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FACT SHEET:

Building the U.S. Semiconductor Workforce: January 2025 Update

Workforce is foundational to economic and national security.

CHIPS for America is catalyzing a transformation of the U.S. semiconductor industry, with historic investments to rebuild American leadership in manufacturing and spur a new era of innovation in research and design. Since the day the CHIPS and Science Act passed, the Department of Commerce has been laser-focused on building the world's best manufacturing and innovation talent. In February 2023, CHIPS for America laid out an ambitious vision for America to train and inspire a new generation of technicians, engineers, and researchers.

Less than two years later, the United States has achieved rapid progress in building pathways for Americans to secure the approximately 125,000 good jobs that CHIPS projects will create. Looking back from the launch of CHIPS for America, this document provides a summary of our progress to date in growing a thriving domestic semiconductor workforce. **By investing in workforce development as a key economic and national security strategy, CHIPS for America is securing American prosperity and innovation for decades to come.**

The Department of Commerce has delivered on the CHIPS Act's call to invest in America's technology workforce, at a scale not seen since the height of the Cold War.

CHIPS for America has mobilized substantial new public and private investments towards semiconductor talent attraction, retention, and advancement, including:

- Nearly $300M to date in dedicated CHIPS workforce funds to support over 25 CHIPS-funded manufacturing facilities across 12 states.
- $250M investment in the National Semiconductor Technology Center (NSTC) Workforce Center of Excellence, a flagship public-private partnership to develop innovative solutions to the industry's most pressing workforce challenges.
- Over $200M and counting in private capital towards new and incumbent worker training and retention in the United States from semiconductor companies.
- Over $300M in new funding for semiconductor workforce development from 14 states, thanks in part to the CHIPS Program Office (CPO)'s efforts encouraging state and local investment incentives to support education and workforce development.
- Over $55M through CHIPS Research and Development (R&D) to support the workforce for advanced packaging, measurement science, and related fields.
- Joint investment commitments to the $200M National Network for Microelectronics Education, a cross-agency and public-private collaboration across the Department of Commerce, the U.S.

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National Science Foundation (NSF) and the NSTC Workforce Center of Excellence, to help scale educational resources across the country.

CHIPS for America is seeding critical education and workforce infrastructure across the country in support of American competitiveness.

Already, the potential for new CHIPS jobs and investments is incenting workforce ecosystem growth across the country. Promising signs of new pathways include:

- 600+ strategic partners across 28 states engaged by CHIPS applicants, comprising 250+ educational institutions, 100+ workforce or economic development organizations, and 70+ community-based or labor organizations.
- More than 20 companies utilizing apprenticeships as a key talent strategy, including new or expanded programs from firms like TSMC and Intel. Many CHIPS awardees are also committing to apprentice utilization targets on their construction sites, strengthening the long-run vibrancy of the American construction workforce.
- Nearly 20 companies investing in child care in their communities, including over 10 companies supporting expansion of supply of child care in CHIPS regions, and over 16 companies reducing the costs of care for workers though offerings such as flexible spending accounts, subsidies, and tuition discounts. CHIPS awardees are also developing public-private partnerships to address staffing shortages and ensure their workers have access to needed child care seats.
- Over 80 community colleges across 22 states expanding semiconductor programming or starting new initiatives.
- Over a dozen workforce intermediaries selected by CHIPS-funded companies to coordinate and accelerate workforce solutions in their host regions.[1]

CHIPS for America's revitalization of the domestic semiconductor industry is making semiconductor jobs increasingly attractive and competitive

Semiconductor companies and their partners recognize the importance of a focused strategy to attract and retain skilled workers, which are essential to the growth and future success of the industry. Evidence to date includes:

- Competitive compensation packages offered by CHIPS awardees, including benefits like comprehensive health and retirement plans, bonuses and stock options, tuition reimbursement and educational assistance programs, and paid family leave policies.[2]
- Significant wage premiums for CHIPS jobs compared to non-semiconductor and non-manufacturing jobs -- 41 percent for workers with a high school diploma and 79 percent for

[1] As of January 4, 2024. For information on CHIPS awardees intermediary selections, please see "Community Impact Reports" at https://www.nist.gov/chips/funding-updates. For more information on workforce intermediaries, please see CHIPS Workforce Intermediary Strategy.

[2] In their applications to CPO, companies were required to describe commitments to create good jobs in line with the Departments of Commerce and Labor's Good Jobs Principles as part of their facility and construction workforce plans.

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those with a bachelor's degree.[3] Research has also found that jobs created by CHIPS are more likely to offer health insurance coverage. [4]

- Increases in median salaries on U.S. semiconductor job postings. Advertised salaries for semiconductor jobs have gone up by over 35 percent since the passage of the CHIPS Act, according to Lightcast data.
- CHIPS awardees representing two of the top ten public companies in the country on JUST Capital's 2024 rankings of companies that support workers and communities. The industry overall continues to climb in the rankings year over year.
- Multiple semiconductor companies exploring skills-based hiring. CPO expects that approximately half of new manufacturing jobs will not require a four-year degree.

TO MEET THE INCREASING DEMAND FOR TALENT, CHIPS HAS DEPLOYED A WHOLE-OF-NATION STRATEGY.

Increasing the competitive advantage of America's semiconductor workforce means bringing new people into the field, including communities who have not historically participated in the industry. Efforts to tap into new talent include:

- New strategies to recruit and retain veterans, including commitments from companies to internships for transitioning service members, short-term training and certificates to create smooth onramps for veterans into the industry, and site designation as a Military Center of Excellence.
- Launch of the Historically Black Colleges and Universities (HBCU) CHIPS Network to help coordinate the resources of HBCUs and contribute to workforce and research and development needs of the semiconductor industry.
- Five companies voluntarily adopting the CHIPS Women in Construction Framework to broaden participation in the construction workforce, with new initiatives to sustainably fill gaps in select trades and professions.

CHIPS WORKFORCE FUNDING IS MOVING AT THE PACE OF THE MARKET, AND OUR STRATEGY WILL DELIVER MEASURABLE RESULTS FOR INDUSTRY, WORKERS, AND THE AMERICAN TAXPAYER.

CHIPS Program Office workforce funding is being deployed through a proven, performance-based model, focused on solutions that end in a job, not merely completion of training. Key features include:

- Innovative contracting methods that reduce red tape and streamline disbursement – so that CHIPS-funded workforce solutions respond to real workforce challenges and do not waste time and resources on "train and pray" programs.
- Novel intermediary structure that allows companies, non-profits, education partners, labor organizations, and government to focus on what they uniquely do best and increase speed-to-market for solutions.

[3] Reid, Michael, and Falan Yinug. "Chipping in: The Positive Impact of the Semiconductor Industry on the American Workforce and How Federal Industry Incentives Will Increase Domestic Jobs." Semiconductor Industry Association, Oxford Economics, May 2021.
[4] Pollin, Robert, Jeannette Wicks-Lim, Shouvik Chakraborty, Gregor Semieniuk, and Chirag Lala. "Job Creation, Job Quality, and Demographic Distribution Measures for: BIL—Bipartisan Infrastructure Legislation; IRA—Inflation Reduction Act; CHIPS—Creating Helpful Incentives to Produce Semiconductors," Political Economy Research Institute at University of Massachusetts Amherst, September 2023.

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- In-house workforce experts at the Department of Commerce that work hand-in-glove with awardees to provide collaborative and responsive service and customer-focused implementation support.[5]
- State-of-the-art technology to provide real-time performance information from education and training providers and enable companies to effectively manage the investments in their workforce.
- Data sharing and research partnerships between the Department of Commerce and the NSTC Workforce Center of Excellence to understand program effectiveness.

The Path Ahead

CHIPS workforce investments have been intentionally designed to serve as a catalyst. Public funds will help kickstart the ecosystem development required for the United States to rapidly rebuild its manufacturing base and grow its innovation advantage. Already, we are seeing large returns on this strategy. Private, education, labor, non-profit, state, and federal partners across the country are joining forces to advance our shared mission. New high-quality training and education programs are launching, and more Americans are gaining a foothold in this critical industry. As a result, American workers will be ready to design and build the technologies that will define our future. CHIPS for America is committed to realizing their success.

[5] Offerings include best-in-class implementation support on the Davis-Bacon Act.

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