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FACT SHEET

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Senate Substitute Amendment to H.R. 4346, The CHIPS and Science Act *Lowering Costs for Families & Reigniting American Competitiveness*

Key Points:

- This week, the House will consider the Senate substitute amendment to H.R. 4346, the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act, a bold, bipartisan legislative package that strengthens our economic and national security, catalyze semiconductor innovation and manufacturing, removing roadblocks to attract scientific talent and investment everywhere in America, boost resilience in U.S. supply chains, create good-paying American jobs, and lowering costs for families here at home.
- After months-long negotiations between the House and Senate, the CHIPS and Science Act passed the Senate with a bipartisan vote of 64 – 33 on Wednesday July 27. All Members are encouraged to vote YES on this legislative package.
- Only 12 percent of semiconductor chips are currently being manufactured domestically, down from 37 percent in the 1990s, and many foreign competitors are investing heavily to dominate this critical national security industry. This package will return the U.S. to its status as a world leader in the semiconductor manufacturing industry and shore up our economic and national security.
- The CHIPS and Science Act includes more than \$52 billion for the CHIPS for America Fund to manufacturers to build, expand, or modernize domestic facilities and equipment for semiconductor fabrication, assembly, testing, advanced packaging, or research and development, including \$2 billion specifically for legacy semiconductors, \$2 billion for the CHIPS for America's Defense Fund to be used for microelectronic research and development at the Defense Department, and \$500 million for the CHIPS for America International Technology Security and Innovation Fund.
- This package includes \$1.5 billion for Public Wireless Supply Chain Innovation, known as ORAN, to expand access to American-made 5G technology so everyone can participate in the 21st Century Economy.
- The CHIPS and Science Act makes robust investments in science and technology for American consumers and workers, including:
 - **Strengthening research and development** through the National Science Foundation, the Department of Energy and the National Institute of Standards and Technology, which will power America's preeminence in both basic research and next-generation technologies.
 - **Advancing regional technology hubs** to ensure that communities across the country can participate in research and development.
 - **Diversifying our STEM workforce** to be inclusive so that our nation's brightest minds are helping drive American innovation.
 - **\$1 billion RECOMPETES grant program** for persistently distressed communities, creating good-paying jobs meeting local economic development needs.

- **Bolstering U.S. space exploration and research initiatives** including authorized funds for NASA advancements in space technology, the Artemis IV lunar missions, and the International Space Station.
- **The CHIPS and Science Act is a powerful bipartisan investment in lowering costs for American families, ending our dependence on foreign manufacturers instead of American-made semiconductors, and turbocharging American R&D to ensure our economic and national security for generations to come through American-led innovation and development.**
- **From the White House [Statement of Administration Policy](#):** *The Administration supports these critical measures to invest in the Nation's competitiveness and technological leadership, outcompete the People's Republic of China, and support domestic manufacturing jobs in communities across the country. We look forward to working with the House and Senate to pass this important legislation and strengthen our economic and national security for generations to come.*

Creating Helpful Incentives to Produce Semiconductors (CHIPS)

CHIPS for America Fund: \$52.7 billion for the Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Fund, including:

- **Semiconductor Manufacturing Incentives:** \$39 billion for assistance to build, expand, or modernize domestic semiconductor manufacturing facilities and equipment, including \$2 billion specifically for legacy chip production to advance economic and national security interests.
- **Research and Development:** \$11 billion allocated for Department of Commerce research and development programs and workforce development initiatives including the National Semiconductor Technology Center (NSTC), National Advanced Packaging Manufacturing Program and other R&D and workforce development programs.
- **Advanced Manufacturing Investment Tax Credit:** Establishes a 25 percent investment tax credit to incentivize construction and modernization of semiconductor manufacturing facilities.
- **CHIPS for America's Defense Fund:** \$2 billion to the Defense Department for microelectronic research and development as well as semiconductor workforce training.
- **CHIPS for America International Technology Security and Innovation Fund:** \$500 million to the State Department, in coordination with USAID, EXIM Bank, and DFC, to support international information and communications technology security and semiconductor supply chain activities.
- **CHIPS for America Workforce and Education Fund:** \$200 million to the NSF for microelectronics workforce development.

Public Wireless Supply Chain Innovation (ORAN): \$1.5 billion to spur movement toward open-architecture, software based wireless technologies, funding innovative, 'leap-ahead' technologies in the U.S. mobile broadband market.

Research & Development Provisions to Turbocharge American-led Innovation

National Science Foundation: \$81 billion for NSF including for research and related activities, STEM education and major research equipment.

- Supports **STEM education** at all levels of learning from Pre-K through Graduate school and **skilled, technical workforce opportunities** – including in the semiconductor and microelectronic space.
- Establishes a new **Technology, Innovation, and Partnerships (TIP) Directorate** with NSF to advance R&D to address societal challenges related to US national security, manufacturing, industrial productivity, workforce development, climate change and education.
- **Expands geographical and institutional diversity in research** by directing the NSF, for the first time, to do specific outreach and provide resources to emerging research institutions in every state in the

country – including HBCUs, MSIs, and smaller schools – as well as making additional considerations for institutions in EPSCoR jurisdictions.

- Promotes **quantum information science workforce development** through a quantum information science education and workforce development program.

Department of Energy Office of Science: \$50.3 billion for research, development and innovation programs at the Department of Energy including funding for:

- **Reauthorizing fundamental research and development** activities at the Department of Energy, National Laboratories, universities and private companies.
- **Basic Energy Science research programs** covering materials sciences, chemical sciences, physical bioscience, geosciences and additional disciplines to advance energy technologies including carbon materials research.
- **High Energy Physics programs** including authorizing a program in elementary particle physics and associated advanced research to improve the understanding of the fundamental properties of the universe; and ensuring U.S. participation in international high energy physics initiatives such as the Large Hadron Collider in Geneva, Switzerland.
- **Advance Scientific Computing research initiatives** to steward applied mathematics, computational science, and computer science research relevant to the Department of Energy.
- **Fusion Energy research and development** including extending the authorization for inertial fusion research and development as well as establishing at least two national teams to develop conceptual designs and technology roadmaps for a pilot fusion plant.
- **Biological and Environmental research and development** in biological systems – including genomic science and biomolecular characterization and imaging science – climate, and environmental sciences relevant to the development of new energy technologies.
- **Sustainable transportation and industrial emissions reduction technologies research and development** aligned with the 10 technology areas in applied energy offices including building technologies, sustainable transportation, advanced manufacturing, renewable power research, grid modernization, alternative fuels development and carbon removal research as well as authorizing appropriations for ARPA-E.
- **National Laboratories restoration and modernization** through funds for deferred maintenance and critical infrastructure investments.

National Institute of Standards and Technology: \$10 billion for NIST including \$2.23 billion for the Hollings Manufacturing Extension Partnership (MEP) and \$829 million for the Manufacturing USA Program, a national network of manufacturing innovation institutes.

- **MEP funding includes pilot of Expansion Award** to award MEP centers that provide worker and entrepreneurship training, improve supply chain resilience and advance technology services to small- and medium-sized manufacturers. Also calls for NIST to establish a voluntary **National Supply Chain Database** within MEP to help recognize supply chain disruptions in advance through evaluations of manufacturing capabilities.
- **Growing a diverse semiconductor workforce and building strong communities** through the creation of grant award preferences for Manufacturing USA Institutes that add geographical diversity to the program or that are located in low-income or socially disadvantaged areas and by expanding opportunities for HBCUs, tribal colleges and universities, MSIs, rural institutions and minority businesses in these institutes.

Job-Creating Hubs: Provides \$11 billion in investments to build job-creating hubs.

- Invests in Regional Innovation by directing the Department of Commerce to create 20 geographically distributed **Regional Technology Hubs** to focus on technology development, job creation and expanding U.S. innovation capacity.
- Includes \$1 billion **RECOMPETES grant program** through the Department of Commerce for persistently distressed communities, creating good-paying jobs meeting local economic development needs.

NASA

- **Establishes a Moon to Mars Program**, including Artemis missions to the Moon, to achieve human exploration of Mars
- Amends the code to **extend the International Space Station (ISS) through 2030** and ensures crew time and resources are used to reduce human risk on long-duration spaceflights, reduce risks for exploration technologies and advance basic and applied space life and physical science research.
- Extends for 10 years NASA's authority to **lease non-excess and underused property and equipment** to other federal agencies and private entities.
- Directs NASA to develop and launch a **space-based infrared survey telescope** capable of detecting near-Earth objects and maintain a **Planetary Defense Coordination Office** to plan, develop and implement the program to survey threats posed by such objects.

Critical National Security and Taxpayer/Consumer Protections Included in the Package

- **Workers hired for the construction of CHIPS projects must be paid the prevailing wage (Davis-Bacon).**
- **Prohibits companies from using awarded funds through the CHIPS program for stock buybacks or payment of dividends.**
- **The expansion clawback in the bill requires the recipients of federal financial assistance not to engage in certain material expansions of semiconductor manufacturing in countries of concern, including China, North Korea, Iran and Russia.**
- **Companies that receive federal financial assistance through the CHIPS program are required to notify the Department of Commerce of any plans for significant transactions that may violate the agreement.**
- **The legislation retains tight Congressional oversight over the federal funds provided to support the domestic production of semiconductors through the CHIPS Act.**