

March 4, 2021

Light-water small modular reactor (SMR) technology is rapidly approaching the first commercial deployments in the U.S., and is seeing significant interest internationally. There are three U.S. SMR designs that have plans for first domestic commercial deployments before 2030 and agreements with potential international customers to explore near-term deployments. Light-water SMRs are capable of achieving the near-term scale needed to significantly reduce carbon emissions by 2035, leveraging the existing fuel and supply chain infrastructure. The U.S. will need all three designs commercially demonstrated to meet the expected demand domestically and abroad.

Private-Public Partnerships (PPPs) have been used successfully in the past to bring innovative and transformational technologies to market. For SMRs, these PPPs will address unique first-of-a-kind costs that enable customer commitments, and second mover incentives will lead to efficiencies that make SMRs cost competitive with other technologies.

Implementation of the following legislative priorities will enable the nation to meet its energy, environmental, economic and national security goals.

1. **First SMR Deployment Partnerships (Appropriations)** – Private-public partnerships through cost-share agreements are needed to support first-of-a-kind deployments of the U.S. SMR designs. This DOE funding would reduce the economic, technical and regulatory barriers for designs that utilities can plan on, with greater confidence in broad deployments. Funding of \$350M is needed in FY2022 for continued and additional support to fund light-water SMR projects, with forward funding carry-over, and which would be available for multi-year awards without a per-project funding cap.
2. **Clean Nuclear Energy Value Recognition (Authorization)** – Where policies targeting greenhouse gas reductions exist, they should be technology-neutral and should not undermine grid resilience. The renewable energy targets in the Energy Policy Act of 2005, Energy Independence and Security Act of 2007, and DoD's goal of 25% renewable energy by 2025 (10 U.S.C. §2911) should be changed to technology-neutral clean energy standards that include nuclear energy and level the playing field.
3. **Production and Investment Tax Credits (Authorization)** - A nuclear production tax credit (PTC) was established by the Energy Policy Act of 2005, and amended in 2018, for new nuclear generating capacity. The nuclear production tax credit requires additional changes to bring it on par with production tax credits for other generating sources. The value of the nuclear production tax credit should be increased to at least \$28/MWh and escalated with inflation so that it is commensurate with the need to incentivize new nuclear deployment. The duration of the PTC should be increased to 10 years, and the lifetime capacity should be increased to at least 25,000 megawatts to account for the development of SMRs and other advanced reactors. Although there is not currently a nuclear investment tax credit, ITCs are available for other energy sources. An ITC should be made available as an option for SMRs and other nuclear plants that would either not qualify for a PTC, or whose project structure would be more conducive to utilizing an ITC, and to incentivize investment in the U.S. SMR supply chain.

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4. **Master Limited Partnerships (Authorization)** – Fair taxation of investors in nuclear energy will incentivize and result in an increase in private investment toward the deployment of SMRs. The provisions of the tax code for Master Limited Partnerships to assure the fair taxation of project participants should be expanded beyond the currently qualifying generation technologies to include nuclear energy. Legislation (2020: S. 1841 and H.R. 3249) expanded the tax provisions to other zero carbon energy, but unnecessarily excluded nuclear energy.
5. **Power Purchase Agreements (Authorization)** – Enact federal legislation that enhances the Federal Power Purchase Agreement (PPA) authorities to provide Federal agencies the ability to enter into long-term Utility Service Agreements of up to 40 years, and establish a PPA pilot program. Assess the impact to the federal budget annually instead of the entire PPA value being “scored” in the year the PPA is entered, and the impact of costs to the Federal entity entering into the PPA. The PPAs should have a mechanism to allow the Department of Energy (DOE), Department of Defense (DoD) and other agencies to provide compensation to SMR plants that supply resilient, highly reliable electricity to mission critical facilities to meet national security needs, or other services, such as demonstration of process heat, hydrogen production, and desalination.
6. **Innovative Supply Chain Manufacturing (Appropriations)** - DOE support to innovate the SMR supply chain is needed to reduce manufacturing risks for SMRs and other advanced reactors, and would create U.S. jobs to manufacture SMR components for domestic deployments and for export to supply international deployments. This effort would support the domestic manufacturing of innovative first-of-a-kind components during the licensing phase to demonstrate advanced manufacturing techniques and allow fabrication of commercial units to occur at lower costs and in a compressed delivery schedule by incorporating lessons learned. This includes the demonstration of closing Inspections and Tests at the factory. This would also support the incorporation of advanced manufacturing methods in the SMR supply chain, including acceptance by the Nuclear Regulatory Commission and Codes and Standards organizations. Funding of \$30M is needed in FY2021, in addition to funding already provided for advanced manufacturing under the Nuclear Energy Enabling Technologies and Transformational Challenge Reactor programs.

Other legislative principles, such as the continuation of the Loan Guarantee Program, from SMR Start's [Policy Statement](#) that are authorized and available are also important to SMR deployment and should be continued.