

Strengthening the U.S. Semiconductor Ecosystem through Targeted Tax Policy

SIA urges Congress and the Administration to utilize smart, targeted tax policy to strengthen the competitiveness of the U.S. semiconductor industry ecosystem and thereby enhance the U.S. economy, technology leadership, national security, and supply chain resilience. SIA calls for action on the following tax priorities:

- A semiconductor investment tax credit (ITC) to incentivize manufacturing in the U.S.
- An advanced R&D tax credit to stimulate semiconductor research in the U.S.
- Repeal of the R&D amortization provision to preserve the value of the Section 174 R&D deduction and enhance the competitiveness of the U.S.

The following targeted tax policies can immediately bolster the entire semiconductor ecosystem by providing relief for U.S. companies and enhancing domestic competitiveness:

- **ITC**
SIA urges Congress to adopt a refundable investment tax credit to incentivize the placement into service of semiconductor manufacturing equipment, fab infrastructure, and capital costs. While the U.S. share of global semiconductor manufacturing capacity was 37 percent in 1990, its share has dropped to 12 percent today, as our global competitors have provided significant subsidies to attract investment in this sector. As a result, the cost of building and operating a semiconductor fab in the U.S. is 20-50 percent more expensive than overseas. A tax incentive is needed to make the U.S. more cost competitive.¹
- **Advanced R&D Credit**
To strengthen the entire semiconductor ecosystem and maintain U.S. technology leadership, SIA urges an expanded credit framework to encompass advanced research and experimentation activities undertaken by semiconductor companies. In 2019, the U.S. semiconductor industry invested nearly \$40 billion in R&D, nearly 20 percent of revenue (among the highest of any industry), and a significant portion of this research was conducted for the development of next generation semiconductor technology, with most of this research being conducted by companies in the U.S. An advanced R&D credit would incentivize research in next generation semiconductor technology and help maintain the U.S. as the innovation leader.
- **Repeal of the R&D amortization**
The tax incentive support for R&D in the U.S. is weaker than similar research incentives offered in other countries,² and unfortunately upcoming changes to the tax treatment of research expenses will weaken the environment even more. Currently, consistent with the tax system of all significant U.S. trading partners, U.S. based research expenses can

¹ Empirical data suggests that investment tax credits are more effective at spurring high levels investment. See Edgerton, *Investment, Accounting, and the Salience of the Corporate Income Tax*, Finance and Economics Discussion Series – Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board (2011). As an example, in the fourteen years since the introduction of solar investment tax credits, the industry has grown 10,000 percent, creating thousands of jobs and investing billions of dollars in the U.S. economy. https://www.seia.org/sites/default/files/2020-01/SEIA-ITC-Factsheet-2020-Jan_1.pdf.

² According to an OECD report, the federal and state tax support in the U.S. ranks 24th out of 34 in a comparison group consisting of all large OECD members, plus Brazil, Russia, India, and China (BRIC). See <https://itif.org/publications/2020/09/08/enhanced-tax-incentives-rd-would-make-americans-richer>

be deducted annually, which encourages more private sector investment in R&D with the goal of creating new or improved products, services, processes or techniques. However, recent legislation altered this treatment by requiring the research expenses to be amortized over five years, thereby reducing the value of the deduction. Once it takes effect, amortization of research expense will make the U.S. less attractive for research investments by the semiconductor industry and the broader economy.³ If the amortization requirement takes effect, the U.S. will be one of only two countries with such a policy and a less attractive place for critical R&D. This provision should be repealed to strengthen the research and innovation ecosystem in the U.S.

The Importance of the Domestic Semiconductor Industry

- **Semiconductors are Critical to the U.S. Economy** – Semiconductors enable technologies transforming and growing virtually all sectors of the economy. Semiconductors are also a perennial top five U.S. export product. The industry indirectly employs more than a million people and has major commercial manufacturing facilities in 18 states.
- **Semiconductors are Critical to U.S. National Security** – U.S. leadership in semiconductor technology contributes to the digital transformation essential to our national security. From artificial intelligence to 5G/6G communications to quantum computing, leadership in semiconductor technology is critical to our national security.
- **Semiconductors are Critical to U.S. Technology Leadership** – Semiconductors underpin the “must win” technologies transforming virtually all sectors of the economy. Leadership in semiconductor technology will enable the U.S. to drive these transformational technologies and secure the economic and security benefits.
- **Global Competitors are Investing Heavily, the U.S. must Compete** – Foreign governments are providing extensive incentives – ranging from full/partial tax holidays, favorable loans, reduced utility costs, and direct global subsidies.⁴ As a result, the cost of building and operating a fab in the U.S. is not competitive with other countries, and the U.S. share of global semiconductor manufacturing capacity has declined from 37 percent in 1990 to 12 percent today. China alone is offering \$100 billion in domestic subsidies, including massive tax breaks which are funding the construction of more than 60 new semiconductor fabs.
- **It is Not Too Late** – Federal incentives can reverse these trends. An SIA report estimates that a federal incentive program would likely encourage the construction of 19 new fabs and generate 70,000 jobs.⁵

³ One report estimates the amortization will cost over 23,000 R&D jobs in the first 5 years and nearly another 60,000 in the following 5 years. See Impact of the Amortization of Certain R&D Expenditures on R&D Spending in the United States, available at <https://investinamericasfuture.org/ey-impact-of-the-amortization-of-certain-rd-expenditures-on-rd-spending-in-the-united-states/>.

⁴ Measuring distortions in international markets: The semiconductor value chain, *OECD Trade Policy Papers*, No. 234, available at <https://doi.org/10.1787/8fe4491d-en>.

⁵ Turning the Tide for Semiconductor Manufacturing in the U.S., available at <https://www.semiconductors.org/turning-the-tide-for-semiconductor-manufacturing-in-the-u-s/>