

States Use of U.S. State Energy Program Funds for Technology Innovation: Accelerating the Development of Advanced Nuclear

State Energy Offices utilize U.S. State Energy Program funds provided by Congress and administered by the U.S. Department of Energy (DOE) to support markets for innovative energy technologies, such as advanced nuclear. Advanced nuclear is a reliable, clean power source that we must use to meet increased power demand from data centers, manufacturing, and consumers. Over the past year, more than 30 states have identified opportunities to accelerate the construction of new nuclear power plants.

On February 5, 2025, a group of geographically diverse states established the Advanced Nuclear First Movers Initiative with support from the National Association of State Energy Officials (NASEO). The initiative is being led by four state co-chairs representing: Kentucky, Indiana, New York, and Wyoming, and participation by Louisiana, Maryland, Pennsylvania, Utah, Virginia, and West Virginia. The initiative will accelerate advanced nuclear project development by reducing financial and technology risks, devising supportive market adoption policies, defining supply chain needs, streamlining federal permitting, developing coordinated procurement options, exploring state-federal-private financing structures, and creating public-private partnerships. The initiative aims to reduce the cost of advanced nuclear projects and ultimately deliver more power to the electric grid using firm, clean power to ensure reliability, affordability, economic growth, and environmental sustainability.

Examples of additional work being done by the State Energy Offices to support advanced nuclear are described below. State Energy Offices work closely with their governors and state legislatures and typically utilize U.S. State Energy Program formula funds for these activities.

- The **Wyoming** Energy Authority, in June 2023, as part of the state's broader energy strategy, issued a strategic framework and roadmap for nuclear energy and industrial development. The Wyoming Energy Authority also offers Energy Matching Funds to support projects that will meet Wyoming's energy needs, significantly advance research or commercialization of projects, and demonstrate ability to successfully execute. In August 2023, the state awarded funds to BWXT Advanced Technologies to assess microreactor investment, applications and development of nuclear microreactor technologies and know-how in Wyoming.
- In January 2025, **New York** Governor Hochul announced plans to develop a Master Plan for Responsible Advanced Nuclear Development in New York. The New York State Energy Research and Development Authority (NYSERDA), working with the Department of Public Service and other State Agencies, will lead the development of the Master Plan. NYSERDA published a "Blueprint for Advanced Nuclear Energy Technologies" that sets out the scope of issues to be considered throughout the Master Plan process.
- On November 21, 2024, the **Tennessee** Nuclear Energy Advisory Council released its final report on advancing nuclear energy innovation in the state. The report outlines 19 recommendations addressing first-of-a-kind costs for small modular reactors, growing a strong supply chain, and coordinating and enhancing workforce development, regulatory responsiveness, and coalition building. The Tennessee Department of Environment and Conservation Office of Energy Programs supported the Council and report using SEP funds.
- The **Kentucky** Office of Energy Policy submitted the state "Nuclear Energy Development Working Group report" to the Kentucky Legislative Research Commission in 2023. The report, directed by Senate Joint Resolution 79, which facilitated the establishment of a state Nuclear Energy Development Working Group that would identify barriers to nuclear energy

use in Kentucky and consult stakeholders to develop recommendations for a permanent nuclear energy commission. The barriers identified by the Working Group covered regulatory, policy, financial, social, environmental, workforce and education, safety, and security and weapons proliferation issues but none are considered insurmountable. The report also outlines the potential formation of the Kentucky Nuclear Energy Development Authority. The report was made possible with State Energy Program funds.

- In 2024, the **Indiana** Office of Energy Development released a report prepared by Purdue University on “Small Modular Reactor (SMR) Technology and Its Impact on Indiana,” developed using State Energy Program funds. Recommendations outlined in the report included the importance of Indiana conducting feasibility studies, building partnerships, and prioritizing stakeholder engagement to ensure SMRs can integrate efficiently into the state’s energy portfolio. The report recommended the state develop educational resources, review existing state requirements, investigate incentives, explore supply chain resources, and opportunities to derisk construction particularly at existing coal plants.
- The **Maryland** Energy Administration funded a “Feasibility Assessment and Economic Evaluation: Repurposing a Coal Power Plant Site to Deploy an Advanced Small Modular Reactor Power Plant.” The study helped determine the feasibility and economic impact of siting a four-unit Xe-100 small modular nuclear reactor at an existing coal generation facility.
- The **Utah** Office of Energy Development (OED) undertook a multi-part “Strategic Nuclear Energy Pathway” effort. The first installment in this series identified initial steps the state could take to prepare for Utah’s first nuclear reactor. OED cited reasons for the Office’s involvement in this strategy, mainly alignment with Utah’s all-of-the-above energy policy and consistency with Utah’s energy priorities, established by the state legislature, including adequacy, reliability, dispatchability, affordability, sustainability, security, and cleanliness.
- In January 2021, the **Virginia** Nuclear Energy Consortium released a “Virginia is Nuclear Strategic Plan” in coordination with the State Energy Office and other state agencies.