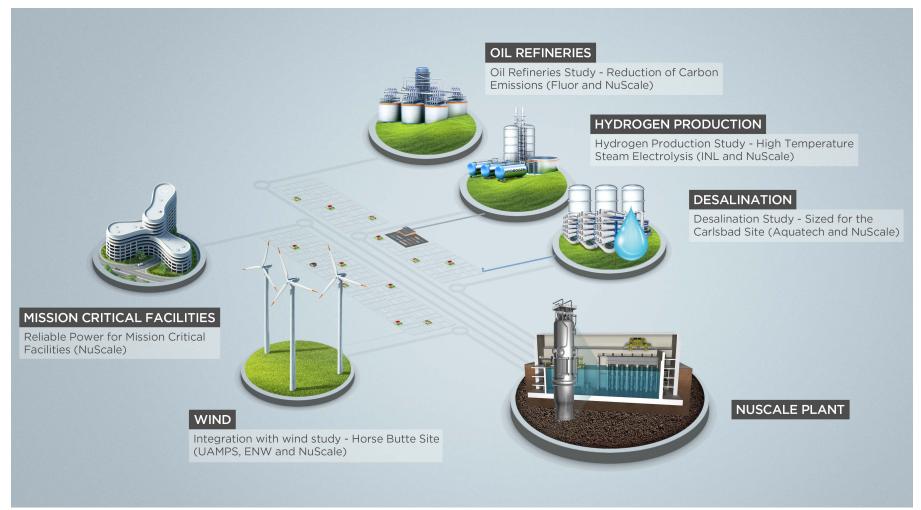
NuScale has revolutionized the nuclear supply chain with modular manufacturing of NPM units in-house that are shipped to sites





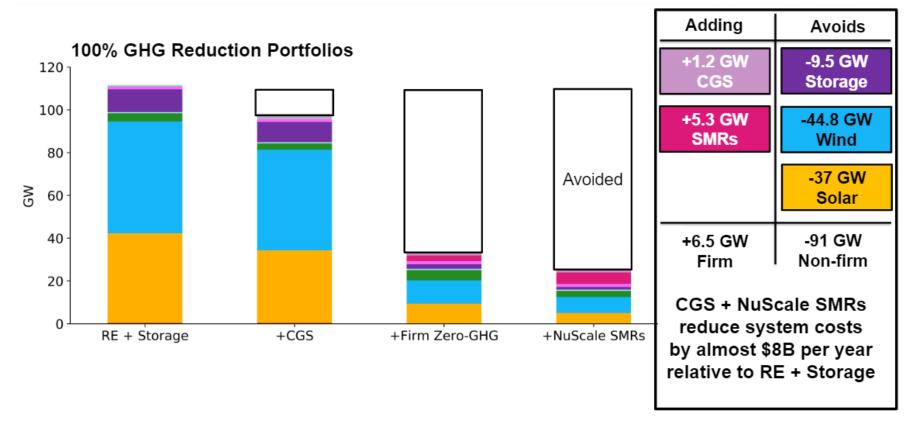
## Beyond Baseload: NuScale Diverse Energy Platform

MORE THAN RELIABLE BASELOAD AND LOAD-FOLLOWING ELECTRICITY GENERATION





## Benefits of including nuclear at 100% GHG reductions



"Low-cost SMRs reduce the need to overbuild renewables for capacity purposes...

Renewables continue to be valuable resources that coexist in a system with lower-cost SMRs" – E3 study

Source: Pacific Northwest Zero-Emitting Resources Study commissioned by Energy Northwest, E3, January 2020







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