NuScale Power™

Safe. Economic. Simple.
Small Modular Reactors

Michael S. McGough, Chief Commercial Officer

Presentation to
Energy NorthWest
Member Forum XVI
October 24th, 2013
Kennewick, Washington

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NuScale Power History

- NuScale technology in development and design since 2000 (DOE) MASLWR program, lessons from AP1000 scaled testing
- Integral test facility first operational in 2003
- Began NRC design certification (DC) pre-application project (Project #0769) in April 2008
- ~245 FTE's currently on project, ~$150MM spent project life-to-date
- Twelve-reactor simulated control room operational in May 2012 for Human Factors Engineering development

NuScale Engineering Offices Corvallis

One-third scale Test Facility

NuScale Control Room Simulator

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Fluor-An American Company

- Acquired majority interest in NuScale in October 2011
- One of the world's leading publicly traded engineering, procurement, construction, maintenance, and project management companies
- #110 in the FORTUNE 500 in 2013
- More than 1,000 projects annually, serving more than 600 clients in 66 countries
- More than 43,000 employees worldwide
- Offices in more than 28 countries on 6 continents
- Over 100 years of experience

Fluor Corporate Headquarters
Dallas, Texas

Revenue	$27.6 billion
New awards	$27.1 billion
Backlog	$38.2 billion

Investment Grade Credit Ratings:

S&P	A-
Moody's	A3
Fitch	A-

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What is a NuScale SMR?

- A 45 Mwe Fully-integrated Nuclear Power Plant called a NuScale Power Module (NPM)
- Each NPM is factory built including containment and reactor vessel
- Each NPM has it's own package turbine
- Each NPM is installed underground in 10 MM gallon pool, along with up to 11 additional NPM's (for 540MWe total output)
- NPM's can be added incrementally as load grows

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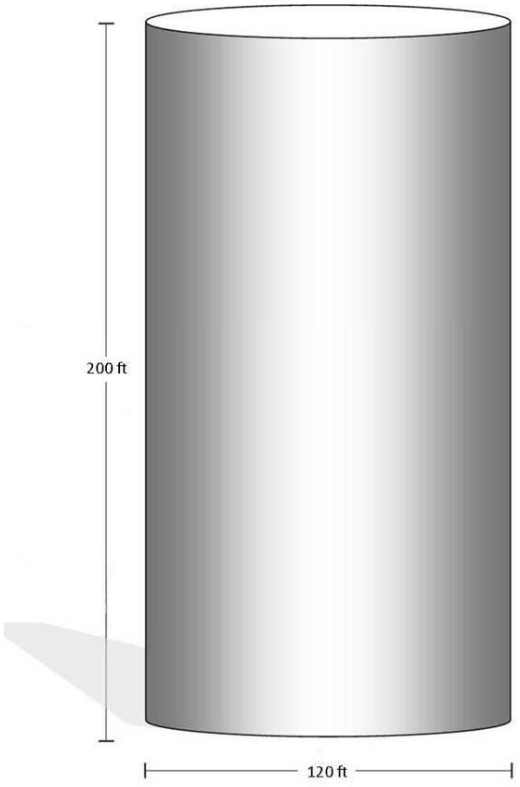
Size Comparison

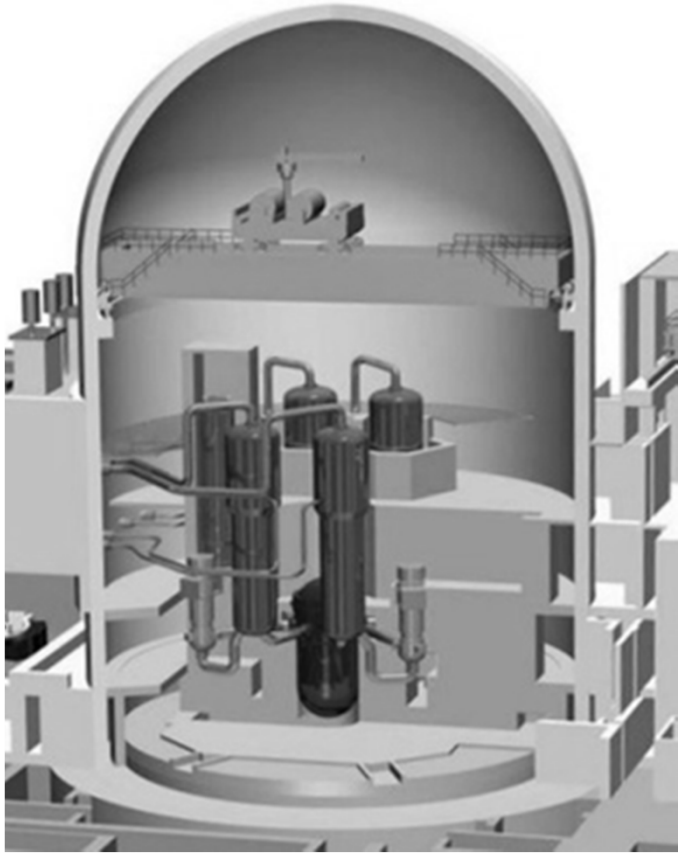
Comparison size envelope of new nuclear plants currently under construction in the United States



Containment

NuScale's combined containment vessel and reactor system

Typical Pressurized Water Reactor



*Source: NRC

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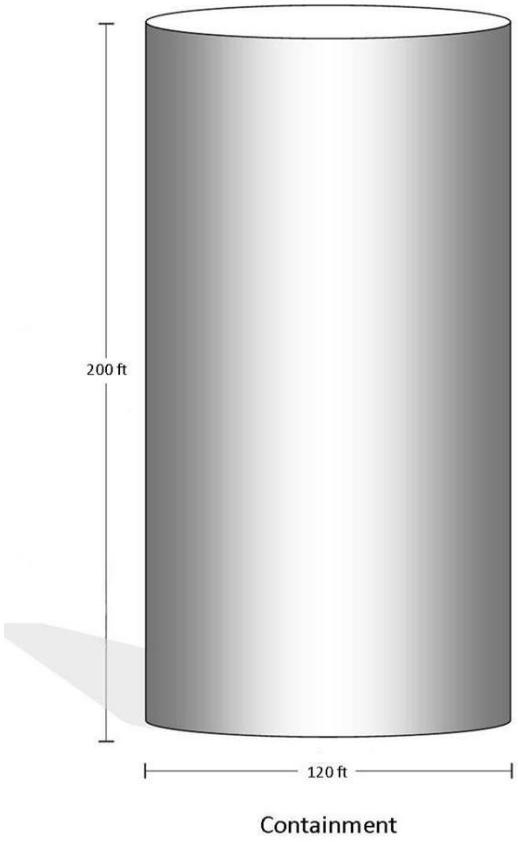
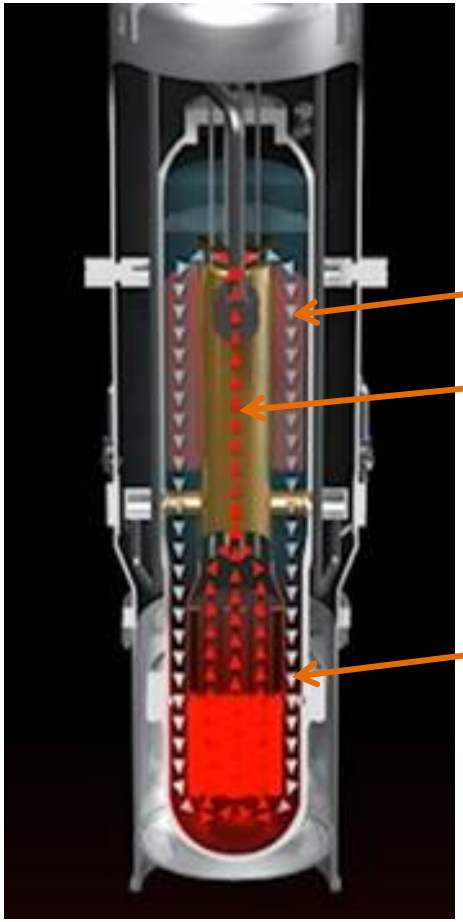
What is a NuScale Small Modular Reactor?

Comparison size envelope of new nuclear plants currently under construction in the United States



NuScale's combined containment vessel and reactor system



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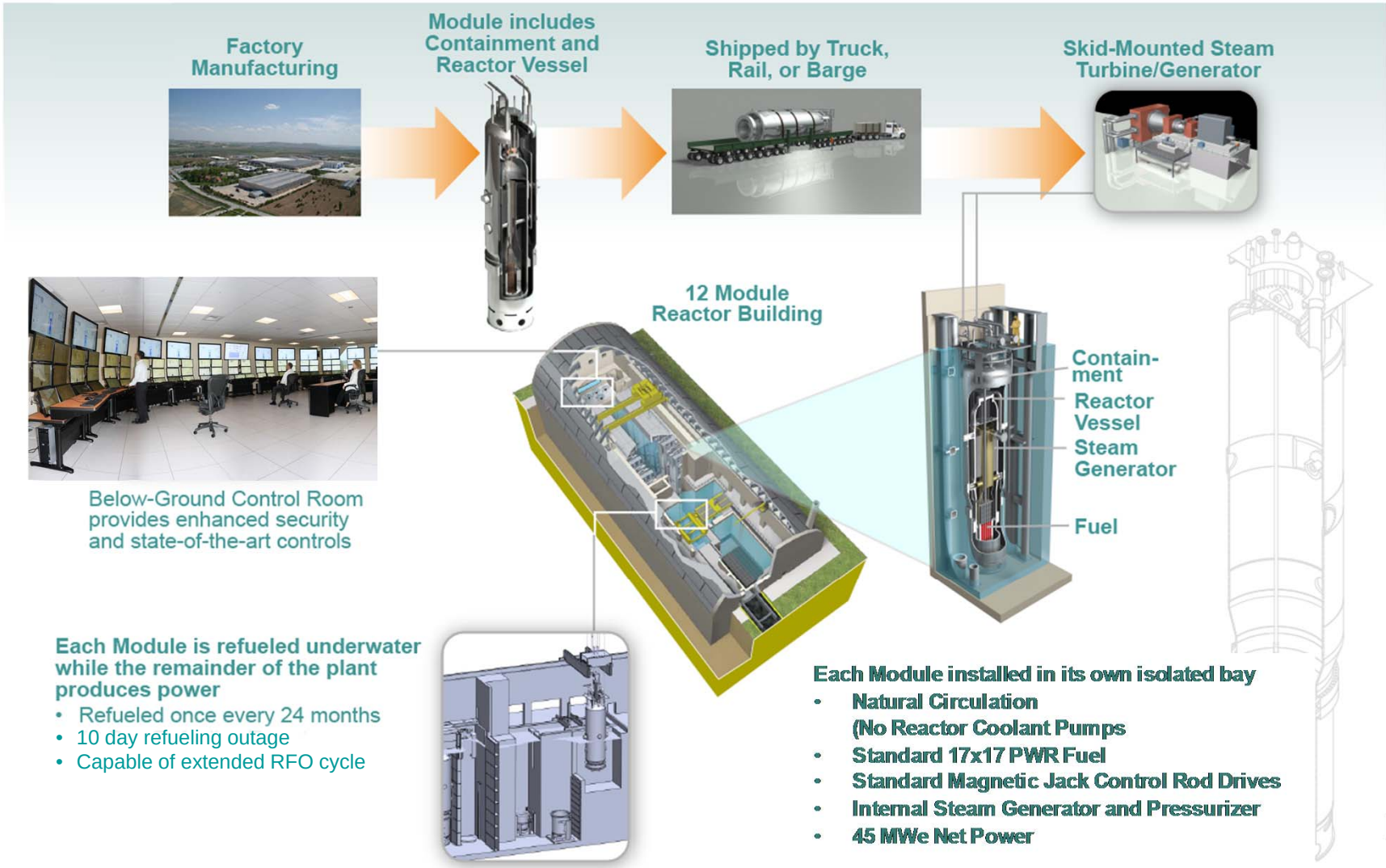
How Does the Plant Come Together?



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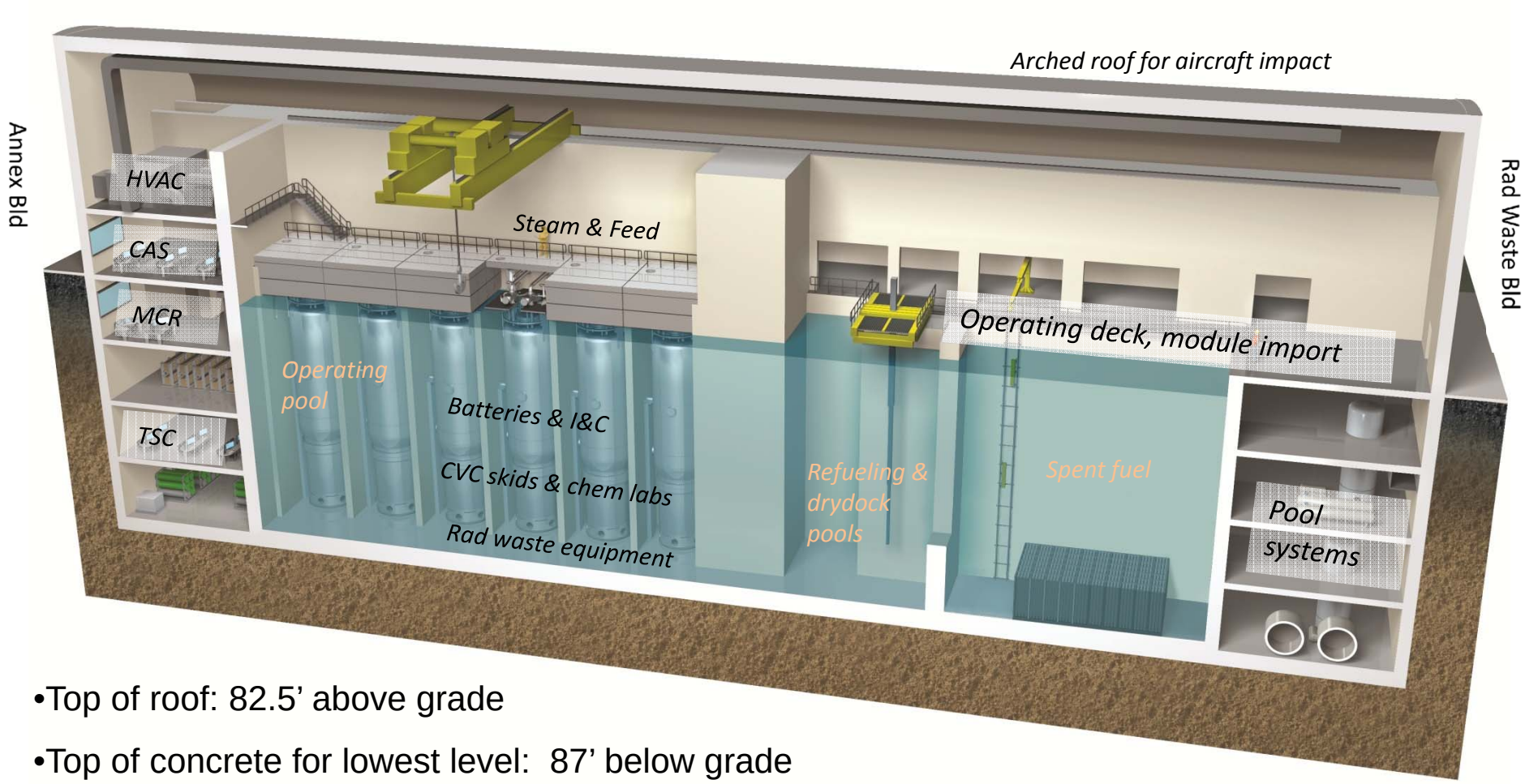
Reactor Building Section



- Top of roof: 82.5’ above grade
- Top of concrete for lowest level: 87’ below grade
- 443’ E-W , 137.5’ N-S

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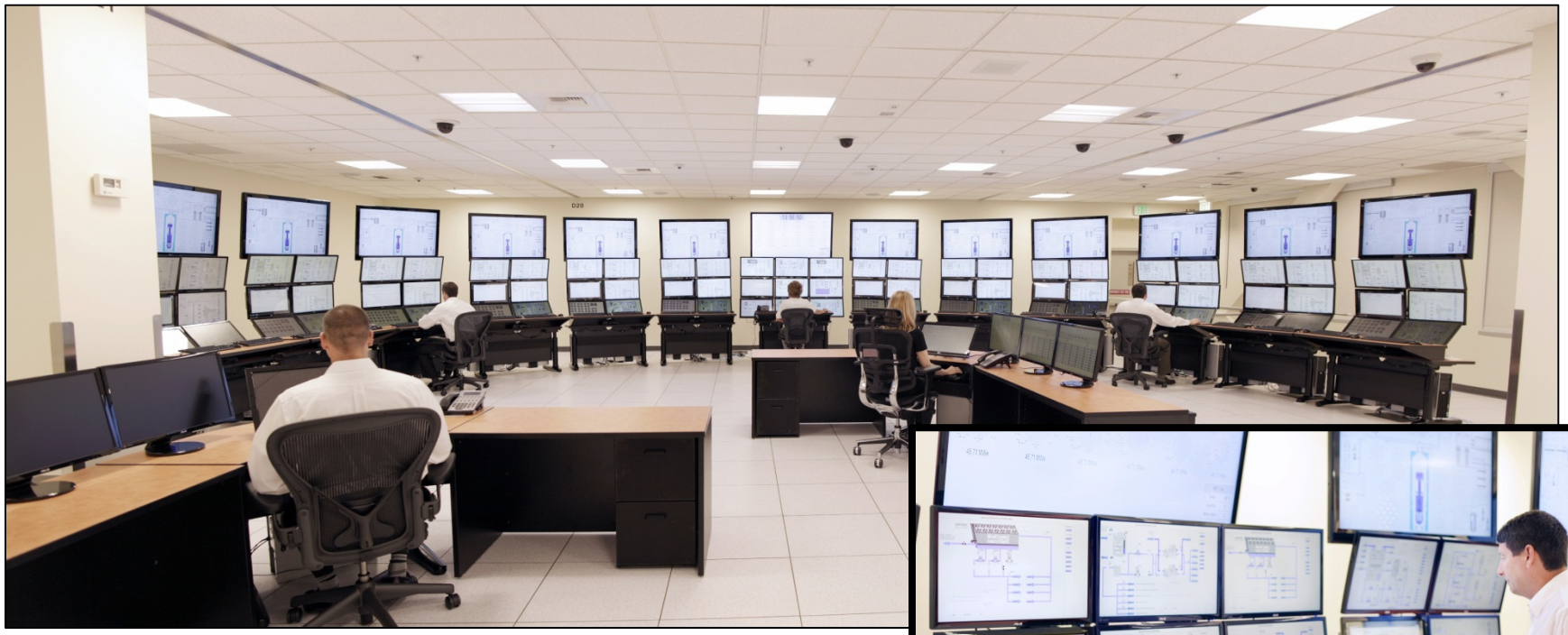
Full-Scale 12-module Control Room Simulator



- Displays and HFE studies in cooperation with INL
- Visited by NRC team in October 2012

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NuScale Announces Major Breakthrough in Safety

- NuScale design has achieved the “Triple Crown” for nuclear plant safety. The plant can safely shut-down and self-cool, indefinitely, with:
  - **No Operator Action**
  - **No AC or DC Power**
  - **No Additional Water**
- Safety valves align in their safest configuration on loss of all plant power.
- Details of the Alternate 1E Power System Fail-safe concept were presented to the NRC in December 2012.

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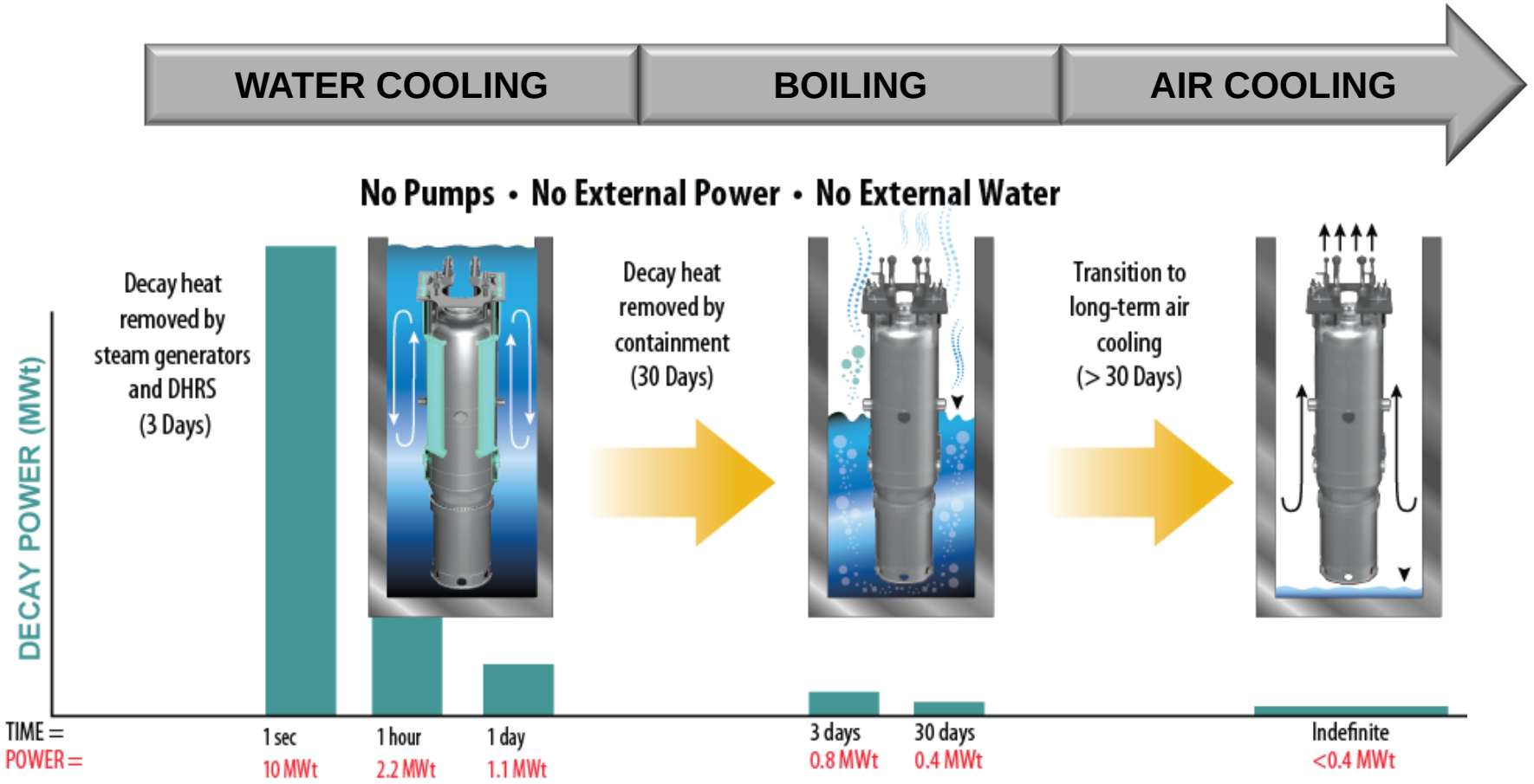
Innovative Advancements to Reactor Safety

Nuclear fuel cooled indefinitely without AC or DC power*



- ***30 days is a minimum based on very conservative estimates.***

Alternate 1E power system design eliminates the need for 1E qualified batteries to perform ESFAS protective functions – Patent Pending

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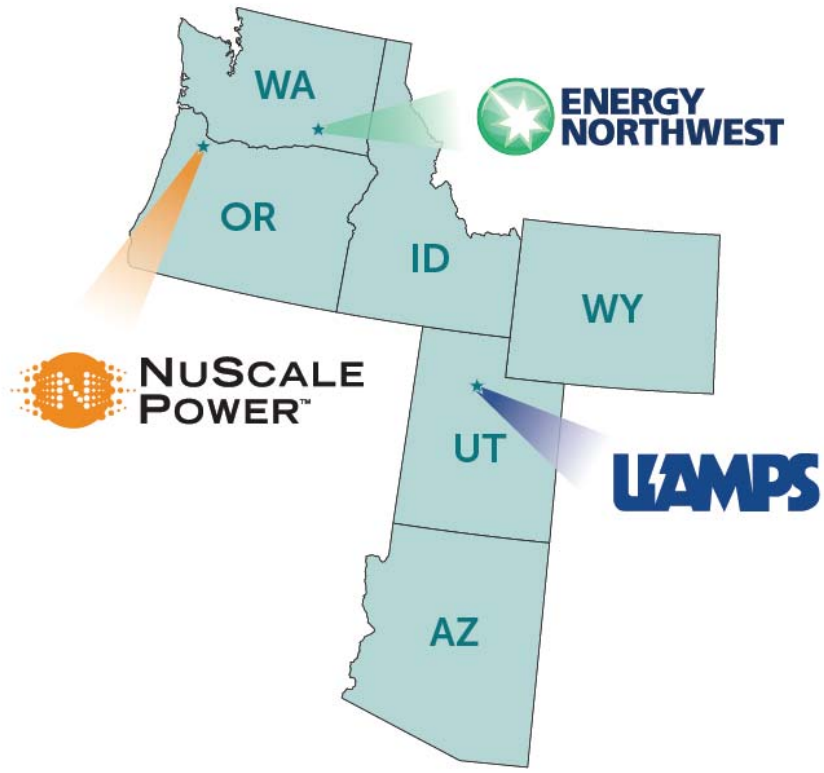
What Is Project WIN?

- Western Initiative for Nuclear (Project WIN) is an exclusive multi-western state collaboration to investigate the demonstration and deployment of an innovative SMR design developed by NuScale Power.
- Involved WIN participants: NuScale, UAMPS, Energy Northwest, ID, UT, OR, WA, WY, AZ

PROJECT WIN | Western Initiative for Nuclear



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DOE FOA Program

- FOA1 Awarded $150MM to B&W November 2012
- FOA2 Issued – March 11, 2013
  - Proposals Due – July 1, 2013
  - Target date for award announcement– Sept. 17, 2013
  - Award – Jan. 16, 2014
- Expected number of Awards – 1+
- Funding – up to $226M if a single award
- Revised FOA2 Criteria, Innovation, Fukushima Resistance, Licensability timeline

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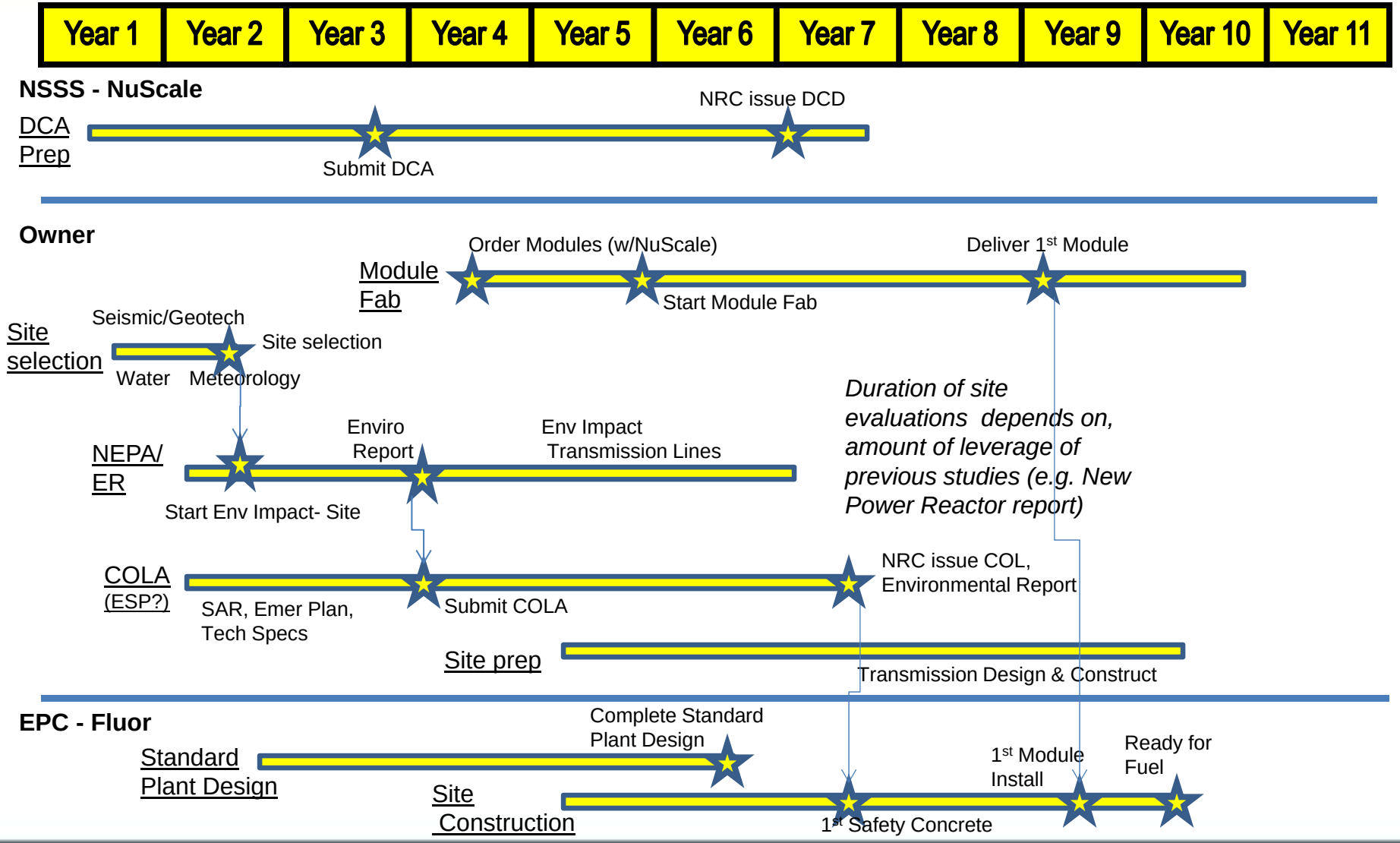
NuScale Project Timeline



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