



November 4, 2025

The Honorable Chris Wright
Secretary
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

The Honorable Russ Vought
Director for Office of Management and Budget
Eisenhower Executive Office Building
1650 Pennsylvania Avenue
Washington, DC 20504

The Honorable Michael Kratsios
Director of the Office of Science and Technology Policy
Eisenhower Executive Office Building
1650 Pennsylvania Avenue
Washington, DC 20504

Dear Secretary Wright, Director Vought, and Director Kratsios,

As you prepare the fiscal year (FY) 2027 budget request to Congress, **the Energy Sciences Coalition (ESC) urges you to request no less than \$9.5 billion for the Department of Energy Office of Science (DOE SC).** This level of investment is essential to meet the Trump Administration's current imperatives—delivering an abundant domestic supply of reliable energy and positioning the United States to continue to lead the world in critical and emerging technologies. We recognize the constrained budget environment, but now is the time to double down on the foundation of fundamental research programs and build world-leading research facilities and test beds to strengthen U.S. competitiveness, drive economic growth, and build the next-generation workforce.

There is universal agreement that the United States must maintain its leadership in science, technology and innovation to dominate security, energy and economic fields. DOE SC plays a pivotal and leading role in addressing this country's science, energy, and national security challenges. DOE SC also is uniquely positioned to advance all five of the Trump Administration's FY 2027 research and development budgetary priorities as well as all five of the high-priority crosscutting actions outlined in the September 2025 memo to federal agencies. DOE SC has the depth and breadth to address this broad set of science and technology challenges due to its unique attributes:

- **It is the nation's primary sponsor of physical sciences research** with a proven model of success in discovery and innovation. DOE SC sponsors research programs vital to American prosperity and security at research universities, national laboratories, industry partners, and other non-profit organizations and helps maintain the U.S. pipeline of science and engineering talent.
- **It is the nation's steward of the most sophisticated, world-class scientific user facilities.** DOE SC designed, built, and currently manages 28 large-scale research facilities that include particle

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accelerators, experimental reactors, X-ray synchrotron and free-electron laser light sources, fusion user facilities, the world's fastest and most powerful supercomputers and other high-precision instruments for genomics and nanoscience. Annually, more than 40,000 researchers from academia, industry and federal agencies use these facilities to support their cutting-edge pursuits in science and engineering.

- **It supports a network of 17 DOE National Laboratories and directly stewards 10 of them.** A competitive advantage for the nation, the DOE National Labs represent the greatest collection of technical talent, scientific tools, and unique research facilities found anywhere in the world, and are critical to maintaining and enhancing U.S. global leadership in science and technology and competing with foreign adversaries like China.
- **It advances STEM education, traineeship, and workforce programs to train the next generation of scientists, engineers, and technicians by providing hands-on experience.** These programs prepare the U.S. workforce to be world leaders in science and technology and find innovative solutions to the nation's pressing energy and national security challenges. Through competitively awarded grants, DOE SC supports approximately 29,000 Ph.D. scientists, engineers, graduate students, undergraduates and technical personnel at more than 300 institutions across all 50 states and the District of Columbia.
- **It has a proven track record of using large-scale teams to address science, energy, and national security grand challenge problems.** DOE SC has a long history of combining the talent and capabilities of the national laboratories' unique science facilities, the country's research universities, and industry to bring together multi-disciplinary teams to tackle grand challenge problems. Through consortia, centers, Hubs, co-design efforts, and public-private partnerships, DOE SC has been flexible, innovative, and forward-leaning in tackling complex problems. For example, DOE SC used co-design teams of national labs, industry, and academic partners to:
 - deliver the world's fastest and most capable supercomputers, which can perform more than a quintillion tasks per second (a 1 followed by 18 zeroes);
 - launch the fusion milestone-based public-private partnership program, Fusion Innovative Research Engine Collaboratives, and the Innovation Network for Fusion Energy to help U.S. fusion start up companies solve major roadblocks to commercialization and have access to leading-edge fusion research facilities; and
 - support five National Quantum Information Science Research Centers that draw on expertise across the nation to advance new quantum technologies and applications, including 1,500 experts across 115 academic, industry, national lab, federal agency and other research institutions across 22 states.

With this research infrastructure already in place, DOE SC can move at significant speed and scale to deliver critical energy and emerging technologies. Some specific examples include:

- **Developing and deploying critical and emerging technologies**, including artificial intelligence, quantum information science and technology, semiconductors and microelectronics, advanced communications networks, future computing technologies, biotechnology, and advanced manufacturing. DOE SC has a roadmap to solidify U.S. leadership in AI for science, energy, and national security applications. From accelerating the search for new materials for quantum computing, to deploying smart grid infrastructure, to realizing breakthroughs in fusion, AI can help accelerate scientific discoveries and enable new and affordable energy technologies. DOE SC is critical in maintaining U.S. quantum advantage. DOE SC supports unique state-of-the-art quantum facilities and instruments used by over 200 companies exploring quantum technologies. It also launched five National Quantum Information Science Research Centers for the first national large-scale and focused quantum science and technology research effort to advance and scale up quantum technologies such as ultra-precise sensors, secure communications and

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networks, and extraordinarily fast, energy-efficient quantum computers. DOE SC is also leading innovation in next-generation semiconductors, producing energy-efficient microelectronics to reduce energy costs and withstand extreme environments such as high temperatures and radiation, as well as developing more efficient U.S.-based manufacturing techniques using low cost, abundant materials.

- **Advancing new energy technologies for American energy dominance**, including advanced nuclear, fusion, geothermal, grid technologies, and AI data centers. All U.S. energy technologies can be traced back to scientific breakthroughs and early-stage technology development at DOE SC. Cutting edge research in materials, chemistry, physics, biosciences, isotope production, mathematics, and computer science all lay the foundation for future energy technologies. To date, DOE SC investments have been instrumental in the development of nuclear power, energy storage such as lithium ion batteries, smart grid technologies, biofuels and bioproducts, and geothermal carbon capture and storage. Current investments look to the future to advance fusion energy consistent with the priorities of the new Fusion Science and Technology Roadmap, solar fuels, transformative manufacturing techniques to reduce waste and energy costs, and new semiconductors for lighting, computing, and communications applications. DOE SC is also at the forefront of energy-saving technologies to make data centers and AI use sustainable and more affordable.

ESC strongly supports focused and targeted investments in new emerging and energy technologies, such as AI, quantum, and fusion. However, additional investments are needed in FY 2027 to maintain core DOE SC capabilities, talent, and research infrastructure to advance Administration priorities, including:

- **Core research across all six Office of Science major programs** that support national laboratories and research universities in the physical sciences, biological sciences, advanced materials, geosciences, computing and engineering. These programs provide the foundation for the current set of energy and emerging technologies and also support general discovery science across the country, which will yield new ideas, future technologies, and long-term job creation.
- **Accelerating the construction and upgrades of world-class scientific user facilities.** Groundbreaking research requires complementary investments in research infrastructure. DOE SC international benchmarking studies have generally found that the “era of unquestioned American scientific dominance is drawing to a close” and “there is world-wide competition for access to the latest, most powerful facilities.” Accelerating construction of state-of-the-art facilities would help maintain and attract the best scientific talent and drive future discoveries and technological innovation.
- **Fully funding the operations and maintenance of new and updated world-class facilities and cutting-edge instrumentation.** All DOE SC facilities are significantly oversubscribed, meaning many missed opportunities each year to advance high-impact and highly-rated research from national labs, academia, industry and start-up companies, and other federal agencies. For example, supporting the production of radioisotope power systems at DOE facilities is particularly important for maintaining NASA's leadership in deep space exploration.
- **Modernizing national laboratory infrastructure**, such as utilities, roads, and general purpose lab space, to attract and retain the best scientific and engineering talent from around the world.
- **Expanding STEM and workforce development programs.** Based on U.S. industry demand, there is a significant shortage of domestic workers to fill AI, data science, quantum information science, nuclear science and engineering, and fusion energy jobs in the next decade. DOE SC plays a critical role in educating and training the next-generation STEM workforce and meeting this growing demand.

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As you know, DOE SC enjoys bipartisan and bicameral support in Congress. It is imperative that the Administration honor this bipartisan support, as well as the vision laid out in the *CHIPS and Science Act*, by requesting at least \$9.5 billion for the DOE Office of Science in FY 2027.

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

Sincerely,

Leland Cogliani
Co-chair
202-289-7475
leland@lewis-burke.com

Sarah Walter
Co-chair
202-678-4000
swalter@msu.edu

ESC Membership

American Association of Physicists in Medicine	Long Island University
American Association of Physics Teachers	Massachusetts Institute of Technology
American Astronomical Society	Materials Research Society
American Ceramic Society	Miami University of Ohio
American Chemical Society	Michigan State University
American Crystallographic Association	Michigan Technological University
American Geophysical Union	New York University
American Geosciences Institute	Northeastern University
American Institute of Physics	Northern Illinois University
American Mathematical Society	Northwestern University
American Nuclear Society	Oak Ridge Associated Universities (ORAU)
American Physical Society	Pace University
American Society for Engineering Education	Penn State University
American Society of Agronomy	Princeton University
Acoustical Society of America (ASA)	Purdue University
American Society of Mechanical Engineers	Rensselaer Polytechnic Institute
American Society for Microbiology	Rochester Institute of Technology
American Society of Plant Biologists	Rutgers, The State University of New Jersey
American Vacuum Society	Society for Industrial and Applied Mathematics
Arizona State University	Soil Science Society of America
Association of American Universities	South Dakota School of Mines
Association of Public and Land Grant Universities	Southeastern Universities Research Association
AVS – The Society for Science and Technology of Materials, Interfaces, and Processing	SPIE
Battelle	Stanford University
Binghamton University	Stony Brook University
Biophysical Society	Tech-X Corporation
Boston University	Tufts University
Case Western Reserve University	The Ohio State University
City College of CUNY	University of Arizona
Clemson University	University of California System
Coalition for Academic Scientific Computation (CASC)	University of Colorado Boulder
Consortium for Ocean Leadership	University of Delaware
Columbia University	University Fusion Association
Computing Research Association	University of Hawaii
Council of Graduate Schools	University of Illinois System
Council of Scientific Society Presidents	University of Iowa
Cornell University	University of Maryland, College Park
Cray Inc.	University of Michigan
Crop Science Society of America	University of Missouri System
Duke University	University of Nebraska
The Ecological Society of America	University of North Texas
Florida State University	University of Oklahoma
Fusion Power Associates	University of Pennsylvania
General Atomics	University of Rochester
Geological Society of America	University of Southern California
George Mason University	University of Tennessee
Georgia Institute of Technology	University of Texas at Austin
Harvard University	University of Virginia
Health Physics Society	University of Wisconsin-Madison
IBM	Universities Research Association
IEEE-USA	Vanderbilt University
Iowa State University	Washington State University
Jefferson Science Associates, LLC	West Virginia University
Krell Institute	Yale University
Lehigh University	

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