



ENERGY SCIENCES COALITION

December 15, 2020

Dear Congresswoman DeLauro,

The Energy Sciences Coalition (ESC) congratulates you on your election as the next Chairwoman of the House Appropriations Committee. We are grateful for your long-standing and steadfast support for federal investments in fundamental research. In particular, we appreciate your recognition of the importance of research that supports Nobel-prize winning discoveries, the advancement of new clean energy technologies, efforts to mitigate the impacts of climate change, and programs to maintain a highly skilled workforce.

As you advance funding priorities in fiscal year 2022 and the outyears, ESC urges you to give high priority to investments in the Department of Energy (DOE) Office of Science. Bold new investments are needed to stay ahead of international competition, maintain U.S. competitiveness, 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 is critically important in developing new energy technologies to achieve ambitious net zero goals, advancing Industries of the Future and emerging technologies, and maintaining a highly skilled science and technology workforce. The DOE Office of Science also enjoys strong bipartisan support in Congress.

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 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.

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.

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,

Christopher Carter
Co-chair
610-216-5656
ccc317@lehigh.edu

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

ESC Membership

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