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American Physical Society

July 7, 2021

The Honorable Eddie Bernice Johnson  
Chairwoman  
House Committee on Science, Space, and Technology  
2321 Rayburn HOB  
Washington, DC 20515

The Honorable Frank Lucas  
Ranking Member  
House Committee on Science, Space, and Technology  
2321 Rayburn HOB  
Washington, DC 20515

Dear Chairwoman Johnson and Ranking Member Lucas:

On behalf of the American Physical Society (APS) – the nation’s largest physics membership organization with more than 50,000 members in academia, the private sector and national labs – I want to thank you and your staff for your efforts in crafting and advancing the bipartisan H.R. 3593, the *Department of Energy Science for the Future Act (DOE Science for the Future Act)*, which recently was passed out of the House of Representatives. This legislation is a clear indication of your commitment to strengthen our scientific enterprise by authorizing robust investments that will enable the DOE Office of Science to support leading-edge scientific research, construct and upgrade world-class facilities and build a stronger, more diverse US STEM workforce. **APS strongly supports the *DOE Science for the Future Act*** and looks forward to the legislation going to conference.

The DOE Office of Science is the nation’s primary supporter of basic physical sciences research. It sponsors approximately half of all university physics research; in physics subdisciplines, such as high-energy physics and nuclear physics, the Office of Science is the primary government sponsor. It also plays an integral role in US leadership in other fields, including advanced materials, quantum information science, computing and engineering.

The Office of Science also plays an integral role in training the next generation of scientists and engineers, who are essential for an innovation-based economy. It uses competitively awarded grants to sponsor more than 25,000 researchers – including PhD scientists, engineers, graduate students, undergraduates and technical personnel – at DOE laboratories and more than 300 institutions nationwide.

Additionally, the Office of Science supports the operation of the largest collection of major scientific user facilities in the world. State-of-the-art facilities are essential for performing discovery science and leading-edge research and are an important component of a balanced research portfolio. To compete globally, we must continue to have world-class facilities at home and access to world-class facilities abroad.

The *DOE Science for the Future Act* demonstrates your recognition of the need to increase our investments in energy-related fundamental research, expand and modernize our large-scale facilities, and bolster and diversify the US domestic STEM workforce to maintain our nation's global leadership in science, technology, and innovation. This legislation includes provisions that will address these needs, as well as additional pressing issues for our community, which will improve the United States' global competitiveness. These provisions include:

- **Building the US Energy Research Ecosystem of the Future:** Authorizes \$8.739 billion for fiscal year 2022 (FY22), a 24 percent increase above the FY21 enacted levels, and provides 7% annual increases for the next four fiscal years (FY23-26). This robust and sustainable growth across all Office of Science programs will help the United States remain a global leader in energy-related science, technology and innovation.
- **Modernizing and Expanding World-Class, Large-Scale User Facilities:** Authorizes funding to accelerate the construction of – and upgrades to – major, large-scale scientific facilities, which are critical to discoveries that necessitate infrastructure that is impossible for a single institution to support. These facilities often generate innovation leaps in the physical sciences.
- **Expanding the US Domestic STEM Workforce:** Requires the Secretary to develop a 10-year education plan and outreach strategy to expand educational and workforce opportunities for underrepresented students, K-12 teachers and faculty in STEM fields. The Secretary will also collaborate with the Director of the National Science Foundation (NSF) to support and leverage NSF's INCLUDES program to maximize the impact of federal efforts to expand and broaden the US STEM workforce. We applaud these efforts and hope they will become a consistent and sustainable part of DOE Office of Science's mission.
- **Building Research Capacity to Broaden Participation in STEM:** Requires the Secretary to develop programs to strengthen the research capacity relevant to DOE Office of Science disciplines at emerging research institutions (ERIs), which may include enabling partnerships between research-intensive institutions and ERIs, as well as soliciting proposals directly from ERIs.
- **Addressing the Liquid Helium Crisis:** Creates a new program aimed at reducing the consumption of helium in Office of Science-supported research by awarding grants to purchase and maintain equipment to reduce helium consumption. As our nation pursues the goal of creating a quantum workforce, helium is central to obtaining the ultra-low temperatures needed for this technology's creation.

Thank you again for leadership in working to ensure the United States remains a global leader in science, technology and innovation. If you have questions or would like to further discuss our strong support, please do not hesitate to contact APS Director of Government Affairs Mark Elsesser ([elsesser@aps.org](mailto:elsesser@aps.org); 202.662.8710).

Sincerely,



Sylvester James Gates, Jr.  
President, American Physical Society