

MEMORANDUM

TO: Interested Parties
FROM: Adrienne Elrod, Director of External & Government Affairs, CHIPS for America
DATE: August 9, 2023
SUBJ: CHIPS for America Delivering Results One-Year In

OVERVIEW

One year ago, President Biden signed the CHIPS and Science Act into law, a bipartisan achievement aimed at:

- Investing in projects critical to U.S. economic and national security;
- Securing and extending America’s leadership in semiconductor technology;
- Creating good-paying jobs and building strong communities; and,
- Stewarding taxpayer dollars efficiently by only providing the amount necessary to incentivize private investment.

Soon after, Secretary Raimondo formed CHIPS for America, a new team at the Department of Commerce tasked with implementing this historic law. One year later, CHIPS for America is already making progress as part of President Biden’s agenda that is investing in American workers, supply chains, and communities.

The United States has become a magnet for private sector investments in semiconductor manufacturing and innovation: semiconductor companies have already committed over \$231 billion to building and operating fabrication facilities (“fabs”) in the U.S. and other parts of the semiconductor supply chain. At the same time, dozens of America’s universities, community colleges, and research institutions have announced partnerships with the private sector to train workers and invest in more cutting-edge research and development (R&D).

CHIPS for America is a historic opportunity for our country to come together and strengthen national security, rebuild supply chains, unleash the next generation of innovation, and solidify America’s technological leadership in the 21st century.

This memo outlines progress to date to stand up this program and the course we are charting for years to come.

INVESTING IN CHIPS AMERICA

CHIPS Powering Private Investments

Since President Biden took office, the United States has experienced a manufacturing renaissance. Private companies have announced more than **\$500 billion** of investments in manufacturing in every state and territory. Of those investments, the bulk – **\$231 billion** – is focused solely on manufacturing semiconductor chips, materials and equipment for such chips, and associated research. And **\$166 billion** of these investments were committed after the CHIPS and Science Act was signed into law.

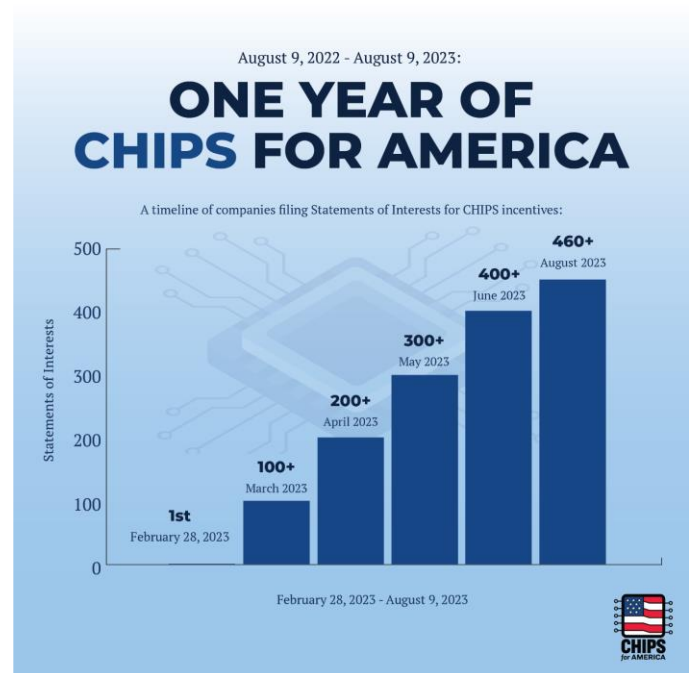
CHIPS for America seeks to [catalyze private investment](#) in the semiconductor industry, not replace it. For each application, Commerce will only dedicate the minimum amount of federal funding necessary to accomplish the program’s goals. Our aim is to attract additional, significant private capital to create viable projects at sufficient scale. Our process requires applicants to show us their plans to activate private capital, set up creative financing structures, secure commitments from customers, and support a healthy semiconductor ecosystem in the U.S.

At the same time, we are requiring applicants to tell us not only how they will maximize our own dollars but also how they plan to maximize state and local incentives as well as the Investment Tax Credit through the Department of the Treasury.

Hundreds of Project Proposals

Since February, the Department received more than **460 statements of interest** outlining proposals to manufacture chips and the relevant equipment and materials for making chips in America. These companies range from big, medium, and small and all look to build projects up, down, and across the semiconductor ecosystem in **42 states**. These are projects that will support small businesses and revitalize communities that have been left behind or counted out. Some of these projects will create entirely new local economies and opportunities across the nation.

From big fabs that will create thousands of jobs, to chip packaging facilities, to smaller chemicals and material companies, each statement of interest confirms that the private sector remains deeply invested in building in America.

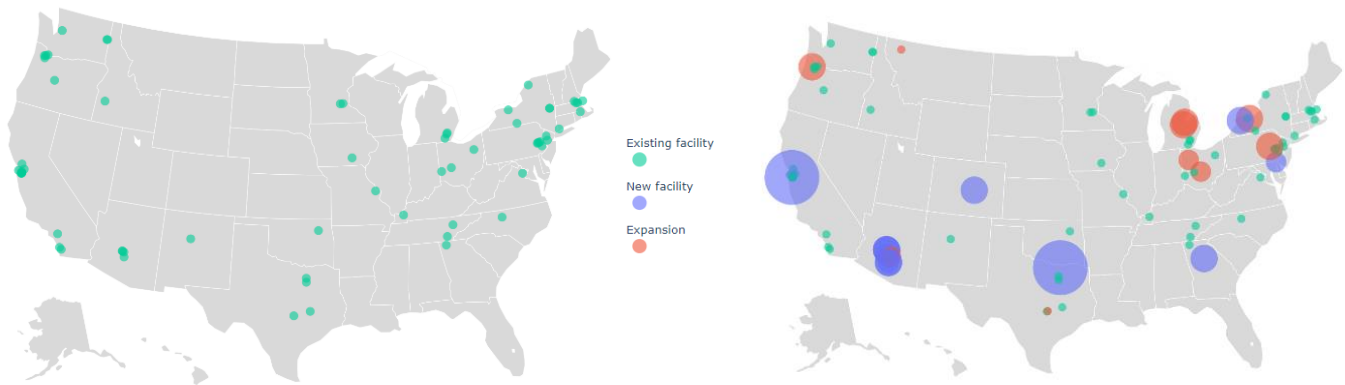


Rebuilding Domestic Supply Chains

One of the main reasons President Biden, Secretary Raimondo, and bipartisan leaders in Congress worked together to pass the CHIPS and Science Act was to bring manufacturing and supply chains back home to America. While major fabs are a critical part of producing chips, they are only as strong as the supply chains that produce them and package them.

Americans saw during the pandemic how semiconductor shortages affected key industries, such as autos and medical device manufacturing. CHIPS for America is working to build resilience in our supplies going forward. That's why CHIPS for America is not only investing in commercial fabs, but also semiconductor materials, equipment, and R&D facilities to make our supply chains more resilient. America is now attracting private investment not only in fabs, but across the entire semiconductor supply chain.

*Semiconductor Supply Chain Facilities Before and After
President Biden Signed the CHIPS and Science Act*



BUILDING THE A-TEAM

After President Biden signed the CHIPS and Science Act into law, Secretary Raimondo got to work building an A-Team at Commerce. The semiconductor industry is one of the most dynamic and complex industries on the planet, and she knew getting the job done right required the best and brightest talent that reflects the ingenuity and diversity of America. Secretary Raimondo hired the first CHIPS staffer in September 2022. The team has now grown to more than 140 people.

Since CHIPS is designed to leverage public investment to spur private capital, Secretary Raimondo has focused on recruiting talent from inside and outside government capable of going toe-to-toe with large, sophisticated companies to ensure we reach the best possible deals for the American taxpayer.

To get this job done right, CHIPS for America brought on:

- National security leaders and experts from the Pentagon and intelligence community to make sure we prioritize investments that protect our long-term national security;
- Economists and former semiconductor industry leaders who know how the industry works;
- Financial pros from some of the world’s leading financial institutions, private equity firms, and investment firms to make sure we get taxpayers the best deal possible;
- Workforce experts who know the ins and outs of what workers the industry needs and experience fostering partnerships with community colleges, labor unions, child care providers, and companies;
- Lawyers trained in navigating federal, state, and local permitting requirements to help companies cut through red tape while building the cleanest and most energy efficient facilities of their kind in the U.S.; and
- Microelectronics researchers and technology leaders from the country’s best universities and companies.

Read more about the experts joining CHIPS for America:

- **Reuters:** [U.S. Commerce Dept. names financial sector, government experts to chips team](#)
“The new team members include officials with experience managing large federal programs, experts from the semiconductor industry, and executives with financial sector experience, the department said.”
- **Roll Call:** [Officials juggle several US goals as they award CHIPS money](#)
“Armed with \$52 billion, a team of experts drawn from the worlds of finance, science and technology, national security, economic policy, trade and the environment have assembled at the Commerce Department to attempt to reverse a decades-long decline in U.S. semiconductor manufacturing.”

THREE KEY FOCUSES: ECONOMY, SECURITY, & INNOVATION

On February 23, 2023, Secretary Raimondo [delivered](#) remarks at Georgetown University's School of Foreign Service to outline the historic opportunity the bipartisan CHIPS and Science Act presents to solidify America's permanent global leadership and protect our long-term national security. She laid out bold goals to make the United States the only country in the world where every company capable of producing leading-edge chips will have high-volume manufacturing capabilities and R&D to innovate for the future.

Since then, CHIPS for America has made significant progress on these key priorities:

Creating Economic Opportunity

CHIPS for America is a prime example of how the United States is investing in the middle class again, creating good-paying jobs that don't require a four-year college degree. In fact, the Brookings Institution [reports](#) that more than 60% of the jobs in a fab don't require a college degree.

Since President Biden signed the CHIPS and Science Act into law, semiconductor companies have announced new projects [expected](#) to create 20,500 manufacturing jobs working in facilities. Of these jobs, 13,500 are projected to be in big manufacturing fabs and 6,900 are expected to be at facilities that are part of the semiconductor supply chain.

And, by the end of the decade, the CHIPS and Science Act is expected to create hundreds of thousands of good-paying jobs with opportunities to join unions, including 100,000 construction jobs building the facilities and more than 90,000 manufacturing jobs.

Training programs, community colleges, universities, labor unions, and industry are already working together to prepare a skilled workforce and strong talent pipeline for years to come. Communities are seeing the impacts of these partnerships, which will support a robust ecosystem to ensure that workers can get the skills and training they need to work in the semiconductor industry.

Some of these partnerships include:¹

- In Ohio, a semiconductor company made a [\\$50 million investment](#) matched by the U.S. National Science Foundation to total \$100 million aimed at bolstering Ohio's education institutions, building a talent pipeline, and addressing workforce challenges.
- In Indiana, [Purdue University was awarded \\$5 million](#) from state funding for a semiconductor workforce partnership to develop a talent pipeline for the industry.
- In Arizona, [Arizona State University has made commitments](#) to help bridge the "lab to fab" gap and prepare skilled workers to be skill-ready day one on the job, and [community colleges across Maricopa](#) have stood up programs where potential semiconductor technicians can learn skills in just 10 days.
- In New York, 22 university and colleges formed the [Northeast University Semiconductor Network](#), in coordination with the U.S. National Science Foundation and Micron, to ensure programs across institutions can get engineers and skilled workers into the industry.

¹ The cited examples contain publicly available information about semiconductor manufacturing in the United States. These examples do not reflect any endorsement by the Department of Commerce. The information provided below is a summary and not exhaustive.

- In Maryland, [Morgan State University, an HBCU serving the Baltimore area, launched two new research centers](#) leveraging state funds and focused on semiconductor design and fabrication innovation.

Expanding America’s Workforce

CHIPS for America is laser-focused on attracting, training, hiring, and retaining the best talent in America to help ensure the success of this program. As Secretary Raimondo [has said](#), if we don’t invest in America’s manufacturing workforce, it doesn’t matter how much we spend in this program because we won’t succeed without the right workforce.

That’s why Secretary Raimondo is calling on colleges and universities to work with semiconductor companies and:

- Triple the number of graduates in semiconductor-related fields, including engineering.
- Expand recruitment pipelines so that more underserved populations – including women, under-represented communities, and veterans – get into these programs and launch their careers.
- Train 100,000 new technicians over the next decade through apprenticeships, career and technical education, and career pathway programs.
- Work with manufacturers, construction companies, and unions to advance the national goal of hiring and training another million women in construction over the next decade to meet the demand not just in chips, but other industries and infrastructure projects as well.

Secretary Raimondo to Students

Secretary Raimondo is committed to doubling the semiconductor workforce over the next decade, with the most diverse, productive, and talented workers in the world. She recently [spoke](#) with aspiring young professionals about the bright future of semiconductor careers.



“The reason I’m so excited to join you is I want you—your generation—to think about making a living making things in America. And for a long time that wasn’t the case. And I’m asking you to think about it, because it’s incredibly rewarding, at the end of your day, to go home and know that you were part of making something that makes a difference in the world.”

Advancing National Security

President Biden, Secretary Raimondo, and leaders in Congress passed the CHIPS and Science Act with strong bipartisan support because it is critical to the long-term national security of the United States. As we experienced during the pandemic, the holes and bottlenecks in our semiconductor supply chains sent shockwaves across the economy. This is not just a risk to our economy, but to our national security.

Additionally, global competition is increasingly about technology and chips – rather than just tanks and missiles. Yet, even though the United States invented semiconductors, we currently make none of the world’s most advanced chips needed for defense, critical infrastructure, or emerging technologies of the future like artificial intelligence (AI). Maintaining our competitive edge in science and technology is crucial to our national security, and the countries who invest in research, innovation, and workforce will lead the 21st century.

That’s why CHIPS for America is investing in our capacity here at home so that we aren’t reliant on other countries for the chips and technology we need for military modernization, intelligence efforts, and cybersecurity. Our goal is that the most advanced semiconductor technologies are designed and manufactured here in the U.S.

The Department of Commerce has:

- Made economic and national security a primary lens to review applications.
- [Signed](#) a first-of-its-kind agreement with the Department of Defense to expand our collaboration to ensure that our investments position the U.S. to produce semiconductor chips essential to national security and defense programs.
- [Released](#) proposed national security guardrails for the incentives program to ensure the technology and innovation funded by the CHIPS and Science Act is not used for malign purposes against the U.S. or its allies and partners.
- [Coordinated and collaborated](#) with allies and partners to make global supply chains more resilient and diversified.



Read more about our work to advance national security:

- **Wall Street Journal:** [Pentagon to Reap Rewards From \\$53 Billion Chips Act](#)
“Commerce officials will count on input from Defense Secretary Lloyd Austin and the defense and intelligence communities as they begin implementing the program this week,’ [Secretary Raimondo] said.”
- **Reuters:** [U.S. seeks to prevent China from benefiting from \\$52 billion chips funding](#)
“The U.S. Commerce Department on Tuesday released proposed rules to prevent \$52 billion in semiconductor manufacturing and research funding from being used by China and other countries deemed of concern ... It also classifies some semiconductors as critical to national security – defining these chips as not considered to be a legacy chip and therefore subject to tighter restrictions.”
- **ABC News:** [What the US is doing with semiconductors to stave off China threat](#)
“The Departments of Commerce and Defense signed a memorandum of agreement on Wednesday in an effort to strengthen information sharing and coordination in doling out CHIPS incentive funds -- a move top U.S. officials say will shore up national security as China attempts to overtake the United States in semiconductor production.”

Driving Innovation

In addition to investing in building more chips in America, we will continue to develop the innovation and technologies of the future that improve people’s lives. As part of the CHIPS R&D program, we’re creating a new National Semiconductor Technology Center (NSTC), an ambitious public-private consortium where government, industry, customers, suppliers, educational institutions, entrepreneurs, workforce representatives, and investors will converge to innovate, connect, and solve problems. And, most importantly, it’s going to ensure the U.S. leads the way in the next generation of semiconductor technologies— everything from sustainable manufacturing, AI, and 6G communications to the future applications we haven’t even thought of yet.

Read more about our work on accelerating innovation:

- **New York Times:** [Commerce Dept. Outlines Plans to Fund Cutting-Edge Chip Research](#)
“The technology center is expected to be central to that effort. Some of its locations would be capable of end-to-end manufacturing of new chip designs, while others would focus on experimenting with new materials and equipment, or with new ways of putting chips together to make them more powerful, Ms. Raimondo said.”
- **Bloomberg:** [Biden Set to Launch \\$11 Billion Chips Program R&D Centerpiece](#)
“The Biden administration is setting up a network of advanced computer-chip design and engineering facilities, the focal point of plans to spend \$11 billion on research and development to bolster US economic and national security. The Commerce Department envisions the National Semiconductor Technology Center involving a number of new technical sites around the country, working with academic and industry partners to drive innovations in products and workforce development.”

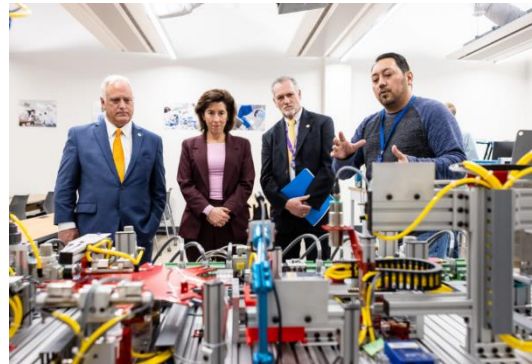
WHERE WE'VE BEEN

CHIPS for America is a historic opportunity to solidify America's technological leadership and win the industries of the future, but only if we as a nation unite behind a shared objective. That's why Commerce has been fanning out across the country to get companies, workers, educational institutions, state and local governments, and other partners rowing in the same direction. Since President Biden signed the CHIPS and Science Act into law, Secretary Raimondo, Deputy Secretary Graves, and Commerce officials have traveled to 27 states and held more than 50 events.

Here's a sample of how CHIPS for America is mobilizing public-private partnerships across the country:

Secretary Raimondo

- **September 2022:** Secretary Raimondo, Secretary Blinken, Senator Todd Young (R-IN), Governor Eric Holcomb (R-IN) and ecosystem stakeholders [visit Purdue University's Birk Nanotechnology Center](#) and participate in a fireside chat focused on building a semiconductor ecosystem to restore domestic manufacturing and competitiveness abroad.
- **October 2022:** Secretary Raimondo toured the University of Maryland NanoCenter FabLab, and [held a roundtable discussion](#) on how to improve domestic technological capacity and production with Senator Chris Van Hollen (D-MD); University President Darryll Pines; Senior Vice President and Provost Jennifer King Rice; and A. James Clark School of Engineering Dean Samuel Graham.
- **December 2022:** President Biden, Secretary Raimondo, and Governor Doug Ducey (R-AZ) mark milestone of the [installation of the first piece of equipment](#) at a new Arizona fab facility.
- **March 2023:** Secretary Raimondo toured the advanced manufacturing facilities at Austin Community College District (ACC) and [hosted a roundtable with Austin Mayor Kirk Watson](#), ACC Chancellor Dr. Richard Rhodes, the interim CEO of the Austin Chamber of Commerce, industry leaders, and ACC manufacturing students to discuss the growing industry and building a skilled workforce.
- **March 2023:** President Biden and Secretary Raimondo [visit North Carolina plant](#) which produces silicon carbide chips for semiconductors. The company had just announced a \$5 billion facility west of Durham, which the President referred to as "the largest investment in manufacturing in North Carolina history."
- **April 2023:** Secretary Raimondo [hosted meeting at Portland Community College](#) to discuss domestic semiconductor manufacturing with the Oregon Congressional Delegation and industry representatives.
- **May 2023:** Secretary Raimondo and Deputy Secretary Graves hosted a CHIPS roundtable with 13 Governors at SelectUSA.
- **June 2023:** Secretary Raimondo and Senator Amy Klobuchar (D-MN) [convened a meeting at Normandale Community College](#) in Minnesota with local government officials, semiconductor



Secretary Gina Raimondo tours advanced manufacturing facility at Austin Community College (ACC) with Austin Mayor Kirk Watson (left); ACC Chancellor Dr. Richard M. Rhodes (second from right); and ACC student Guadalupe Lozano (right).

company executives, and business and education leaders on the need for Minnesota companies and others throughout the U.S. to increase microchip production.

- **July 2023:** Secretary Raimondo participated in a [panel focused on the future of US semiconductor policy and national security](#) at the American Enterprise Institute with Senator Todd Young (R-IN) and Chris Miller. Miller is Assistant Professor of International History at the Fletcher School of Law and Diplomacy at Tufts University.
- **July 2023:** Secretary Raimondo [participated in a virtual event with aspiring professionals](#) about how the CHIPS and Science Act and the resulting revitalization of the domestic semiconductor industry are creating thousands of new, high-paying jobs.

Deputy Secretary Graves

- **November 2022:** Deputy Secretary Graves participated in a CHIPS R&D roundtable at North Carolina State University and toured the Power America Laboratory.
- **November 2022:** Deputy Secretary Graves tours local semiconductor businesses, Teledyne/FLIR and Transphorm and participated in a CHIPS [ecosystem roundtable](#) with the University of California-Santa Barbara and other key stakeholders.
- **April 2023:** Deputy Secretary Graves led a workforce development roundtable with industry stakeholders at [Metropolitan State University of Denver](#).
- **May 2023:** Deputy Secretary Graves participated in a CHIPS R&D workforce development roundtable at the Seattle Metropolitan Chamber of Commerce with ecosystem stakeholders in Washington and toured NVIDIA's Robotics Lab.
- **August 2023:** Deputy Secretary Graves gave keynote remarks at the International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART) Annual Leadership Conference.



Deputy Secretary Graves (second from left) participates in a workforce roundtable with Massimo Ruzzene, Vice Chancellor of Research and Innovation at University of Colorado, Boulder (left); Maluwa Behringer, Executive Director of Industry Partnerships at MSU Denver (second from right); and student Julia Molnar (right) at Metropolitan State University of Denver.

WHERE WE'RE GOING

We are ready to keep moving fast. With more than 460 statements of interest received already, we are ready to test the strength of applications, and maximize investments that advance economic and national security and meet other objectives laid out in the funding opportunity.

Application Timeline: Then and Now

- **Since February 28:** Commerce announced first funding opportunity for commercial fabrication facilities and [started accepting statements of interest](#) for all companies.
- **March 31:** Commerce started accepting [pre-applications and full applications](#) for leading-edge proposals.
- **May 1:** Commerce started accepting [pre-applications](#) for current- and mature-generation proposals.
- **June 26:** Commerce started accepting [full applications](#) for current- and mature-generation proposals.
- **September 1:** Commerce will begin accepting [pre-applications for large supply chain projects](#) (\$300 million and above).
- **October 23:** Commerce will begin accepting [full applications for large supply chain projects](#) (\$300 million and above).
- **Later This Year:** The Department of Commerce and CHIPS for America will outline Notice of Funding Opportunities (NOFOs) for [smaller supply chain projects](#) and commercial R&D facilities.