United States Senate

WASHINGTON, DC 20510

May 10, 2024

Senator Patty Murray Chair Subcommittee on Energy and Water Development Senate Committee on Appropriations 188 Dirksen Senate Office Building Washington, DC 20510 Senator John Kennedy Ranking Member Subcommittee on Energy and Water Development Senate Committee on Appropriations 188 Dirksen Senate Office Building Washington, DC 20510

Dear Chair Murray and Ranking Member Kennedy,

As you begin work on the Fiscal Year (FY) 2025 Energy and Water Appropriations bill, we write to express our strong support for robust and sustained funding for the Department of Energy (DOE) Office of Science.

As the nation's primary sponsor of research in the physical sciences, the DOE Office of Science drives our national mission to deliver scientific discoveries and tools that transform our understanding of the world. The research supported by this office is critical to maintain U.S. competitiveness and security; drive innovation that creates jobs and bolsters our economy; and train a highly-skilled science and technology workforce.

The DOE Office of Science built and maintains a collection of 28 large-scale, cuttingedge, user facilities relied on by more than 36,000 researchers annually. Nearly half of these users are university faculty and students from all 50 states. Others come from industry, and many are conducting research for other key federal science agencies, such as the National Institutes of Health, the National Science Foundation, and the Department of Defense. Without these critical facilities, thousands of users would be forced to move their job-creating research activities overseas or terminate their research altogether. The Office of Science also is unique among federal science agencies, as it supports the network of 17 DOE national laboratories—a competitive advantage for the nation's research and innovation ecosystem—and directly stewards 10 of them.

The DOE Office of Science also supports a workforce of more than 22,000 research scientists, engineers, and support personnel who work to solve some of the nation's greatest challenges. It plays a unique and critical role in the education of the next generation of American scientists, including thousands of graduate students and postdoctoral researchers at hundreds of institutions who depend upon DOE Office of Science support and facilities for their research and training. This collection of research, facilities, and scientific talent enables the DOE Office of Science to contribute greatly to our quality of life, health, and security. The DOE Office of Science has been integral to the development of countless innovative technologies, including MRI machines and PET scans; new composite materials for military hardware and motor vehicles; medical and industrial isotopes; drop-in biofuel technologies; DNA sequencing technologies; more aerodynamic and fuel efficient long-haul trucks; electric vehicle battery technology; an artificial retina; newer and safer nuclear reactor designs; tools to manufacture

nanomaterials; better sensors and detectors for biological, chemical, and radioactive materials; and more. The DOE Office of Science's long-standing leadership in high performance computing has enabled innumerable scientific discoveries, with the promise of even greater discoveries as its advanced computing capacity continues to grow. And in high-energy physics, the Office of Science is pioneering breakthroughs on dark matter, neutrinos, and the other fundamental particles that inform our understanding of the universe.

Looking ahead, research supported by the DOE Office of Science will form the foundation of advanced energy technologies. Developing energy systems that meet our security, economic, and environmental challenges will require robust investment in fundamental research. The DOE Office of Science works at the forefront of energy storage; negative emission technologies; advanced nuclear, hydrogen, fusion, and renewable energy; carbon capture, storage and utilization; and next-generation fuels. These technologies constitute major pillars of local and regional economies and will serve as the foundation for a just transition to a cleaner, more secure energy system.

The Office of Science also leads on critical industries of the future, including quantum information science, artificial intelligence, high performance computing, microelectronics, advanced communications networks, and biotechnology. Continued innovation and jobs of the future depend on the Office of Science's ability to maintain U.S. leadership in these critical areas. As other countries invest significantly in science and technology, and specifically in the physical sciences, it is more important than ever to increase funding for the Office of Science.

Investing in the DOE Office of Science will preserve our capacity to innovate, reduce our dependence on foreign sources of energy, enhance our competitive edge in the global economy, ensure our national security, and create good American jobs well into the future. We urge you to make strong and sustained funding for the DOE Office of Science one of your highest priorities in FY 2025.

Sincerely,

Richard J. Durbin United States Senator

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Mike Rounds United States Senator

Tammy Direkwath

Tammy Duckworth United States Senator

Maria Cantwell United States Senator

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