

Funding for the CHIPS for America Act and Enactment of the FABS Act Investment Tax Credit

Congress should act promptly to provide \$52 billion in funding for the CHIPS for America Act and enact a 25% investment tax credit for semiconductor manufacturing and design (FABS Act)

Why it's Important - Semiconductors are critical to the U.S. economy, national security, and technology leadership.

- Semiconductors enable the key technologies driving the future economy and our national security – AI, 5G/6G, quantum computing, cloud services etc.
- The current shortage of chips highlights the vital role of semiconductors throughout the entire economy – including aerospace, automobiles, communications, defense systems, information technology, manufacturing, medical technology, and others.

The Challenge – U.S. semiconductor leadership is at risk as global competitors invest heavily.

- **Manufacturing**
 - The U.S. currently has a robust semiconductor manufacturing base.
 - There are fabs in 18 states.
 - Semiconductors are America's fourth-largest export.
 - The industry employs over 270,000 Americans, and 1.6 million indirectly.
 - But the U.S. has declined from 37% of global capacity in 1990 to only 12% today.
 - The cost of building and operating a fab in the U.S. is 20-40% higher than in other countries due primarily to government incentives.
 - Global competitors are investing heavily in manufacturing, and the U.S. needs to enhance the resilience of the semiconductor supply chain.
- **Research**
 - To maintain global technology leadership, the U.S. semiconductor industry invests approximately 20% of revenue in research.
 - But federal investment has been flat for decades, while global competitors are investing heavily, thereby eroding future innovation and the training of the next generation of innovators.
 - To ensure U.S. leadership in the technologies of the future, the U.S. needs to increase its investments in semiconductor research.

The Solution – Congress should fund the CHIPS Act and enact an investment tax credit incentivizing both manufacturing and design in the U.S. (FABS Act).

- Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Act – Congress has authorized the federal incentives to promote semiconductor manufacturing and increase investments in semiconductor research, as provided in the CHIPS Act, as part of the FY2021 NDAA (Title XCIX), but these programs need to be funded to make them a reality.
 - The Senate has approved \$52 billion in funding for the CHIPS Act as part of the U.S. Innovation and Competition Act (USICA) (S.1260), which passed on a 68-32 bipartisan vote.
 - The House now needs to take action on the funding.
- “Facilitating American-Built Semiconductors Act” (FABS Act) – the FABS Act (S.2107) as introduced in the Senate would establish an investment tax credit for certain expenditures for semiconductor manufacturing. To ensure U.S. leadership throughout the entire ecosystem, this bill should be strengthened to include a credit for semiconductor design.

Manufacturing Incentives

- To compete with the substantial subsidies offered by competitors overseas and fill gaps and vulnerabilities in our supply chain, federal incentives provided in the CHIPS Act and the FABS Act are needed to attract fab construction, expansion, and modernization in the U.S.
- Incentives for manufacturing and investments in research offer significant benefits for the U.S. economy, national security, and supply chain resilience.
 - The Boston Consulting Group [released a study](#) which outlined the need for and impact of robust federal incentives for domestic semiconductor ecosystem to reverse decades-long trajectory of declining U.S. chip production.
 - The report outlined different scenarios of significant U.S. investment in manufacturing incentives. A scenario of \$50 billion USG investment would reverse the decline in semiconductor manufacturing in the US and would result in 19 new facilities, unleash \$279 billion in industry investment from the private sector, and generate 70,000 direct jobs and support 350,000 additional jobs.
 - These incentives would strengthen our supply chain and ensure the availability to meet key national security and economic needs.

Design Incentives

- Semiconductor design is a key element of U.S. technology leadership. U.S. headquartered companies account for 47 percent of global semiconductor sales, and to remain competitive it is essential for the U.S. to maintain leadership in semiconductor design.
- To ensure the U.S. remains at the cutting edge of semiconductor technology, the investment tax credit in the FABS Act should be strengthened to include a credit for next generation semiconductor design.
- A strengthened FABS Act would help strengthen the entire semiconductor ecosystem and help maintain U.S. technology leadership.

Research Investments

- Investments in research are critical to U.S. technology leadership, and the U.S. economy and national security are reliant on the U.S. remaining the leader in semiconductor technology.
- The semiconductor industry supports increased investments in basic research at federal research agencies such as the National Science Foundation (NSF), the Department of Energy Office of Science, the Defense Advanced Research Projects Agency (DARPA), and the National Institute of Standards and Technology (NIST).
- The CHIPS Act also includes investments in advanced development, such as funding for a National Semiconductor Technology Center (NSTC) and a semiconductor packaging center. The NSTC is critical for U.S. capabilities in advanced development and prototyping to commercialize innovative technologies, and strengthened capabilities in advanced packaging are essential to U.S. technology development and supply chain resilience.
- According to a [report](#) commissioned by SIA:
 - Each \$1 invested in semiconductor research yields \$16.50 in GDP growth over 5 years.
 - Increases in semiconductor research would add \$161 billion to U.S. GDP and create nearly 500,000 more jobs by 2029.
- Investments in semiconductor research will help ensure the U.S. remains the global technology leader and will help educate the next generation of innovators, thereby providing the pipeline of scientists and engineers needed for the U.S. economy and national security.

We recognize these requests require significant resources, but the cost of inaction is even higher – CHIPS & FABS are vital to our economic future, technology leadership, and national security.