



ENERGY SCIENCES COALITION

June 14, 2022

The Energy Sciences Coalition (ESC) thanks Congress for continuing its strong, bipartisan support of the U.S. Department of Energy (DOE) Office of Science.

To build on this support, **ESC continues to urge Congress to appropriate \$8.8 billion in FY 2023 for the DOE Office of Science, an increase of 18 percent above FY 2022 and consistent with the bipartisan House and Senate DOE Science for the Future Act.** ESC is concerned that the FY 2023 President's budget request for the Office of Science of \$7.8 billion is not sufficient to maintain U.S. competitiveness.

While we appreciate that the budget request proposes targeted increases for certain climate and clean energy research, the proposed funding level is not sufficient to support growth to core research in the physical sciences needed for groundbreaking scientific discoveries or meaningfully advance key Administration priorities, such as in fusion energy and emerging technologies such Artificial Intelligence and quantum information science. To remain a global leader in innovation, the Office of Science must have the resources to make significant new investments in key emerging technologies, accelerate construction of world-class scientific facilities, and fully support operations of the 28 Office of Science user facilities used by more than 36,000 researchers to advance critical national missions. The 4.3 percent increase proposed in the budget request would not even keep up with the current inflation rate of 8.3 percent, which drives up costs to conduct research and to make the necessary procurements to build state-of-the-art research facilities on time and on budget.

Groundbreaking research requires complementary investments in research infrastructure. Unfortunately, the budget request falls short in this area and would not support construction of world-leading facilities to maintain current project schedules, let alone accelerate their construction to stay ahead of international competition and minimize total costs. The Office of Science is conducting international benchmarking studies and 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." However, it is not too late for U.S. to reclaim leadership. Accelerating construction of state-of-the-art facilities would help maintain and attract the best scientific talent and drive future discoveries and technological innovation. Further, more general DOE national lab infrastructure, such as office space and critical utilities, is the backbone of the DOE enterprise, but is aging and needs to be modernized. Modern, reliable infrastructure at the national labs is critical to support world class science facilities, attract top talent, and address science and technology challenges of the future. ESC is concerned about the impact of the proposes cuts to Science Laboratory Infrastructure, including pausing design and construction of three ongoing projects.

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.

Additionally, ESC is concerned about the proposed cut to the operations of existing user facilities. Demand for access to these unique facilities far exceeds current capacity. Proposed cuts to those user facilities will reduce access to thousands of researchers from academia, industry, and other federal agencies engaged in critical science and engineering pursuits. More resources are needed to increase access to drive innovation in diverse DOE missions including clean energy technologies, industries of the future, and the origins of the universe.

To ensure the DOE Office of Science can meet growing demands and advance critical areas of science and technology, ESC continues to recommend \$8.8 billion in FY 2023 to address gaps in the budget request including:

- growing core research at national laboratories and research universities in the physical sciences, biological sciences, advanced materials, geosciences, computing and engineering to help develop not just future energy technologies and climate solutions but also general discovery science that serves as the seed corn of future technologies.
- fully funding and accelerating the construction and upgrades of world-class scientific user facilities and support infrastructure to stay ahead of international competition and attract the best talent;
- maximizing operations to fully utilize state-of-the-art facilities and cutting-edge instrumentation to support the more than 36,000 researchers from academia, industry and federal agencies that rely DOE user facilities; and
- making significant new, strategic investments in innovative high-risk, high-reward research areas, such as quantum science and technology; artificial intelligence and scientific machine learning; genomics, biotechnology, and other convergence science; microelectronics; next-generation communications; accelerator and laser systems; and optical detectors.

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, national security, and environmental challenges. We look forward to working with you in advancing the critical missions of this invaluable agency.

Sincerely,

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ESC MEMBERSHIP

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