

Enact Bipartisan Competitiveness Legislation to Strengthen Semiconductor Research, Design, and Manufacturing in the U.S.

Congress should promptly enact bipartisan competitiveness legislation that (1) provides \$52 billion in funding for the CHIPS for America Act to strengthen U.S. chip research, design, and manufacturing and (2) includes a 25% investment tax credit for semiconductor manufacturing and design (as called for in the FABS Act). These initiatives are part of a holistic, integrated strategy for U.S. semiconductor leadership.

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.
- A resilient semiconductor supply chain and U.S. semiconductor technology leadership is critical to our national security, critical infrastructure, and economy.

THE CHALLENGE

U.S. semiconductor leadership is at risk as global competitors invest heavily to build their domestic industry and technology capabilities.

Manufacturing

The U.S. share of modern global semiconductor manufacturing capacity has declined from 37% in 1990 to only 12% today.

- Global competitors are investing heavily in manufacturing, and the U.S. needs to enhance the resilience of its semiconductor supply chain.
- Due primarily to foreign government incentives, the cost of building and operating fabs is 20-40% higher in the U.S. than abroad.

Research and Design

Semiconductor research and design are key foundations of U.S. technology leadership.

- U.S. chip companies are world leaders in semiconductor research and design, but global competitors are seeking to challenge this lead.
- To maintain global technology leadership, the U.S. semiconductor industry invests approximately 20% of revenue in research.
- Unfortunately, federal investment in research has been flat for decades, limiting innovation and the training of the next generation of innovators.

Global competitors are heavily incentivizing semiconductor design, with investment tax credits as high as 50% and significant grant programs.

THE SOLUTION

To compete with the substantial foreign subsidies and to address our supply chain vulnerabilities, Congress should enact bipartisan competitiveness legislation that (1) funds the CHIPS Act and (2) includes a FABS Act investment tax credit incentivizing both semiconductor manufacturing and design in the U.S. Both are needed to provide robust incentives to strengthen the U.S. semiconductor ecosystem, and both should be included in competitiveness legislation Congress is considering.

CHIPS Act: Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America

Act – Congress authorized federal incentives to promote semiconductor manufacturing and increased investments in semiconductor research as part of the FY2021 NDAA (Title XCIX) (P.L. 116-283), but these programs need to be funded to make them a reality.

- The Senate-passed USICA (S. 1260) and House-passed COMPETES Act (H.R. 4521) include \$52B in funding for the CHIPS Act.
- Congress must promptly enact compromise legislation with full CHIPS funding.

FABS Act: Facilitating American-Built Semiconductors Act (FABS Act) – the bipartisan FABS Act (H.R. 7104/S.2107) would establish a tax credit for investments in constructing, expanding, and upgrading semiconductor manufacturing facilities and equipment in the U.S., and the House bill includes a credit for semiconductor design.

- SIA strongly supports the House version of the FABS Act to provide a credit for both semiconductor manufacturing and design as a means of strengthening the entire ecosystem. This version should be included in final competitiveness legislation Congress is considering.



CHIPS GRANTS AND FAB TAX CREDITS – AN INTEGRATED POLICY APPROACH FOR U.S. LEADERSHIP

Both CHIPS grants and tax credits for semiconductor manufacturing and design are parts of a complementary, holistic strategy, and both are needed to produce robust, predictable, and durable incentives to restore U.S. semiconductor leadership.

The original bipartisan CHIPS Act in the 116th Congress (S.3922/H.R.7178) included both direct grants and a tax credit for semiconductor manufacturing facilities and equipment. When the CHIPS programs were authorized as part of the FY 2021 NDAA the tax provisions were removed.

Grants and tax credits for chip manufacturing and design reinforce each other.

- Grants offer targeted, one-time incentives for manufacturing
- Tax credits for manufacturing and design offer ongoing, predictable incentives to continue ongoing investments to construct, upgrade, and expand new and existing facilities and to conduct advanced chip design.

CHIPS grants are focused on manufacturing capabilities, while strengthened FAB tax credits provide incentives for both manufacturing and design.

The grant program allows Commerce to target funding to address key gaps and vulnerabilities in our supply chain, while the tax credits allow for more streamlined implementation and can assist companies and regions that do not receive a grant.

As the U.S. strengthens its semiconductor manufacturing and supply chain resiliency, it should bolster our longstanding leadership in chip design.

The CHIPS Act also includes investments in advanced development, such as funding for a National Semiconductor Technology Center (NSTC) and an Advanced Packaging Manufacturing Program (APMP).

- 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.
- Funding facilities for advanced prototyping and piloting will help inventors through the “valley of death” where innovative ideas funded as pre-competitive basic research are unable to secure the necessary investment to become commercially viable.



VOICES IN SUPPORT

The CHIPS Act and FABS Act enjoy broad-based support from bipartisan leaders in government, national security, and business.

- 22 bipartisan [governors](#)
- [National security leaders](#), including former leaders of the Department of Defense and intelligence community
- Dozens of [CEOs](#) from a diverse range of companies, including the CEOs of Alphabet, Apple, Cisco, Ford, General Motors, and Medtronic, as well as major [industry associations and unions](#) representing major sectors of the economy and broad business groups, such as the U.S. Chamber of Commerce and the National Association of Manufacturers.

Funding the CHIPS Act and enacting the FABS Act are vital to our economic future, technology leadership, and national security.



America's Future is Built on Semiconductors