**AFCC News & Reports – January 2020 #2:**

**The U.S. Bioeconomy is Strong, But Faces Challenges**

The National Academies of Sciences, Engineering, and Medicine released a report [Safe Guarding the Bioeconomy](https://www.nap.edu/catalog/25525/safeguarding-the-bioeconomy), on January 14, 2020, which shows significant advances have occurred since the National Bioeconomy Blueprint first articulated a U.S. definition in 2012.

The U.S. government is now assessing the national bioeconomy and developing strategies for supporting and safeguarding its continued growth.

**The report recommends that the U.S. government should adopt the following definition of the U.S. bioeconomy:** “The U.S. bioeconomy is an economic activity that is driven by research and innovation in the life sciences and biotechnology, and that is enabled by technological advances in engineering and in computing and information sciences.”

The report considers the definition flexible enough to allow for the future inclusion of new developments, but at the same time promotes guidance towards metrics and data collection efforts needed to track the bioeconomy’s growth, conduct economic assessments, and enable policy makers to keep abreast of advances with the potential to pose new national or economic security challenges.

The report identifies as key findings: “ The U.S. is a clear leader in the global bioeconomy landscape, but faces challenges from decentralized leadership, inadequate talent development, cybersecurity vulnerabilities, stagnant investment in fundamental research, and international competition.

“As a major driver of scientific discoveries, spanning fields from agriculture to pharmaceuticals, a vulnerable bioeconomy puts the country’s economy at risk.”

The report recommends the Executive Office of the President form a “coordinating body” to facilitate coordination across the science, economic, regulatory, and security agencies, as well as take steps to improve cybersecurity and attract science talent around the world, especially to counter China’s intellectual property environment.

Furthermore, the report recommends that the way to measure the U.S. bioeconomy is by assessing the economic contribution of the bioeconomy to the larger U.S. economy, which would raise awareness of the importance of the bioeconomy and the need to monitor and safeguard it.

“A full assessment of the inputs and outputs of the bioeconomy could also enable future analysis of how investment in basic research is tied to productivity, thus enabling better tracking of the outcomes of public investments.”

Based on the report, from calculations and available data, in 2016 the bioeconomy accounted for about 5.1 % of the U.S growth domestic product (GDP), and in dollar terms, this represents $959.2 billion.

This is a rough estimate since the report states there are many factors which are difficult to measure in terms of the contributions that the bioeconomy make to the overall economy. This is because the bioeconomy is tied to both science and commercialization, which leads to divergent approaches for assessing its value. Data on the bioeconomy also have substantial gaps.