ENERGY SCIENCES COALITION

December 24, 2025

Dear Chairman Kennedy, Chairwoman Murray, Chairman Fleischmann, and Ranking Member Kaptur,

Thank you for your strong, bipartisan support of the U.S. Department of Energy (DOE) Office of Science. **As you prepare a final fiscal year (FY) 2026 Energy and Water appropriations bill, the Energy Sciences Coalition (ESC) urges you to appropriate at least $8.6 billion in FY 2026 for the DOE Office of Science.** This level of funding would be consistent with the House mark and the use of $250 million in prior year balances in the Senate mark**.** If additional funding becomes available, ESC recommends that Congress provide up to $900 million in additional funding to increase total appropriations in FY 2026 for the DOE Office of Science to $9.5 billion, consistent with the FY 2024 authorized funding level in the bipartisan *CHIPS and Science Act*. **Once the core science and infrastructure needs of the Office of Science are met, ESC also supports up to $5 billion in supplemental funding to advance critical DOE initiatives in artificial intelligence (the Genesis Mission), quantum information science, fusion, and microelectronics.**

The DOE Office of Science, the nation's largest funder of the physical sciences, has long enjoyed widespread and bipartisan support in Congress. It supports groundbreaking scientific discoveries, builds and maintains the nation's largest collection of world-class scientific facilities, advances key emerging technologies such as artificial intelligence and quantum information science, is mission-focused on advancing energy technologies for affordable and reliable power, and helps maintain the U.S. pipeline of science and engineering talent. The Office of Science is also unique among federal science agencies by supporting the network of 17 DOE national laboratories—a competitive advantage for the nation's research and innovation ecosystem—and directly stewards 10 of them.

Specifically, ESC appreciates the House and Senate rejecting steep cuts to Office of Science programs proposed in the FY 2026 budget request. Instead, the House and Senate bills overall provide stability of funding across Office of Science programs and activities, such as:

- support for **fundamental research** programs across the physical sciences and targeted initiatives in **emerging technologies** such as artificial intelligence, quantum information science, microelectronics, and fusion;
- mostly funding **major research facility construction and national lab infrastructure modernization projects** consistent with current cost and schedule profiles to stay ahead of international competition and address major maintenance issues;
- maintaining stable **operations** funding of the 28 Office of Science research facilities to provide access and experimental support to more than 38,000 researchers each year; and

- continuing support for **multi-disciplinary centers** focused on addressing scientific grand challenges, such as Energy Frontier Research Centers, Bioenergy Research Centers, Energy Innovation Hubs, National Quantum Information Science Research Centers, Fusion Innovation Research Engine collaboratives, and Inertial Fusion Energy Science and Technology Accelerated Research Hubs.

ESC appreciates these continued investments. However, we remain concerned about funding shortfalls in both the House and Senate bills. These shortfalls can only be addressed with additional resources. If additional funding becomes available, ESC has several major recommendations:

- **Reverse cuts to fundamental research that supports Nobel Prize-winning discoveries and drives innovation in energy solutions and emerging technologies.** Overall, core research has declined by 8.4 percent over the last two fiscal years. Depending on final distribution of funds for cross-cutting programs in AI and quantum, core research may be cut further in FY 2026. ESC is concerned with reductions in critical research disciplines including materials, chemistry, geosciences, biological sciences, earth and environmental systems sciences, particle physics and nuclear physics. ESC is particularly concerned about proposed cuts in the House and Senate bills for earth and environmental systems science, which has provided critical tools to federal, state, and local decision-makers to predict and help mitigate extreme weather events, including for electric grid reliability and resilience. The U.S. should remain a world-leader in ultra-high resolution Earth system models that use AI tools and combine studies of atmospheric physics and chemistry, ecosystem ecology and biogeochemistry to help plan the deployment of energy technologies and infrastructure to withstand future extreme weather threats. The U.S. risks falling behind if cuts continue to research programs that serve as the scientific foundations for innovations in clean energy and emerging technologies. More concerning is that these cuts translate into less support for U.S. researchers and students in STEM fields. The U.S. needs to grow, not shrink, its workforce. Consistent with the *CHIPS and Science Act*, ESC recommends an increase of 7 percent to all core research programs, or an additional $287 million above the House and Senate marks. This level of funding would start to reverse cuts or flat funding for core research in most programs and advance the highest priority research areas outlined in Office of Science advisory committee reports, strategic plans, and workshop reports.
- **Maximize facility operations.** ESC strongly supports maintaining facility operations across the Office of Science. This is necessary to operate existing facilities and experiments and support more than 38,000 researchers from academia, industry and federal agencies who rely on these facilities for their science and engineering pursuits. However, proposed funding only supports 88% of operations. This means significant missed opportunities for thousands of additional users to advance mission-relevant science. ESC recommends an additional $113 million to achieve close to 91% of facility operations and fund critical maintenance activities to ensure long-term operation.
- **Accelerate the construction and upgrades of world-class scientific user facilities and major equipment.** ESC supports funding included in the House and Senate bills to keep most major facility line-item construction projects and major items of equipment on time and on budget. However, ESC is concerned that even these funding levels fall short of DOE-approved and *CHIPS and Science Act* authorized project profile funding for several critical research facilities and experiments. There are also opportunities to add funding to some key projects that could be accelerated since they are funding constrained rather than schedule constrained. There is also little to no research and development funding to define and guide future facility needs. ESC recommends an additional $200 million to fully fund and accelerate construction projects and state-of-the-art equipment and an additional $100 million for research and development for next-generation facilities.
- **Upgrade national lab scientific infrastructure.** ESC strongly supports continued funding for the Science Laboratories Infrastructure program, including funding for both existing line-item construction projects and general plant projects. These investments in upgrading and replacing aging

utilities, roads, office buildings and other general purpose infrastructure are essential for the safe, reliable, and resilient operation of the 10 Office of Science national laboratories as well as a critical tool in the recruitment and retention of leading scientists and engineers. However, ESC is concerned that based on current budget projections no new projects will start until 2028. Based on a DOE Office of Science FY 2022 assessment of the 10 national labs it stewards, 43 percent of general-purpose buildings were rated as substandard or inadequate to meet mission needs, 71 percent of utility systems were rated as substandard or inadequate, and 35 percent of the remaining support infrastructure was rated as substandard or inadequate. According to DOE, the substandard and inadequate condition of facilities results in operational inefficiencies, reduced resiliency and reliability, unplanned outages, costly repairs, and elevated safety risks. ESC recommends an additional $200 million to advance new national lab infrastructure upgrades to retire risk to lab operations faster.

ESC encourages Congress to prioritize investments in core Office of Science research and infrastructure needs. ESC also recognizes that there may be an opportunity for a one-time investment in targeted emerging technology initiatives to supplement Office of Science research and development programs. To this end, ESC also supports up to $5 billion in supplemental funding to advance critical DOE initiatives in artificial intelligence, quantum information science, fusion, and microelectronics. ESC agrees with DOE Under Secretary for Science Dario Gil's assessment that "science, engineering, and technology are the new currency of strategic power", we need to "operate with a profound sense of urgency", and "this is a race we must and will win." To maintain U.S. competitive advantage will require new resources that can leverage the science accomplishments, expertise and world-leading research infrastructure managed by the DOE Office of Science. We also agree with Under Secretary Gil that the core pillars of research and development include partnerships between federal agencies and national labs, research universities, industry, philanthropy and state and local governments and federal resources should be used to support all of these critical pillars. Supplemental appropriations from unobligated prior year funds would be cost neutral and would help achieve these goals by accelerating implementation of emerging technology initiatives. DOE could be authorized to spend those funds over two years, including:

- **Up to $2 billion for the new Genesis Mission**, which seeks to transform science by creating AI infrastructure and tools to solve major challenges in science, energy, and national security twice as fast as current approaches. This funding could be used to develop an integrated platform that connects DOE's supercomputers, experimental facilities, AI systems, and unique datasets across every major scientific domain and fund up to 20 teams focused on DOE missions, such as critical materials, fusion, advanced fission, nonproliferation, and new battery technologies.
- **Up to $2 billion for fusion**. The Fusion Industry Association and the Commission on the Scaling of Fusion Energy both recommended a one-time investment of $10 billion to commercialize fusion energy and beat our strategic competitors. DOE's October 2025 Fusion Science and Technology Roadmap lays out clear program priorities and a $2 billion investment would be an important downpayment in science and engineering activities and research infrastructure needed to address major science and technology gaps to commercialize fusion energy. Investments could include $100 million for small and medium-sized research facilities and test stands, $400 million for fusion research at National Laboratories and universities such as the FIRE collaboratives and IFE Hubs, and $1.5 billion to advance one or more fusion science and technology facilities identified in the roadmap, such as a blanket and fuel cycle facility and/or a neutron source facility to qualify technologies and materials needed for fusion power plants.
- **Up to $1 billion for quantum technologies and microelectronics**. The *DOE Quantum Leadership Act of 2025* (S. 579) authorizes $488 million a year in DOE quantum science and technology programs, compared to $329 million in FY 2025 enacted funding. $750 million could be used to expand and implement new projects, such as $250 million for quantum instrumentation and quantum foundries to build a U.S. supply chain, $200 million for quantum network

infrastructure, $125 million in additional funding to expand research and partnerships at the National Quantum Information Science Research Centers, $120 million for early-state quantum high performance computing testbeds, and $25 million for a quantum traineeship program. Another $250 million, consistent with the *Micro Act* in the final *CHIPS and Science Act*, could be applied to microelectronics research and expanding the Microelectronics Science Research Centers to design and build unique microelectronics needed for DOE missions in extreme environments.

The United States must maintain its leadership in science, technology and innovation, and the DOE Office of Science plays a pivotal and leading role in addressing this country's energy and national security challenges. For these reasons, we urge Congress to provide at least $8.6 billion for the Office of Science in FY 2026. If additional resources are available, ESC recommends an additional $900 million in funding to reserve cuts in core research programs, maximize facility operations, and accelerate construction of research and other mission critical infrastructure. ESC also recommends up to $5 billion in supplemental funding from unobligated and prior year balances to invest in strategic initiatives. We look forward to working with you in advancing the critical missions of this invaluable agency.

Sincerely,

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The Energy Sciences Coalition (ESC) is a broad-based coalition of organizations representing scientists, engineers and mathematicians in universities, industry and national laboratories who are committed to supporting and advancing the scientific research programs of the U.S. Department of Energy (DOE), and in particular, the DOE Office of Science.