



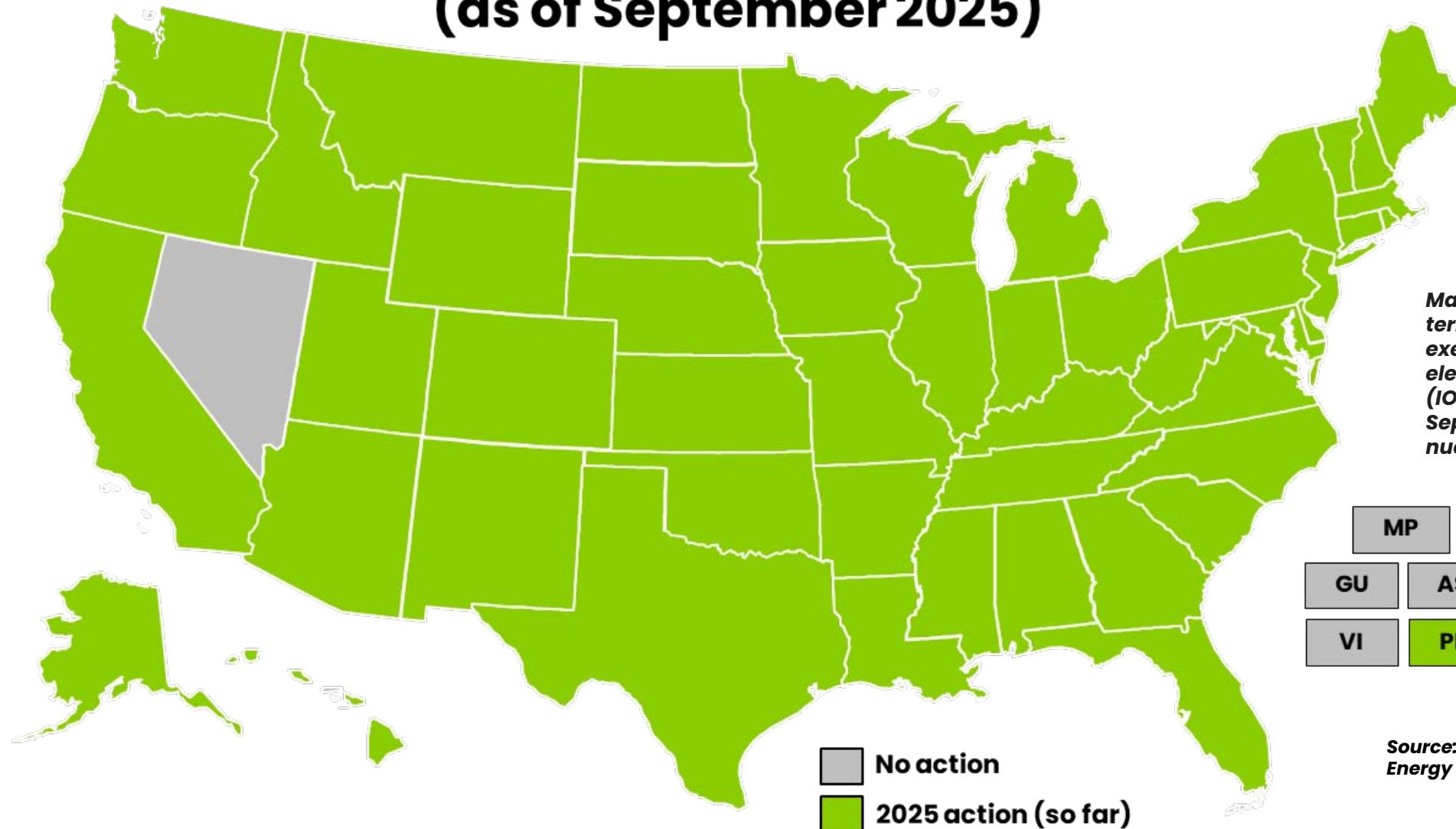
U.S. Advanced Nuclear Policy & Market Landscape: 2025 So Far

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**The Future of Nuclear Energy: Fleet Modernization,
Advanced Reactors, and Fusion**

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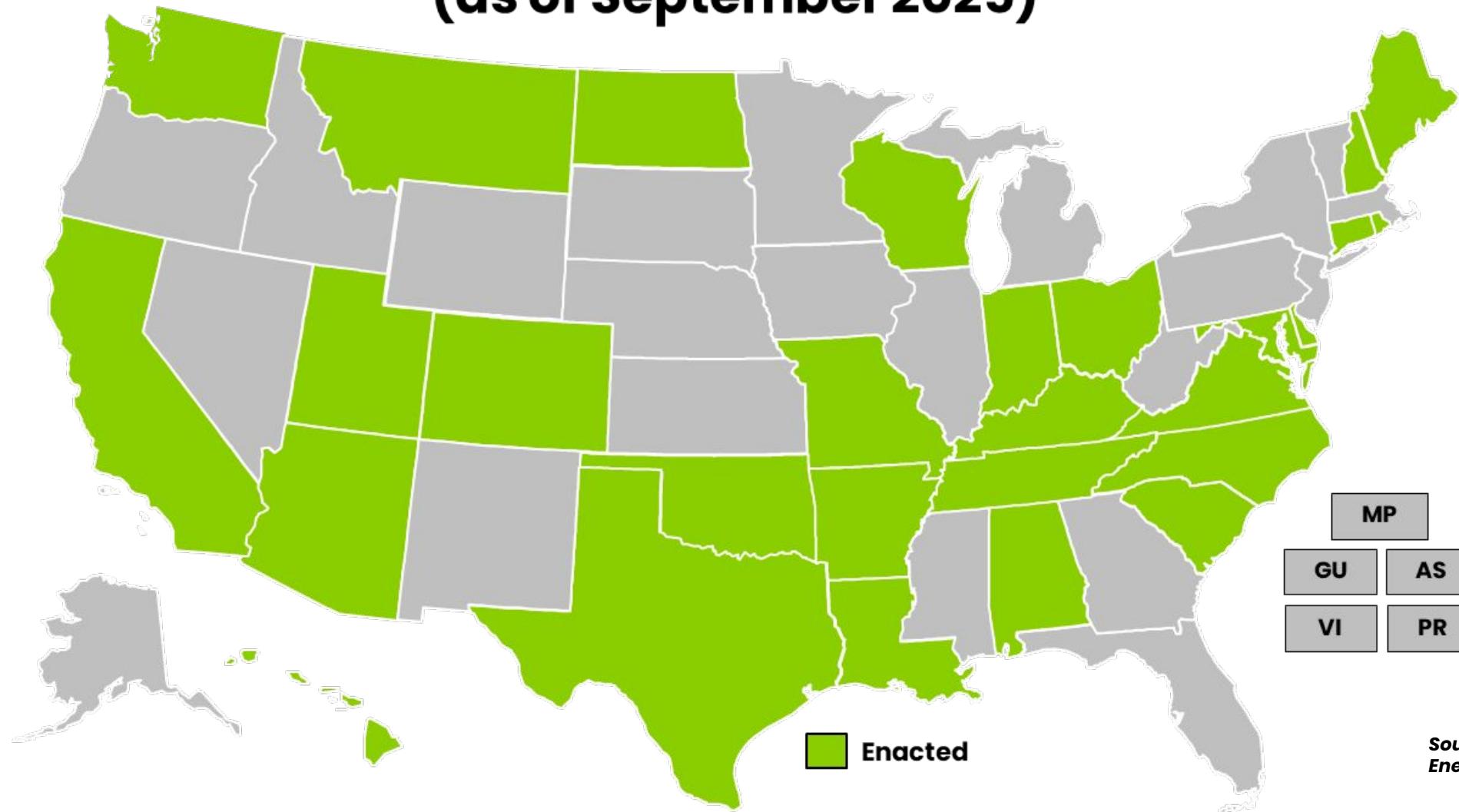
Advanced Nuclear Actions in 2025 (as of September 2025)



Source: Justin Lindemann; NC Clean Energy Technology Center

Advanced Nuclear Legislation in 2025 (as of September 2025)

Experience
POWER 



Source: Justin Lindemann; NC Clean Energy Technology Center

Federal Policy Trends



- Onshoring of the nuclear fuel supply chain, including a domestic advanced fuels market
- Streamline permitting and licensing for next-generation reactors and lifetime extensions
- Maintain and establish incentives for advanced nuclear development and demonstrations
- Support commercialization of emerging nuclear technologies not yet deployed at scale
- Expand international cooperation with existing and future civilian nuclear states

State Policy Trends

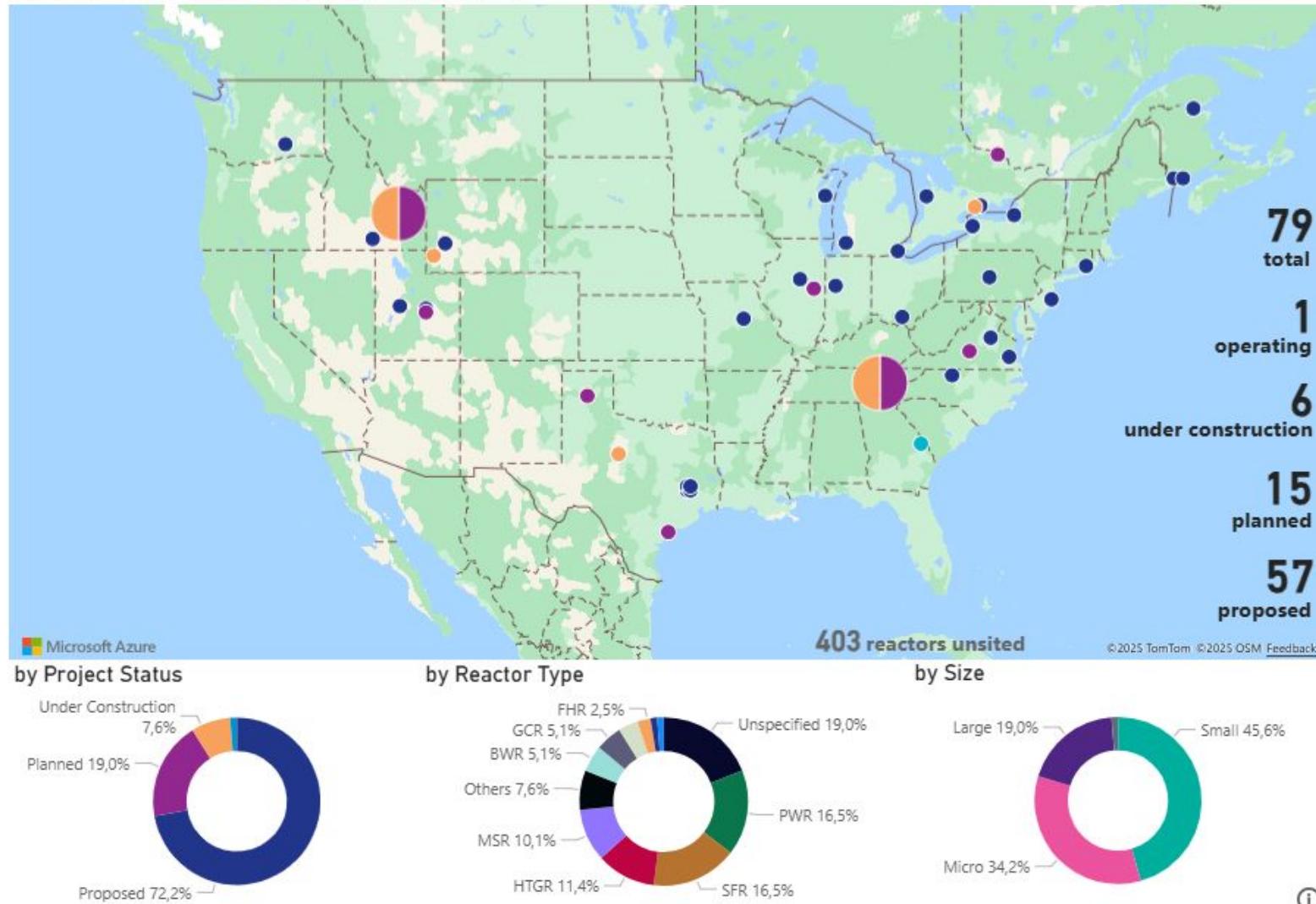


- States moving from just studying nuclear feasibility to nuclear procurement, development, and deployment
- Shifting away from moratoriums to exceptions and allowances
- Viewing nuclear as a potential resource for combatting projected large load growth and reducing rising bills
- Runway of incentives for early project development and workforce development
- Recommissioning becoming a reality to fill in gap of new nuclear projects

Current Projects in the Pipeline

Experience
POWER 

Status ● Proposed ● Planned ● Under Construction ● Operating



Notable Investments & Announcements

- **September 2025**
 - DOE Fuel Line Pilot Program (Sep 30): DOE selects Oklo, Terrestrial Energy, TRISO-X, and Valar Atomics to build advanced nuclear fuel lines, supporting goal of 3 reactors critical by July 4, 2026.
 - Oklo Aurora (Sep 22): Oklo breaks ground on first Aurora Powerhouse at INL with DOE support.
 - GLE Enrichment (Sep 16): Global Laser Enrichment completes large-scale enrichment demo in NC.
 - Fermi America AP1000 (Sep 8): NRC accepts license review for 4 AP1000s near Amarillo, TX.
- **August 2025**
 - Aalo-X Groundbreaking (Aug 28): Aalo Atomics starts building first Extra-Modular Reactor plant (10 MWe) at INL for data centers.
 - Google + TVA + Kairos (Aug 18): TVA signs first-ever PPA for Gen IV reactor (Hermes 2, 50 MWe) to power Google data centers in TN and AL. Operations expected 2030.
 - DOE Reactor Pilot (Aug 12): 11 companies selected (incl. Oklo, Aalo, Radiant, Valar, Terrestrial) to build test reactors by July 4, 2026.

Notable Investments & Announcements (cont.)

- **July 2025**
 - TVA Clinch River SMR (Jul 10): NRC accepts permit review for TVA's first SMR project.
 - TerraPower Natrium (Jul 2): NRC shortens permit review timeline (19 months). Decision expected Dec 2025.
- **June 2025**
 - TMI Restart (Jun 25): Constellation ahead of schedule to restart Three Mile Island Unit 1 (Crane Clean Energy Center) by 2027.
 - NY Advanced Nuclear (Jun 23): Gov. Hochul directs NYPA to develop a 1 GW advanced nuclear plant.
 - Talen + AWS PPA (Jun 11): 1,920 MW nuclear PPA through 2042, \$20B investment, SMR exploration.
- **Spring 2025**
 - NuScale (May 29): 77 MWe SMR design receives NRC approval.
 - TVA (May 20): First U.S. SMR construction permit application (Clinch River, BWRX-300).
 - Southern Co. (Apr 10): First U.S. plant loads next-gen fuel (6% enriched uranium, Vogtle 2).
 - Dow + X-energy (Mar 31): SMR construction permit submitted for Seadrift, TX.
 - Last Energy (Feb 28): Plans 30 microreactors in TX for data centers.
 - TerraPower + SDC (Jan 21): MOU to integrate Natrium plants with data centers.