# Blue Ribbon Commission on America's Nuclear Future

### Dr. Paul Lorenzini, CEO August 30, 2010





# **NuScale Power history**

- NuScale design (MASLWR) originally developed under DOE funded program with co-sponsors in 2000-2003
- OSU refined and developed the design with proprietary improvements (2004-2007)
- NuScale Power Inc. formed in June 2007
- Tech-transfer agreement with OSU provides exclusive use of the Integral System Test facility and patents.
- First financing January, 2008

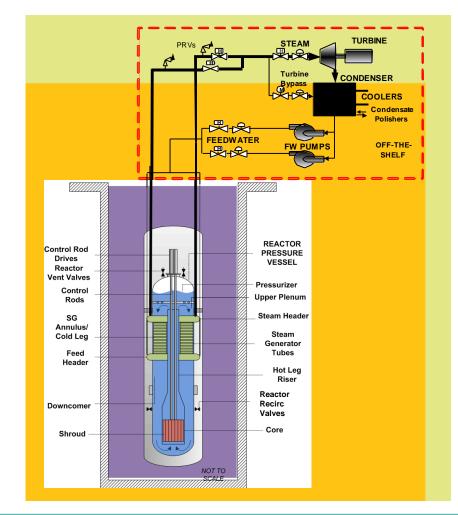


### **Introduction to NuScale**

- NSSS is Factory Built:
  - Entire NSSS prefabricated and shipped by rail, truck or barge
- Natural Circulation Cooling:
  - <u>Inherently safe</u> Eliminates major accident scenarios
  - <u>Improves economics</u> Eliminates pumps, pipes, valves
- Large natural heat sink
  - Simplifies and enhances safety case
- Proven Technology
- Below Ground

3

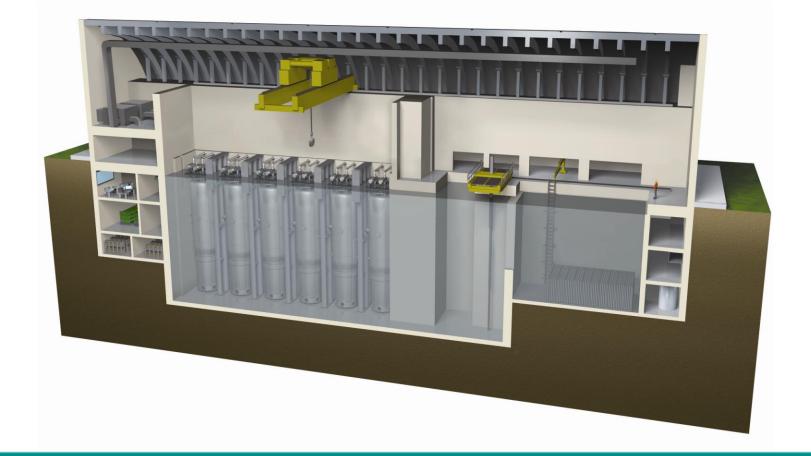
Enhances security and safety





## Modularity permits scaling to any size

#### 12 modules, 45 MWe each produces 540 MWe



4



## NuScale Powered by thorium addresses many issues

Old Nuclear	New Nuclear
Waste disposal concerns	Thorium fuel reduces long-lived transuranic wastes
Proliferation threat	Thorium fuel is more proliferation resistant and improves global plutonium consumption
Confidence in nuclear plant safety	NuScale Power's revolutionary design eliminates major accidents and significantly lowers risks
Economic risks of large plants	NuScale Power lowers financial risks with modular, factory built designs
Resource sustainability	Global resources of Thorium are 3x to 4x uranium and can be fully utilized in conventional nuclear plants

5



# Thorium as an alternative fuel: Issues

- Refinement of fuel design
  - Cost and timing of a fuel qualification program
  - Development of a thorium fuel manufacturing infrastructure
- Reactor control issues due to reduced delayed neutron fraction





## NUSCALE POWER

201 NW 3rd Street Corvallis, OR 97330 541-207-3931 nuscalepower.com



