



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON **SCIENCE, SPACE, & TECHNOLOGY**

Opening Statement

Chairwoman Eddie Bernice Johnson (D-TX)

Subcommittee on Research and Technology Hearing:
“*Engineering Our Way to a Sustainable Bioeconomy*”
March 12, 2019

Thank you, Madam Chairwoman for holding this hearing. And I want to thank you and the Ranking Member for putting together such a distinguished panel of witnesses.

This morning, we will hear about engineering biology research and its applications in energy, agriculture, manufacturing, the environment and human health. We have invited academic researchers, a small company, as well as experts on the ethics and security implications of engineering biology to help us understand how we can maintain U.S. leadership in engineering biology and achieve a sustainable bioeconomy.

Engineering biology research allows researchers to safely re-engineer existing biological systems and to learn from and mimic existing biological systems to perform novel tasks and develop novel materials and products. Technologies enabled by engineering biology are exciting and have the potential to solve some of society’s greatest challenges, including providing food for a growing population, reducing our dependency on fossil fuels, and dramatically transforming manufacturing. They also have numerous applications for human health as well as for the environment.

Because of the great promise of this research and its applications, I first introduced the *Engineering Biology Research and Development Act* in 2015. By then, several other countries had already prioritized engineering biology and developed national strategies for their investments, and I was concerned that the U.S. risked losing our leadership in an industry we historically dominated. Here we are, four years later, and instead of pulling together the expert stakeholders to develop such as strategy, the Trump Administration is proposing massive cuts to our science budgets once again. There is no question that we would cede our leadership in engineering biology—as well as in many other areas of science and technology—if the President’s proposed cuts to the nation’s R&D enterprise were to be enacted into law. I intend for this Committee to set us on a more hopeful path forward and I hope we can work on a bipartisan basis to ensure that the whole Congress does likewise.

The *Engineering Biology Research and Development Act* would establish a framework for greater interagency coordination of federal investments in engineering biology and lead to a national strategy for these investments. The bill would also focus on expanding public-private partnerships and on education and training for the next generation of engineering biology

researchers. Importantly, the bill would ensure that we address any potential ethical, legal, environmental, and societal issues associated with engineering biology. It will also ensure that public engagement and outreach are an integral part of this research initiative.

The Committee was not given the opportunity to consider and move this bipartisan bill since 2015. However, it is on our agenda this year, and I look forward to working with my colleagues on both sides of the aisle as we consider amendments informed by the experts, including on today's panel. A sustainable bioeconomy is central to the future of U.S. competitiveness and the wellbeing of our population. And engineering our way to a sustainable bioeconomy begins with a national strategy and careful attention to societal implications.

I thank the witnesses for being here today. I look forward to today's discussion, and I yield back the balance of my time.