



## ENERGY SCIENCES COALITION

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February 22, 2021

Dear Chairman Bowman,

The Energy Sciences Coalition (ESC) congratulates you on your election as the new Chairman of the Subcommittee on Energy of the House Committee on Science, Space and Technology. We look forward to working with you on maintaining strong, bipartisan support for the Department of Energy (DOE) Office of Science.

As you advance funding priorities in fiscal year 2022 and the outyears, ESC urges you to give high priority to investments in the DOE Office of Science. Bold new investments are needed to stay ahead of international competition, maintain U.S. competitiveness, maintain a highly skilled science and technology workforce, and create American jobs of the future in key energy sectors as well as new technology areas such as high performance computing, artificial intelligence, biotechnology, and quantum information science. The DOE Office of Science supports all of these efforts. The DOE Office of Science also enjoys strong bipartisan support in Congress.

We also encourage you to include an investment in Office of Science research infrastructure as part of any economic recovery or infrastructure bill. An investment in DOE Office of Science, shovel-ready research infrastructure at national laboratories and university research facilities would immediately create construction jobs and stimulate the economy, as well as enable future scientific breakthroughs and discoveries vital to continuing American prosperity and security. This includes the construction of world-class user facilities and instruments that currently support 36,000 researchers from academia, industry and federal agencies; upgrades to and replacement of increasingly obsolete and unreliable support infrastructure to address growing deferred maintenance issues at DOE national laboratories; and expanded research initiatives to attract the best and brightest scientists and engineers to critical fields of science.

Scientific breakthroughs and energy technology innovation are still necessary to decarbonize the U.S. economy and mitigate the worst effects of climate change. Specifically, Office of Science-supported fundamental research forms the foundation for future energy technologies. The current imperative—energy systems that meet our energy security, economic, and environmental challenges—requires continued, robust investments in all areas of fundamental research to advance all energy systems, including energy storage, negative emission technologies, advanced nuclear, hydrogen, fusion, renewables such as wind and solar, carbon capture, storage and utilization, and next-generation fuels.

The DOE Office of Science is unique among federal science agencies, supporting the network of 17 DOE national laboratories—the crown jewels of the nation's research and innovation ecosystem—and directly

*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.*

stewarding ten of them. The DOE Office of Science also builds and operates the most sophisticated, world-class scientific user facilities used by research universities, industry and most federal agencies.

Another unique feature is science at scale. The DOE Office of Science has a long history of combining the talent and capabilities of the national laboratories' unique science facilities, the country's leading research universities, and industry to bring together multi-disciplinary teams to tackle fundamental science, energy, and national security grand challenges. The most recent examples are the national quantum information science research centers and the nation's response to COVID-19. This team-science approach was also applied successfully to the Human Genome Project where DOE and the National Institutes of Health worked together to uncover the complete set of human genes—a signature scientific achievement in the biological sciences—with a broad range of applications in healthcare, veterinary medicine, agriculture, and biotechnology.

The DOE Office of Science will continue to play an important role in the COVID-19 response as well as future pandemics and should receive continued support. The DOE Office of Science established multi-disciplinary teams from all 17 national labs to address critical needs, such as improving capabilities for and ensuring effective detection of infection; expediting discovery of therapeutic drugs, including antibodies and antivirals, to complement vaccine development; and providing epidemiological and logistical support to Federal, state and local decision-makers to more accurately forecast disease transmission. The DOE Office of Science spearheaded the creation of the National Virtual Biotechnology Laboratory and the COVID-19 High Performance Computing Consortium to bring together the best minds from the public and private sector to address this public health challenge.

Having demonstrated significant impact, investments in the DOE Office of Science should be sustained for the ongoing response to COVID-19 and for improved preparedness and science-based understanding to address future biological events. In addition, the DOE Office of Science has expanded collaborations with the National Institutes of Health and the Department of Veterans Affairs to accelerate drug discovery for cancer treatment and better understand traumatic brain injury, as just two examples. These collaborations should be maintained and expanded to support these agencies in their critical public health missions.

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 the DOE Office of Science.

Sincerely,

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