

# Advanced Nuclear Technologies

Nuclear Energy Regulatory Forum  
Energy Regulators Regional Association

June 13, 2024

Marc Nichol, Executive Director, New Nuclear



# Advanced Nuclear Developers



# Types of Advanced Reactors

Range of sizes and features to meet diverse market needs

Micro Reactors  
< 50MWe



Oklo (shown)  
Approximately a dozen  
in development

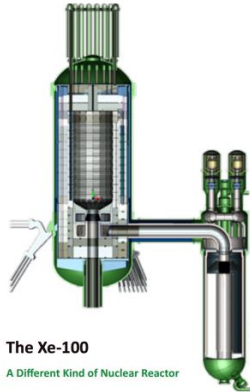
LWR SMRs  
<300MWe



NuScale (shown)  
GEH BWRX-300  
Holtec SMR-300

Westinghouse AP300

High Temp  
Gas Reactors



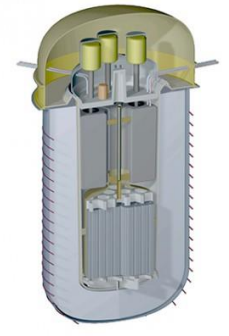
X-energy (shown)  
Several in development

Liquid Metal Reactors



TerraPower Natrium™  
(shown)  
Several in development

Molten Salt Reactors



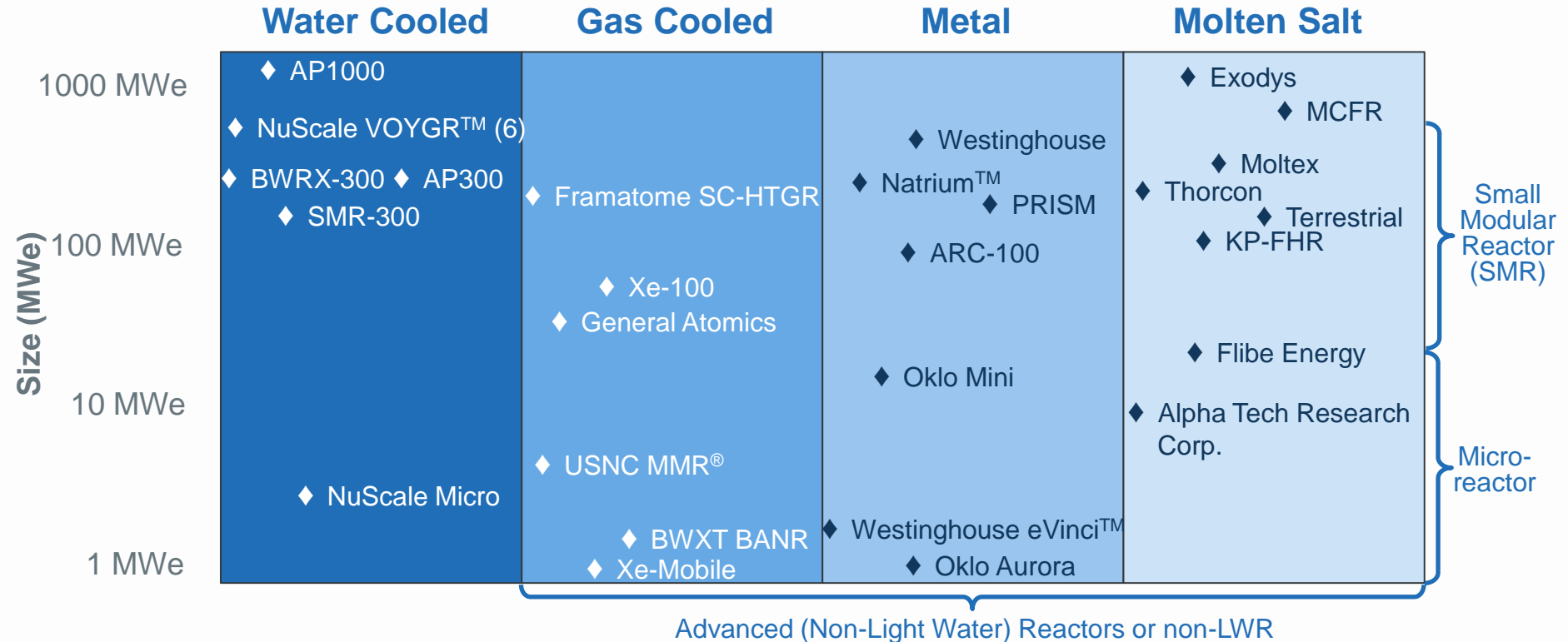
Terrestrial (shown)  
Several in development

Non-Water Cooled  
Most <300MWe, some as large as 1,000 MWe



Learn more about  
innovative technologies  
with the Nuclear  
Innovation Alliance.

# Advanced Nuclear Technologies\*



\* - partial list of technologies

# Advanced Reactor Licensing Progress

## Approved



## Under Review



## Pre-Application



**HITACHI**



**TERRESTRIAL**  
ENERGY



**HOLTEC**  
INTERNATIONAL



# Advanced Nuclear Deployment Plans

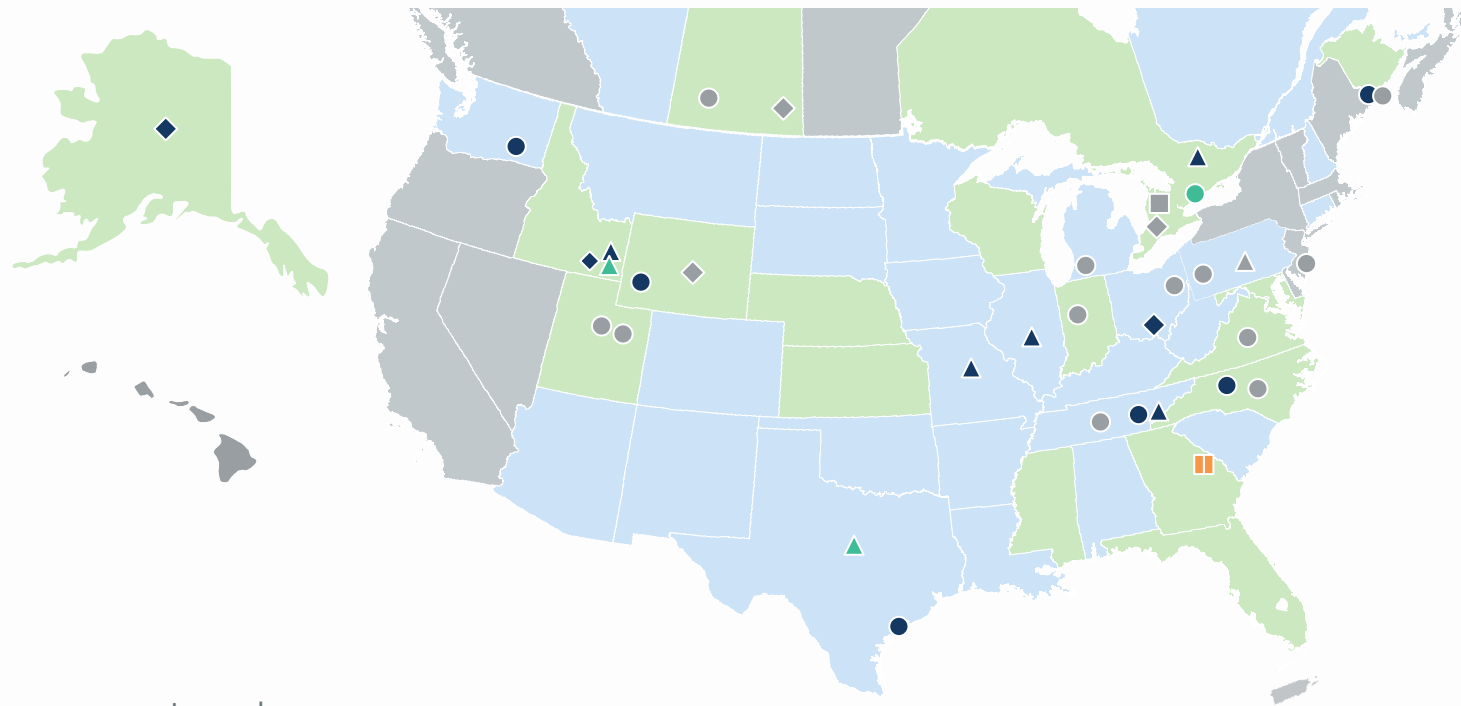
State support and projects that may be in operation by early 2030s



©2024 Nuclear Energy Institute

Updated 04/29/2024

Source: [NEI Website](#)



## Legend

- |  |  |                         |                              |
|--|--|-------------------------|------------------------------|
| State Actions – Substantive Incentives | State Actions – Supportive and Exploring |                         |                              |
| Considered project                     | Planned project                          | Under construction      | Operating                    |
| Large (1,000 MWe)                      | Small (<300 MWe)                         | Micro-reactor (<50 MWe) | University / Research / Test |