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House of Representatives
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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November 7, 2022

The Honorable Rosa DeLauro
Chair
Committee on Appropriations
H-305, The Capitol
U.S. House of Representatives
Washington, DC 20515

Dear Chair DeLauro,

I want to thank you for your strong support of the *CHIPS and Science Act*. The coordinated effort that enabled the bill to pass Congress and reach the President was no small feat to accomplish, and I greatly appreciate your and your staff's efforts on its behalf.

As the Chairwoman of the Science, Space, and Technology Committee, and a leader in crafting the *CHIPS and Science Act*, I am writing to strongly encourage you to bring our efforts on the *CHIPS and Science Act* to fruition by fully funding the activities and authorization levels we put forth in the Act. As you know, this Act was put together with rigorous input from the scientific community, stakeholders, academia, the manufacturing sector, and Americans across the country. In order to strengthen our competitiveness and meet the many challenges we face as a nation, it's important that these authorization levels be matched by the necessary appropriations.

The sections below address the investments we seek to make with the enactment of the *CHIPS and Science Act*. I respectfully ask that you consider the following funding levels for these agencies and the specific programs within the agencies authorized by the Act.

National Science Foundation

The National Science Foundation (NSF) has served this nation remarkably since its creation more than 70 years ago. Through its funding of fundamental research across all STEM disciplines, NSF has catalyzed countless scientific breakthroughs that have expanded human understanding and served as the building blocks for technological revolutions. Unfortunately,

funding for NSF has stagnated for years even as the scientific opportunities continue to grow. While the 18.9 percent increase for NSF in the President's proposal is a significant step in the right direction, it is not sufficient. The course Congress set for the future of NSF in the *CHIPS and Science Act* requires $11.9 billion in appropriations for NSF in FY 2023. This includes $9.05 billion for the Research and Related Activities (R&RA) account (a $1.89 billion or 26 percent increase from FY 2022), $1.95 billion for the Education (EDU) account (a $944 million or 94 percent increase from FY 2022), and $620 million for the Agency Operations and Award Management (AOAM) account (a $220 million or 55 percent increase from FY 2022). The National Science Board (NSB) and the Office of Inspector General (OIG) also have authorized increases of 11 percent and 23 percent, respectively.

I urge you to provide the authorized increases across the agency. They are essential for ensuring NSF can realize the full scale and scope of the new activities mandated by Congress in the *CHIPS and Science Act*. This includes right sizing investments in foundational research across all science and engineering disciplines; ramping up all components of the new Technology, Innovation, and Partnerships (TIP) Directorate; and fully funding new and expanded STEM education and broadening participation programs, including capacity building for minority serving institutions, expanding geographic and institutional diversity, and scholarships, fellowships, and traineeships. I want to call particular attention to the authorized increases to the AOAM and OIG accounts. These are critical for ensuring NSF can maintain high standards for mission-enabling administrative and oversight functions, including identifying and mitigating risks to research security.

National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST) supports U.S. competitiveness by advancing measurement science, standards, and technology across every critical industry of the future and sector of the economy. After three years of largely flat funding, NIST lacks the resources and infrastructure it needs to conduct its critical work. I urge you to provide a substantial increase to NIST's accounts in the FY 2023 enacted budget to match the levels authorized in the *CHIPS and Science Act*.

The Act authorizes NIST's Scientific and Technical Research and Services (STRS) account, which funds NIST's laboratory research, at $979 million in FY 2023. Recent discretionary budgets have been flat, which has restricted NIST's ability to pursue priority research in areas critical to our national and economic security, such as quantum information science, artificial intelligence, and biotechnology. The Act's STRS authorization levels will allow the agency to maintain and expand these important activities. The *CHIPS and Science Act* also seeks to bolster the agency's extramural manufacturing programs. It authorizes $275 million in FY 2023 for the Hollings Manufacturing Extension Partnership (MEP) to maintain and improve the program, support a pilot program for expansion awards for MEP centers, and improve supply chain resilience by creating a national supply chain database. The Act also authorizes $97 million in FY 2023 for the Manufacturing USA program to support several additional manufacturing USA institutes in sectors that will underpin the economy of tomorrow.

Finally, I strongly support investing in NIST's construction account to modernize NIST's labs. Many of NIST's facilities are aging or outdated, with roughly 60 percent of its facilities remaining in poor to critical condition. The agency also has over $850 million in deferred maintenance projects. I urge you to match *the CHIPS and Science Act* and fund the construction account at $200 million in addition to any community projects. These levels will ensure that maintenance and construction projects on both NIST campuses remain on track.

Economic Development Agency

The Economic Development Agency (EDA) serves a unique role in supporting rebuilding and transformation of America's innovation and manufacturing ecosystems. That is why Congress created two new programs for EDA in *the CHIPS and Science Act*. If funded at the authorized levels, these programs will help accelerate high returns on the Federal government's investments in R&D by investing in persistently distressed communities and cultivating regionals hubs of innovation and technology excellence in communities throughout our country.

The Administration requested $50 million for the Recompete Pilot Program in FY 2023; however, I urge the Committee to fund the program at the authorized level of $200 million. This program will boost America's persistently distressed communities by providing flexible multiyear awards tailored to the specific needs of each community. By investing in local economies that have been left behind, we will ensure that all American communities can contribute to and benefit from American innovation. With equal enthusiasm, I urge the Committee to fully fund the Regional Technology and Innovation Hubs program at $1.485 billion for FY 2023. If fully funded, the Tech Hubs program will ensure that we have productive and geographically diverse pipelines to support development and deployment of discoveries beyond the lab and, in doing so, will create good high-paying jobs, nurture startups addressing pressing challenges, and support a wave of domestic manufacturing across our nation. A secure and distributed innovation and manufacturing sector is good for American competitiveness, good for supply chain resilience, and will reduce economic inequities across the country.

Department of Energy

As you work toward finalizing appropriations for Fiscal Year 2023, I strongly urge you to include $8.9 billion for the Department of Energy's (DOE) Office of Science, consistent with the level authorized for FY 2023 in the bipartisan *CHIPS and Science Act*. The Office is the lead federal agency supporting scientific research for energy applications. By providing research funding to thousands of investigators across hundreds of different entities, and through the construction and operation of large-scale experiments and unique scientific user facilities, the Office of Science plays an important and singular role in the nation's efforts to address the climate crisis through the development of new clean energy technologies, and it supports research to probe some of our most fundamental questions surrounding the very nature of matter, energy, space, and time.

I recognize and appreciate that both the House and Senate marks have exceeded the level proposed by the Administration, especially given that the FY 2023 request would not adequately support the research, construction, and facility maintenance with which the Office of Science has

been tasked. However, my Committee's oversight activities and direct engagement with DOE officials have revealed that even more robust funding levels will be necessary to keep major construction projects on budget and on schedule, maintain full operations and support technical staff at existing facilities, address supply chain delays and other impacts of the COVID-19 pandemic, and continue to support world class research carried out by our national laboratories, universities, and private companies. This is true even when accounting for funding provided through the *Inflation Reduction Act*, which addresses deficits that have already been incurred but does not compensate for the shortfalls that the Office faces going forward. As such, I am confident that the $8.9 billion we included in the *CHIPS and Science Act*, and which I am requesting here, will fully enable the Office of Science to meet the financial requirements inherent to the activities described above.

National Aeronautics and Space Administration

The National Aeronautics and Space Administration (NASA)'s research and development programs lead the world in pathfinding discoveries and advances in science, space technology, aeronautics, and human exploration. Our investments in NASA not only lead to awe-inspiring results, such as the James Webb Space Telescope, they help create jobs, develop a skilled workforce, grow our economy, and provide important geopolitical soft power for the United States. NASA's mission inspires Americans and people across the globe. For Fiscal Year 2023, I request full funding to implement the NASA Authorization Act of 2022 in the *CHIPS and Science Act*. For Aeronautics, I request that resources, in addition to those requested by the President, be appropriated to carry out the research and development initiative on reduction of greenhouse gas and noise emissions from aircraft, under the Cleaner, Quieter Airplanes section. This work reinforces NASA's important role in contributing to a sustainable aviation future. In addition, I encourage you to provide resources for implementing the experimental aircraft flight demonstration activities in the *Act*, which will continue to advance U.S. leadership in aeronautics and aviation.

For Science, I request funding of no less than $140 million for Fiscal Year 2023 for the NEO Surveyor Mission to ensure its launch by March 2026 or as early as possible, as directed in the Act and to help mitigate resource reductions to the project. This mission will provide essential contributions to NASA's Congressionally directed surveys to detect, track, catalogue, and characterize near-Earth objects in order to identify and mitigate the potential risks of their impacting Earth. I further request funding toward meeting the goal, under the Act, for research and analysis funding. For Space Technology, I request that you provide resources, in addition those requested by the President, to carry out the space nuclear propulsion program directed in the Act. Space nuclear propulsion is essential for enabling the United States' goal to send humans to the surface of Mars in the late 2030s and advancing NASA's deep space exploration missions. In addition, Madame Chairwoman, I request full funding to carry out the direction on space launch configurations in the Act, which is vital to realizing the nation's Moon to Mars goals.

National Oceanic and Atmospheric Administration

Finally, I strongly encourage you to fully fund federal ocean and coastal acidification research activities at the National Oceanic and Atmospheric Administration (NOAA) and at the National Science Foundation at $20.5 million and $20 million respectively. The ocean has buffered the largest impacts of climate change for hundreds of years. With one third of atmospheric carbon dioxide dissolving into the ocean, we have seen a decrease in ocean and coastal pH. These more acidic ocean and coastal environments can have dire consequences for marine life, and on the coastal industries that rely on them. The reauthorization of the *Federal Ocean Acidification Research and Monitoring Act* as part of the *CHIPS and Science Act* will be vital to improving our understanding of the impacts of an acidifying ocean on marine ecosystems and on coastal communities and economies. This funding will also support coastal communities develop adaptation strategies based on robust federal research and monitoring.

In closing, I recognize the challenges you face in constructing a viable Omnibus appropriations bill in the closing months of the 117th Congress. Yet, the enactment of the *CHIPS and Science Act* has provided the nation an historic opportunity to make transformational changes to spur innovation, create jobs, foster competitiveness, and improve the quality of life for all Americans if we provide the necessary funding. I stand ready to help you achieve that goal, and I appreciate all the important work you are doing for our nation.

Sincerely,

Eddie Bernice Johnson
Chairwoman
Committee on Science, Space, and Technology