



March 25, 2020

Representative Eddie Bernice Johnson

Chairman, House Committee on Science, Space,
and Technology
2306 Rayburn House Office Building
Washington, DC 20515

Representative Frank Lucas

Ranking Member, House Committee on Science,
Space, and Technology
2405 Rayburn House Office Building
Washington, DC 20515

Representative Conor Lamb

1224 Longworth House Office Building
Washington, DC 20515

Representative Dan Newhouse

1414 Longworth House Office Building
Washington, DC 20515

Subject: Support for HR.6097 the *Nuclear Energy Research and Development Act*

Dear Representatives Johnson, Lucas, Lamb and Newhouse:

SMR Start is an industry organization of potential customers and vendors working toward the deployment of light-water Small Modular Reactors (SMRs). We believe that this technology offers important and unique benefits in generating reliable, safe, and affordable carbon-free electricity. Our goal is to ensure that SMRs are a cost-competitive option in the future, with the first units operating in the 2020s.

We thank you for introducing HR.6097, the *Nuclear Energy Research and Development (NERD) Act*. We believe that this legislation is helpful to the success of SMRs and other advanced nuclear technologies.

Authorizing and funding an Advanced Nuclear Reactor Research, Development, and Demonstration Program would help to accelerate the demonstration of SMRs and other advanced reactors. This provides the longer-term authorizing legislation to work in conjunction with the Advanced Reactor Demonstration Program Appropriations legislation enacted in the FY2020 budget for the Department of Energy, Office of Nuclear Energy. Authorizing and funding research, development and demonstration of hybrid energy systems will enable these reactors to be more flexible and better meet the market's energy needs. These are an important subset of the legislative needs for SMRs that have been identified by SMR Start in the attached *Legislative Priorities for FY2021*. The benefit to the government, for enacting legislation that supports the deployment of advanced reactors, is the availability of new generation technologies that can provide advantages over conventional technologies. Energy resilience in particular is a critical need for many government facilities, and the pilot program will help foster the deployment of advanced reactors capable of meeting these resilience needs.

SMRs feature the ability to provide highly resilient power to Federal facilities with national security and mission critical activities. SMRs are designed to operate 24/7 365 days a year with unparalleled reliability, to withstand severe natural events, such as earthquakes and hurricanes, and to continue providing power even when the grid goes down. SMRs also offer the ability to better match new generation capacity with electric demand growth, enhance grid reliability through load following in areas with high penetration of intermittent renewables, and the ability to be deployed in diverse applications, such as the cogeneration of heat and electricity, desalination, and the generation of hydrogen.



Provisions in the NERD Act that support fuel cycle research and development, while not essential for SMRs, are important for the deployment of other advanced reactor technologies. While SMRs are the advanced reactor technology that is closest to deployment, we also support the deployment of other advanced reactor technologies as they continue to mature. SMRs not only serve an important role as a near-term deployment option, but they will continue to be an important nuclear technology even after other advanced reactors enter the market. Further, the success of SMRs is necessary to the success of other advanced nuclear technologies.

Rapid development of U.S. SMR technology is also needed to reestablish the U.S. as a world leader in advanced nuclear technology and strengthen national security. The U.S. has historically been a leader in nuclear technology, driving exports of reactors around the world, leading to strong domestic job creation and close relationships with host countries. Sadly, U.S. policies regarding nuclear energy over the past few decades have led to an erosion of U.S. nuclear leadership and commercial competitiveness. Today China and Russia are supplying 65% of the reactors planned or under construction around the world, compared to 7% by the U.S. This bill helps to put us on the path to reclaiming that mantle of leadership.

We support HR.6097, the *Nuclear Energy Research and Development Act*. Time is of the essence and we encourage the Senate and House to pass supportive legislation without delay.

We would be happy to discuss this topic further.

Sincerely,

A handwritten signature in blue ink that reads "Gregory V. Cullen".

Greg Cullen
Spokesperson, SMR Start

Attachment

cc

House Science, Space, and Technology, Energy Subcommittee Members

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In order to supplement the considerable private investment and achieve the benefits of light-water small modular reactor (SMR) technology, Congress should authorize and appropriate sufficient funds in FY2021 and beyond to implement the following private-public partnerships and other federal government actions that are instrumental in facilitating the successful domestic commercialization and export of U.S. SMRs.

1. **Power Purchase Agreements (Authorization)** – Enact the Nuclear Energy Leadership Act (S.903 and HR.3306) provisions that enhance 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.
2. **Investment Tax Credits (Authorization)** – Investment Tax Credits (ITCs) can spur new infrastructure investment leading to the creation of jobs and the broader economic development. While other energy sources, such as renewables, enjoy the benefits of ITCs, there does not exist an ITC for nuclear energy. A nuclear ITC should be established to incentivize investment in the U.S. SMR supply chain, and should be an option for nuclear energy plants, including new SMRs.
3. **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.
4. **Advanced Technology R&D Private-Public Partnerships (Appropriations)** – Private-public partnerships through cost-share agreements are needed to support technical, first-of-a-kind engineering and design and regulatory development of SMRs and other next generation advanced reactors. This DOE program would reduce the economic, technical and regulatory barriers to efficient, timely, and cost-effective deployment of new technology. Funding of \$100M is needed in FY2021 for the light-water SMR portion of this program, which would be available for multi-year awards without a per-project funding cap.
5. **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. This effort would support the manufacturing of innovative first-of-a-kind components during the licensing phase to demonstrate advanced manufacturing techniques and allow

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- 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.
6. **Technology Deployment (Appropriations)** – DOE and the National Laboratories should support initial commercial plant deployments through the lease or purchase of one or more light-water SMR reactor modules that would enable joint use to demonstrate applications such as load-following, resilient micro-grids, and hybrid energy systems.

Other legislative principles from SMR Start's [Policy Statement](#) that are authorized and available are also important to SMR deployment and should be continued (e.g., Production Tax Credits, Loan Guarantees).