"NuScale", emission-free & flexibility with safety & cost competitiveness

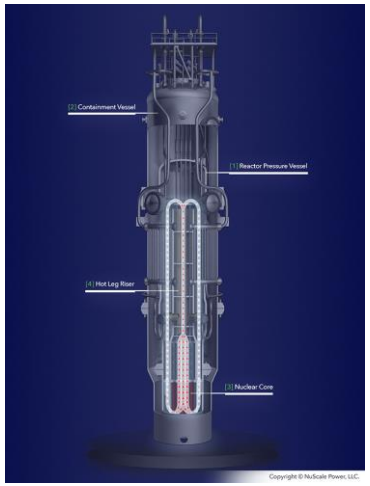
Organization
NuScale Power

Launched time
2015

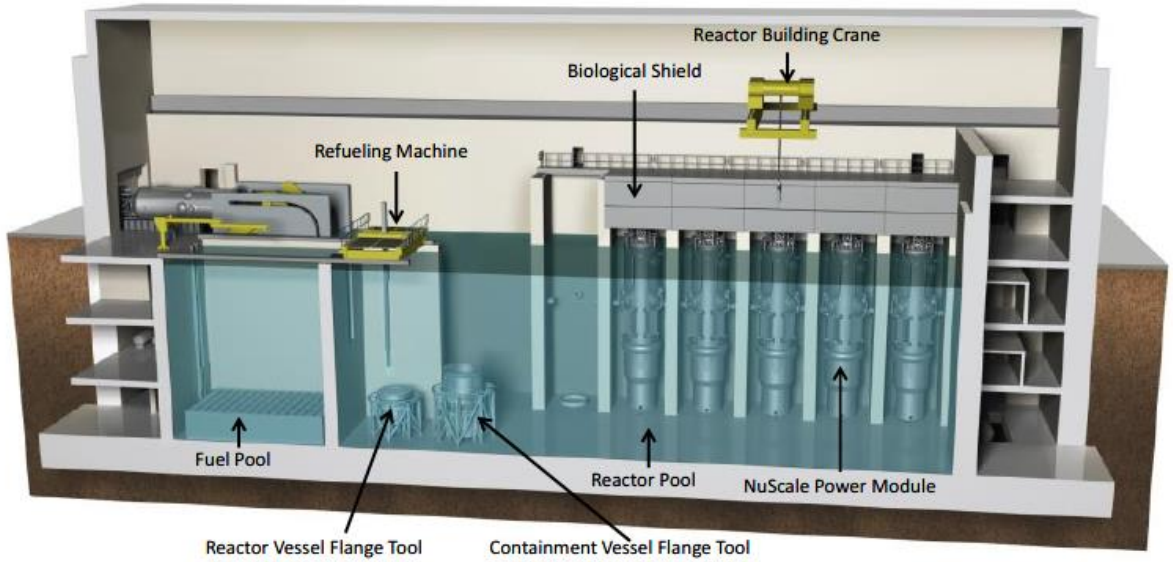
Overview

- NuScale is a small modular reactor (SMR) with 77MWe capacity for each reactor module. The modules can be incorporated in a multi-module nuclear power plant.
- The simple design eliminates reactor coolant pumps, large bore piping and other systems and components found in large conventional reactors.
- Modules safely shut down and self-cool, indefinitely, with no need for AC or DC power, operator or computer action, or additional water.

NuScale reactor module



12-Module NuScale reactor building houses



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Barriers on developing the innovation

- Since the Fukushima Daiichi nuclear disaster, the cost of constructing new nuclear power has increased and the social acceptance of nuclear power by citizens has declined.
- The investment risk of nuclear power has increased.

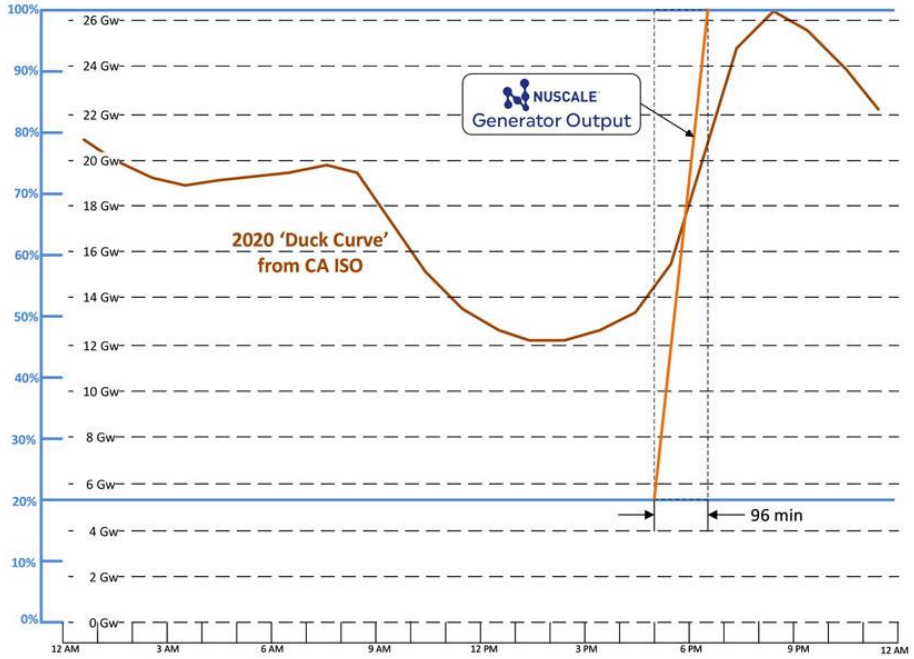
Success factors to overcome the above barriers

- NuScale has focused on nuclear safety even before the Fukushima accident and has led the development of SMR by passive safety system by utilizing innovative technologies such as helical coil steam generator.
- Thorough cost reduction by utilizing pre-fablication and commodity parts.
- NuScale has refined the flexibility of SMR that can be integrated with coal-fired alternative solutions and renewable energy.

Future action plan

- Planning to start operation in 2029 in the US "the Carbon Free Power Project" (CFPP)
- Developing projects globally such as in Canada.

"Duck Curve" of California and NuScale's ramp rate



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