ENERGY SCIENCES COALITION

September 21, 2026

The Honorable Chris Wright
Secretary, U.S. Department of Energy

The Honorable Russ Vought
Director for Office of Management and Budget

The Honorable Michael Kratsios
Director of the Office of Science and Technology Policy

Dear Secretary Wright, Director Vought, and Director Kratsios,

As you prepare the fiscal year (FY) 2028 budget request to Congress, **the Energy Sciences Coalition (ESC) urges you to request no less than $10 billion for the Department of Energy Office of Science (DOE SC).** ESC's top recommendation is to increase Office of Science research funding in the physical sciences and other core scientific disciplines in order to advance current and future emerging technologies and grow the scientific and engineering workforce. This level of investment is necessary to maintain the United States' strategic competitive advantage in science and technology and matches the ambition of the White House's FY 2028 research and development budget priorities memo guiding future federal investments. Long-term federal investments in DOE SC laid the foundation for U.S. leadership in emerging technologies such as artificial intelligence, quantum computing, and fusion. To realize the full potential of these new technologies and lead the world in future emerging technologies requires a well-funded DOE SC. U.S. strategic competitors want to dominate these new technology sectors which requires the United States to act with greater speed and scale. **In addition to $10 billion in annual appropriations, ESC urges you to work with Congress to reprogram unobligated prior year funding and/or use supplemental funding up to $5 billion to accelerate investments that have bipartisan support in critical technology areas, such as AI for science, quantum, and fusion, and upgrade national lab infrastructure.**

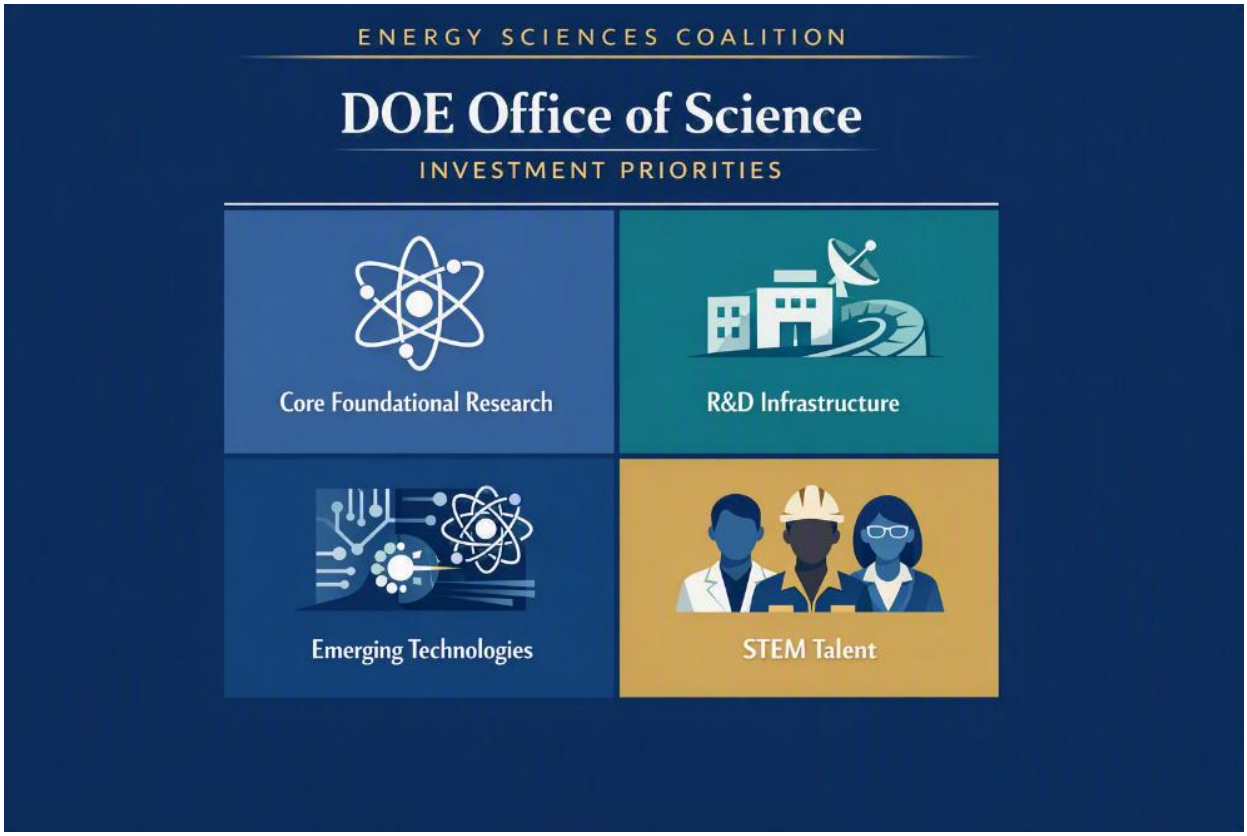
We look forward to working with you in advancing the critical missions of this invaluable agency.

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.



Priority	Strategic rationale	FY 2028 incremental request
Foundational Research	Sustains the scientific base for AI, quantum, fusion, semiconductors, and future emerging technologies.	**+$400M**
Research Infrastructure	Maximizes user facilities, completes major construction, develops next-generation facilities, and upgrades laboratories.	**+$520M**
National S&T Missions	Advances science, early engineering, and infrastructure needs for the Genesis Mission, quantum technologies, fusion energy, microelectronics, and biotechnology.	**+$600M**
STEM Talent	Expands education, traineeships, early-career programs, and mission-aligned workforce development.	**+$100M**
	Total increase above FY 2026	**+$1.6B**

DOE SC is ready to execute on FY 2028 R&D priorities areas, including:

- Investing in foundational research to drive scientific breakthroughs for emerging technologies. The funding guidance directs agencies to increase funding for the physical sciences, as well as computer science, mathematics, and biological sciences. **DOE SC is the nation's primary sponsor of**

physical sciences research with a proven model of success in discovery and innovation. DOE SC is also a major sponsor of research in mathematics and computer science necessary for its high performance computing capabilities as well as research in biological sciences to drive applications in biotechnology and biomanufacturing. Consistent with the R&D priorities memo, the mission of DOE SC is to advance "foundational research, including basic and use-inspired inquiry across the sciences and engineering." Core research in the physical sciences and other DOE SC-sponsored research programs has declined by 8.4 percent over the last two fiscal years. There is an opportunity to reverse this trend. **An additional $400 million above the FY 2026 enacted funding level would grow core research programs by about 9 percent**. Core research supports a broad range of foundational research in fields such as high energy physics and nuclear physics that improve our understanding of the universe as well as use-inspired research in materials and chemistry to improve or design new energy technologies and scientific instruments. Investments in DOE SC's broad science portfolio is necessary to advance basic and use-inspired research to support the Administration's "strategic technology priorities, including AI, quantum, semiconductors, advanced communications, robotics, advanced manufacturing, and nuclear fusion and fission."

- Expand world-class R&D infrastructure for broad use. **DOE SC already supports world-class scientific user facilities and national lab infrastructure** including a network of 17 National Laboratories, of which 10 are directly stewarded by DOE SC. The labs, along with an array of 28 large-scale research facilities, represent the greatest collection of technical talent, scientific tools, and unique research facilities supporting more than 40,000 researchers each year from academia, industry, and federal agencies. **An additional $120 million above the FY 2026 enacted funding level would maximize facility operations** to support critical experiments at these user facilities. DOE SC must also continue to fund the construction of new facilities to stay ahead of international competition, such as the Long Baseline Neutrino Facility/Deep Underground Neutrino Experiments, the Electron Ion Collider, and the Second Target Station at the Spallation Neutron Source. While the highest major infrastructure priority should be finishing construction of these facilities, the Office of Science Advisory Committee is planning to issue its recommendations at the end of the year for the next wave of major research facility investments needed to maintain U.S. leadership. DOE SC should maintain funding flexibility to start planning for these future projects in FY 2028. **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.** The long-term operation of these facilities also requires additional investments in national lab support infrastructure. New investments are needed in upgrading and replacing aging utilities, roads, office buildings and other general-purpose infrastructure that are essential for the safe, reliable, and resilient operation of the 10 Office of Science national laboratories and associated research facilities. **ESC recommends an additional $100 million above the FY 2026 enacted funding level to advance new national lab infrastructure upgrades to retire risk to lab operations faster.**

- Advance national science and technology missions and build the foundation for a new era of scientific discovery. **DOE SC is the lead federal science agency for the Administration's top three S&T priorities—the Genesis Mission, the nation's first quantum computing user facility, and fusion energy.** DOE SC also has a major leadership role in next-generation semiconductor technologies and in biological sciences that support biofuels, bioproducts, and biomanufacturing capabilities. Additional funding is needed to fund current and future S&T Genesis challenge teams and build out AI for science infrastructure. Fully funding core research programs, DOE high performance computing facilities and data infrastructure, and research facilities that generate experimental data for AI applications are key for the success of the Genesis Mission. These investments are consistent with the Administration's funding priorities including "AI as an instrument of scientific discovery, scientific foundation model development, scientific data generation for AI, and integration of AI with scientific instrumentation." DOE SC should also expand investments in quantum science and

technology that include not just the goal of deploying the first fault tolerant, scientifically relevant quantum computer but also quantum sensors, quantum networks, and quantum communications. To ensure that the nation leads in fusion energy, broader investments in science, engineering, test beds, new research facilities, and commercialization activities will be needed. DOE SC should also increase investments in microelectronics research and development to support advanced computing and the Genesis Mission. DOE SC is also updating its biological sciences program to help meet the nation's ambitious goals for a resilient, secure, and globally competitive bioeconomy. DOE SC plans to grow investments in innovative, multidisciplinary approaches that integrate synthetic and systems biology, genome engineering, physiology, bioprocessing, and advanced computational and structural biology to advance the sustainable production of bio-based chemicals, materials, fuels, and new manufacturing processes. **ESC recommends an additional $600 million above the FY 2026 enacted funding level to advance these S&T priority areas.** This funding includes foundational research, early-stage engineering, test beds, and infrastructure needs across the five emerging technology areas.

- Identify and develop top technical talent. **DOE SC already manages a portfolio of STEM education, traineeship, and workforce programs.** These programs train the next generation of scientists, engineers, and technicians by providing hands-on experience, supporting approximately 29,000 Ph.D. scientists, engineers, graduate students, and technical personnel across more than 300 institutions spanning all 50 states and the District of Columbia. **ESC recommends an additional $100 million above the FY 2027 enacted funding levels to expand and initiate new STEM education programs aligned with DOE missions.** Prior recommendations include expanding existing programs like the Early Career Research Program and the DOE Office of Science Computational Science Graduate Fellowship Program as well as launching new traineeship programs in quantum and AI and scaling regional programs being implemented at individual DOE national labs.

In addition to annual appropriations, ESC recognizes that there may be an opportunity for additional supplemental investments from unobligated prior year funding to accelerate deployment of new scientific capabilities, modernize national lab infrastructure and advance 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 Office of Science capabilities, including new and upgraded scientific facilities and instruments, national lab infrastructure, and critical DOE initiatives in artificial intelligence, quantum information science, fusion, and microelectronics. 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 and examples include:

- **Upgrading national lab infrastructure.** Bipartisan legislation, such as the *Restore and Modernize Our National Laboratories Act,* and Office of Science infrastructure assessments have identified up to $25 billion in investments needed to upgrade aging infrastructure and reduce the deferred maintenance backlog for aging laboratories, administrative buildings, and critical infrastructure such as roads, power plants, and water lines. Additional funding would help reverse a backlog of needed capital improvement projects to maintain safe and secure environments for thousands of lab employees and be ready to support the surge in research in discovery science, emerging technologies, energy, and national security.
- **The Genesis Mission**. This initiative 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. DOE has proposed up to $10 billion for the Genesis Mission. Additional 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 additional S&T teams focused on DOE missions, such as critical materials, fusion, advanced fission, nonproliferation, and new battery technologies.

- **Fusion energy**. 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 June 2026 Fusion Science and Technology Roadmap lays out clear program priorities. A major, new, one-time investment could be an important downpayment in science and engineering activities and research infrastructure needed to address major science and technology gaps to commercialize fusion energy. Consistent with prior ESC recommendations, investments could include up to $100 million for small and medium-sized research facilities and test stands, up to $400 million for fusion research at National Laboratories and universities such as the Fusion Innovation Research Engine (FIRE) collaboratives and Inertial Fusion Energy (IFE) Hubs, and up to $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.
- **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. Additional funding could be used to expand and implement new projects, such as quantum computing user facilities and test beds, quantum network infrastructure, expanding research and partnerships at the National Quantum Information Science Research Centers, and launching a quantum traineeship program. Consistent with the *Micro Act* in the final *CHIPS and Science Act*, up to $250 million in new funding 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.

ESC Membership

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American Association of Physics Teachers
American Astronomical Society
American Ceramic Society
American Chemical Society
American Crystallographic Association
American Geophysical Union
American Geosciences Institute
American Institute of Physics
American Mathematical Society
American Nuclear Society
American Physical Society
American Society for Engineering Education
American Society of Agronomy
Acoustical Society of America (ASA)
American Society of Mechanical Engineers
American Society for Microbiology
American Society of Plant Biologists
American Vacuum Society
Arizona State University
Association of American Universities
AVS – The Society for Science and Technology of Materials, Interfaces, and Processing
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Biophysical Society
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City College of CUNY
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Coalition for Academic Scientific Computation (CASC)
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