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White House Releases Report on Growing U.S. Biomanufacturing Capacity for the American Bioeconomy

The global bioeconomy is projected to expand at a rapid pace in the coming decade due to advancements in key technology areas, such as the ability to program microbes to act as microscopic factories by manipulating their DNA. The U.S. bioeconomy—defined as economic activity derived from the life sciences, particularly in the areas of biotechnology and biomanufacturing, including industries, products, services, and the workforce—has the potential to create thousands of jobs and billions in economic growth. Biomanufacturing is the use of biological systems to produce goods and services at commercial scale, and enables the conversion of plants, waste materials, and industrial off-gas into molecules that form the building blocks of everyday consumer products, medicines, fuels, and more. Sustained growth in U.S. biomanufacturing capacity—the ability to produce with the infrastructure and operational resources available—is the key to growing the bioeconomy. The Biden-Harris Administration recognized the specific role of biomanufacturing in growing the bioeconomy, and through the Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe, and Secure American Bioeconomy (Bioeconomy EO), President Biden directed federal departments and agencies to develop a plan to expand biomanufacturing capacity for health, energy, agriculture, and industrial sectors.

Today, the White House Office of Science and Technology Policy released a report on Building a Vibrant Domestic Biomanufacturing Ecosystem. This report describes the current state of U.S. biomanufacturing capacity and identifies key factors driving growth. Stakeholders indicated that while the United States has maintained a leadership role in biomanufacturing innovation, we still need infrastructure to scale-up technology and produce in America. The report identifies 11 actions that policymakers could consider in order to sustain the U.S. biomanufacturing

capacity that has been catalyzed by the Biden-Harris Administration's broader Investing in America agenda. This modern industrial strategy supports our climate and clean energy goals, builds stronger supply chains, reshores American manufacturing, and advances American leadership around the globe. Federal departments and agencies could work through the National Bioeconomy Board to coordinate and prioritize actions strategically to build on the momentum of the Bioeconomy EO.

The Bioeconomy EO also established the National Biotechnology and Biomanufacturing Initiative (NBBI), which has spurred significant action to expand the U.S. bioeconomy and impacted biomanufacturing capacity. Under the NBBI, the Biden-Harris Administration is bolstering and coordinating federal research and development to address societal goals, fostering a biological data ecosystem to enable safe and secure innovation, boosting sustainable biomass production, preparing a diverse workforce, clarifying and streamlining biotechnology regulations, promoting standards and metrics to inform decision-makers.

Federal investments since the 2022 signing of the Bioeconomy EO have increased from $2.7 billion to more than $3.5 billion, including recently announced awards in biomanufacturing from the Department of Defense, BioMADE, the Department of Health and Human Service's Administration for Strategic Preparedness and Response, the United States Department of Agriculture's (USDA) Rural Development office, and Department of Energy's Loans Program Office. The President's commitment to grow the bioeconomy has spurred $46 billion in public and private sector biomanufacturing investments for projects across the country since the start of the Biden-Harris Administration.

The Bioeconomy EO lays out a policy framework for continued government coordination. We encourage stakeholders to continue the momentum for U.S. innovation in biotechnology and biomanufacturing.

The Biden-Harris Administration has successfully completed the following actions directed by the Bioeconomy EO:

Bioeconomy E.O. Directive	Completed Actions
Harness Biotechnology and Biomanufacturing Research & Development to Further Societal Goals	The Biden-Harris Administration released Bold Goals for U.S. Biotechnology and Biomanufacturing: Harnessing Research and Development to Further Societal Goals outlining how

	to leverage biotechnology for medicine, climate change mitigation, food and agriculture innovation, and U.S. supply chain resilience. The President's Council of Advisors on Science and Technology published a Biomanufacturing to Advance the Bioeconomy report.
Establish a new Data For the Bioeconomy Initiative	The White House published Vision, Needs, and Proposed Actions for Data for the Bioeconomy Initiative. The Department of Commerce (DOC) created the Secure Software Development Framework to establish security standards for bio-related software sold to the federal government.
Build a Vibrant Domestic Biomanufacturing Ecosystem	The White House published a report on Building a Vibrant Domestic Biomanufacturing Ecosystem to provide strategic direction on expanding domestic biomanufacturing capacity for products spanning the health, energy, agriculture, and industrial sectors, with a focus on advancing equity, improving biomanufacturing processes, and connecting relevant infrastructure. USDA released Building a Resilient Biomass Supply: A Plan to Enable the Bioeconomy in America to support the resilience of the U.S. biomass supply chain for domestic biomanufacturing and biobased product manufacturing, while advancing food security, environmental sustainability, and the needs of underserved communities.
Increase Biobased Products Procurement	Procuring agencies reported fiscal year spending to Director of Office of Management and Budget on the number and dollar value of contracts that include procurement of biobased products to include purchasing in service, construction, renovations; and the types and dollar values of biobased products used by contractors carrying out service and construction contracts. To increase federal procurement of biobased products, USDA has recently created a short Biobased Products Purchase Card Holder Training Video intended to quickly and easily train purchase card holders on biobased purchasing requirements and benefits.

Expand the Biotechnology and Biomanufacturing Workforce	The White House released the Building the Bioworkforce of the Future report to expand training and education opportunities for the U.S. population in biotechnology and biomanufacturing, with a focus on advancing racial and gender equity and support for underserved communities.
Clarify and Streamline Biotechnology Regulations	USDA, the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA) issued a request for information and released a Report on Stakeholder Outreach Related to Ambiguities, Gaps, Uncertainties in Regulation of Biotechnology Under the Coordinated Framework. USDA, EPA, and FDA released The Coordinated Framework for the Regulation of Biotechnology to update, clarify, and streamline their regulations and oversight mechanisms for products of biotechnology. USDA, EPA, and FDA released the plain language information on the biotechnology regulatory system to clarify regulatory roles, responsibilities, and processes of each agency for different types of products developed with biotechnology.
Measure the bioeconomy	DOC released a lexicon for the bioeconomy to help support measurements and risk assessments of the bioeconomy. DOC released a feasibility study on Developing a National Measure of the Economic Contributions of the Bioeconomy.

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