

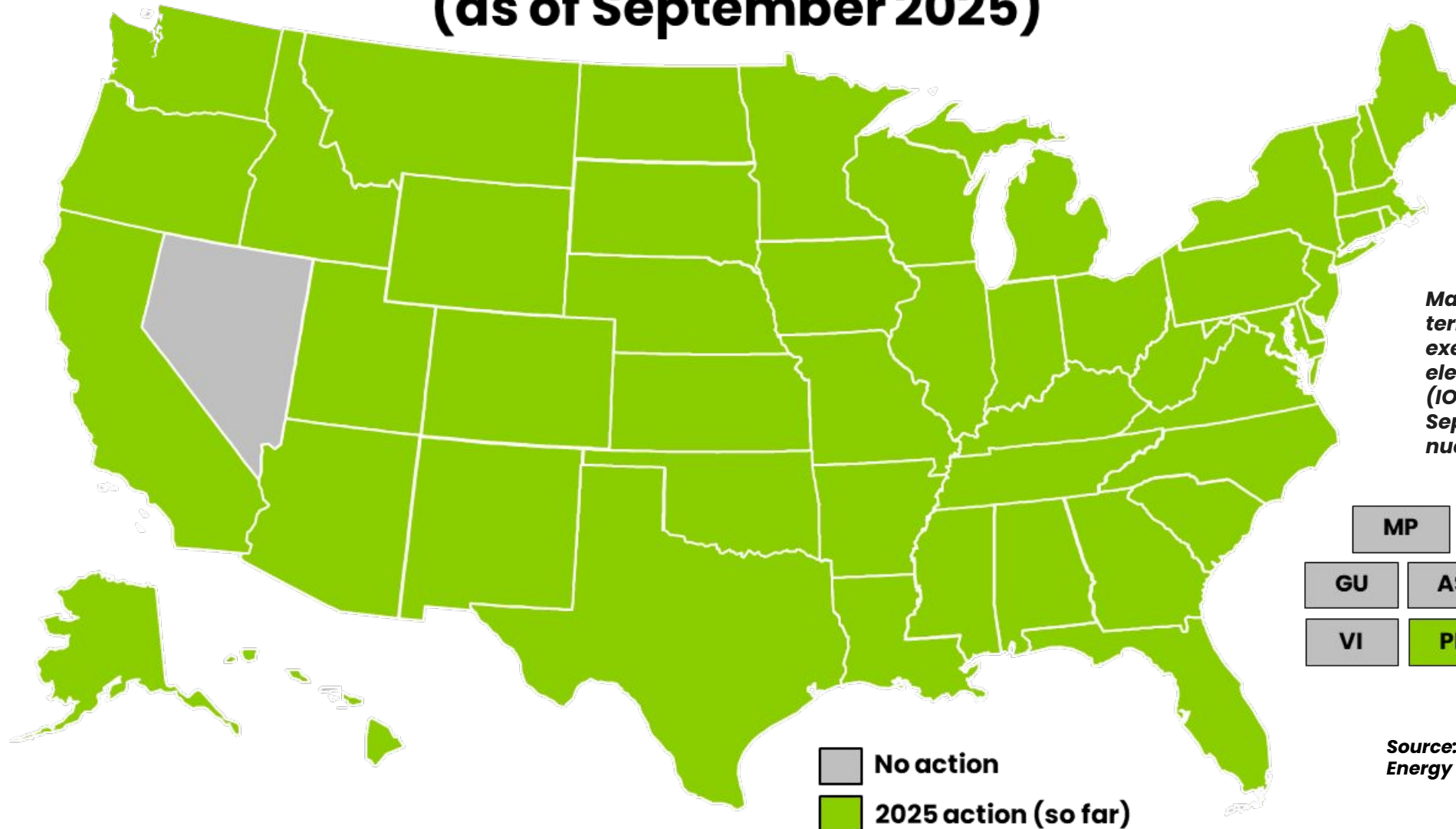
U.S. Advanced Nuclear Policy & Market Landscape: 2025 So Far

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

October 30, 2025

Advanced Nuclear Actions in 2025 (as of September 2025)

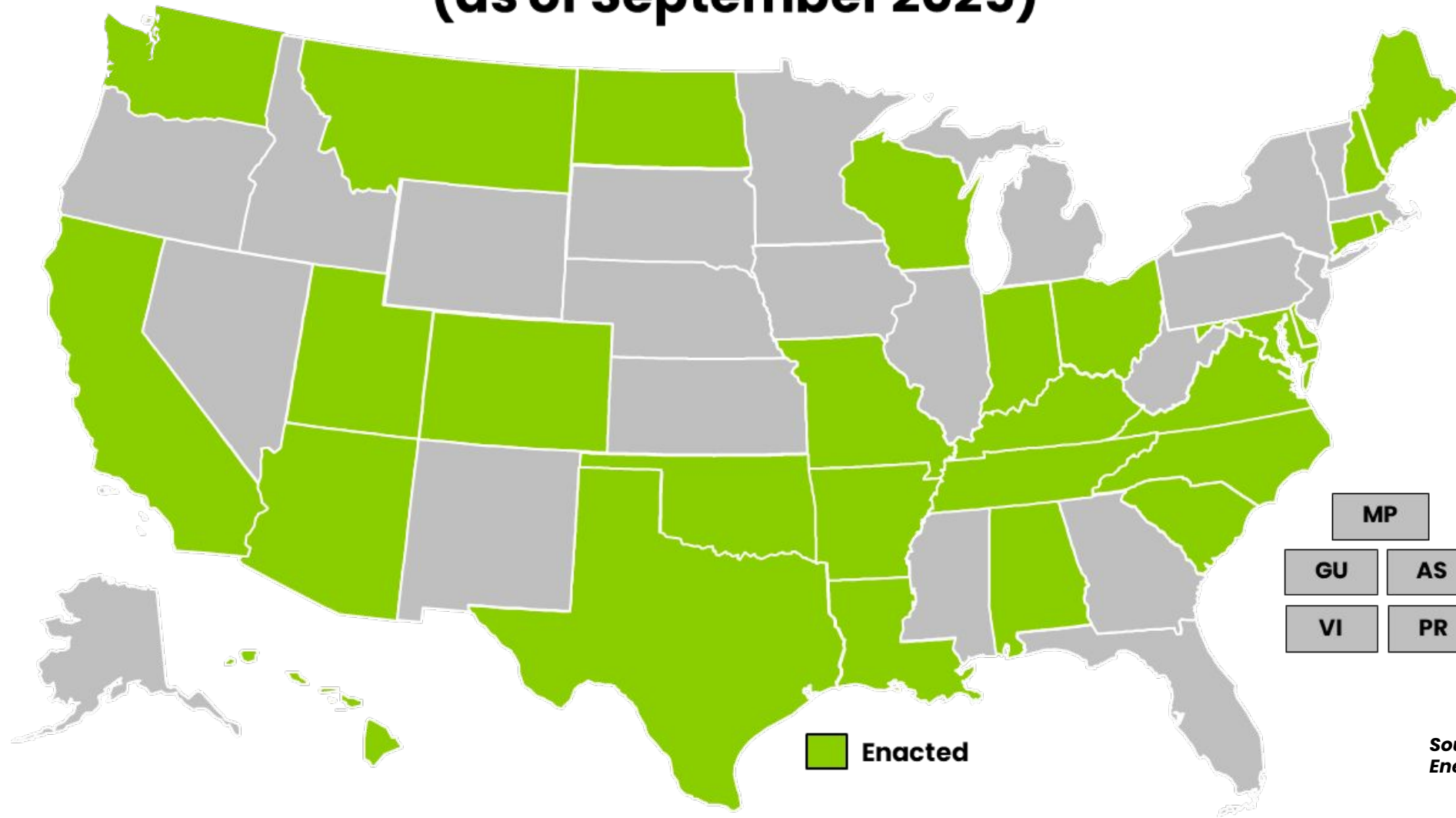


Map (left) of 50 states and U.S. territories with legislative, executive, regulatory, and electric investor-owned utility (IOUs) actions in 2025 as of September related to advanced nuclear technologies.

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Source: Justin Lindemann; NC Clean Energy Technology Center

Advanced Nuclear Legislation in 2025 (as of September 2025)



Map (left) of 28 states that enacted significant legislation in 2025 as of September, pertaining to advanced nuclear technologies.

Source: Justin Lindemann; NC Clean Energy Technology Center

Federal Policy Trends



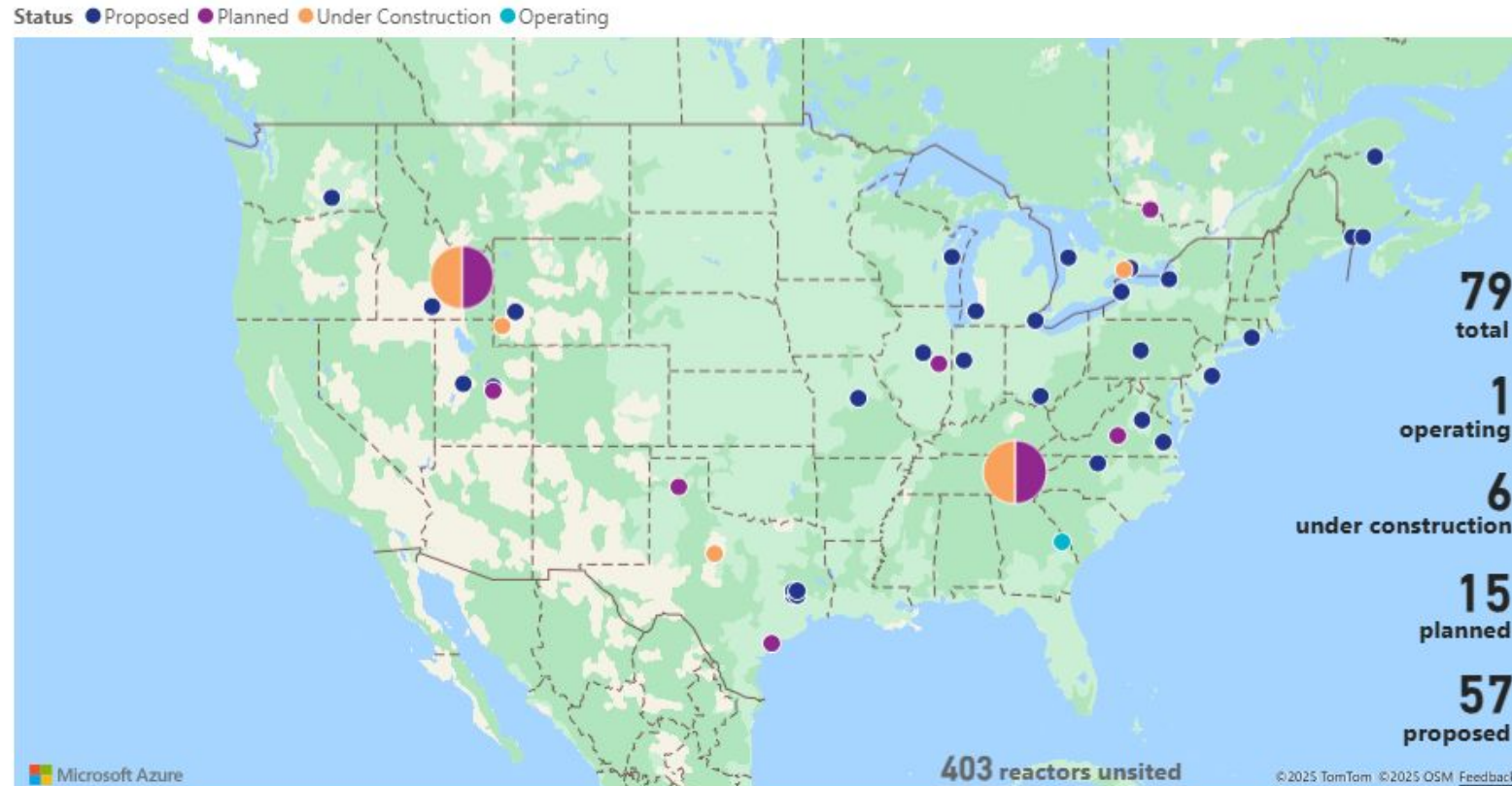
- Onshoring of the nuclear fuel supply chain, including a domestic advanced fuels market
- Streamline permitting and licensing for next-generation reactors and lifetime extensions
- Maintain and establish incentives for advanced nuclear development and demonstrations
- Support commercialization of emerging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

State Policy Trends

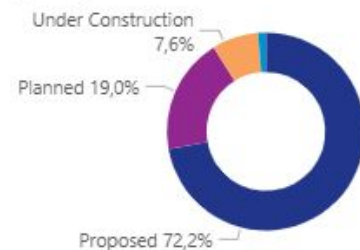


- States moving from just studying nuclear feasibility to nuclear procurement, development, and deployment
- Shifting away from moratoriums to exceptions and allowances
- Viewing nuclear as a potential resource for combatting projected large load growth and reducing rising bills
- Runway of incentives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

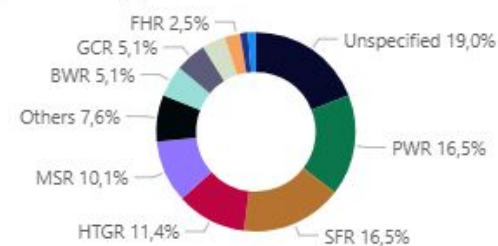
Current Projects in the Pipeline



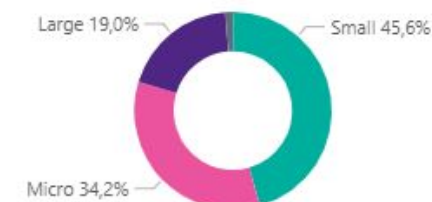
by Project Status



by Reactor Type



by Size



Source: Nuclear Energy Institute
(Aug. 2025)

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.