



Biotechnology Innovation Organization
1201 Maryland Avenue SW
Suite 900
Washington, DC, 20024
202-962-9200

March 16, 2022

The Honorable Jamaal Bowman
Chairman
Subcommittee on Energy
Committee on Science, Space
and Technology
U.S. House of Representatives
2321 Rayburn House Office Building
Washington, DC 20515

The Honorable Randy Weber
Ranking Member
Subcommittee on Energy
Committee on Science, Space,
and Technology
U.S. House of Representatives
2321 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Bowman, Ranking Member Weber, and Members of the Subcommittee:

The Biotechnology Innovation Organization (BIO) is pleased to submit a statement for the record to the United States House of Representatives Committee on Science, Space, and Technology Subcommittee on Energy hearing entitled, *Bioenergy Research and Development for the Fuels and Chemicals of Tomorrow*.

Introduction

BIO¹ represents 1,000 members in a biotech ecosystem with a central mission – to advance public policy that supports a wide range of companies and academic research centers that are working to apply biology and technology in the energy, agriculture, manufacturing, and health sectors to improve the lives of people and the health of the planet. BIO is committed to speaking up for the millions of families around the globe who depend upon our success. We will drive a revolution that aims to cure patients, protect our climate, and nourish humanity.

Research and Development Fostering Innovation

BIO welcomes the subcommittee holding a hearing on the need for research and development of sustainable fuels and chemicals. We are pleased the subcommittee invited Dr. Laurel Harmon from our member company LanzaTech to serve as a witness for the discussion.

Congressional support of federal research and development of bioenergy is critical part of a larger strategy to grow the bioeconomy. As the country emerges from the COVID-19 pandemic and confronts rising energy prices driven by conflict in Ukraine, we must invest in a sustainable and resilient economy, with innovation at its core.

Biotechnology is enabling a dramatic paradigm shift in the production of fuels and chemicals. Modern biorefineries are converting domestic sources of renewable biomass, wastes, and residues into sustainable low carbon fuels, chemicals, and products. In turn, the sector creates high paying jobs,

¹ <https://www.bio.org/>



particularly in rural parts of the country where renewable biomass is grown and in manufacturing communities where carbon can be captured and utilized. Developing and employing domestic feedstocks will help reduce the United States' dependence on foreign energy and create an energy sector that reduces greenhouse gas emissions and enhances human health through improved air quality.

Economic Benefits of Research and Development

Federal programs that foster research, development, demonstration-scale activities, and deployment of renewable, low-carbon energy technologies send positive signals to the investment community. Private sector funding is critical to accelerate innovation, create a more resilient economy, and grow jobs for years to come.

A 2020 Breakthrough Energy report² prepared by PricewaterhouseCoopers LLP showed that federally funded research and development catalyzed hundreds of billions in added economic value in 2018, and that every job supported with federal research and development investment added almost three additional jobs to the U.S. economy. Looking specifically at energy, the same study found that \$9.5 billion in energy research and development and associated infrastructure investments in 2018 supported more than 112,000 American jobs, while also contributing \$9 billion in labor income, \$2.8 billion in tax payments, and \$14 billion in value added to the economy.

For investments made by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), the economic benefits have far exceeded the cost of the R&D investments. A total taxpayer investment of \$12 billion (inflation-adjusted 2015 dollars) in EERE's research and development portfolio yielded more than \$388 billion in net economic benefits to the United States³.

Conclusion

Policies supporting research and development of sustainable fuels and chemicals will allow us to build a biobased economy and workforce. BIO is committed to working with Congress in a forward-looking manner to foster pioneering technology breakthroughs and science. Doing so will bolster our economic and energy independence and set us on a path to better health and prosperity.

A handwritten signature in black ink, appearing to read "Sarah Gallo".

Sarah Gallo
Vice President, Agriculture and Environment
Biotechnology Innovation Organization

² <https://www.breakthroughenergy.org/-/media/files/bev/bepwcreport09162020.pdf>

³ <https://www.energy.gov/sites/prod/files/2017/11/f46/Aggregate%20ROI%20impact%20for%20EERE%20RD%20-%2010-31-17%20%28002%29%20-%2011-17%20%28optimized%29.pdf>