CHIPS: The Intersection with States
State Economic Development Executives Network (SEDE)

October 26, 2023
Background: CHIPS and Science Act
One Hundred Seventeenth Congress of the United States of America

AT THE SECOND SESSION

Began and held at the City of Washington on Monday, the third day of January, two thousand and twenty-two

An Act

Making appropriations for Legislative Branch for the fiscal year ending September 30, 2022, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

Sec. 1. Table of contents.
Sec. 2. References.

DIVISION A—CHIPS ACT OF 2022

Sec. 101. Short title.
Sec. 102. Creating helpful incentives to produce semiconductors (CHIPS) for America fund.
Sec. 103. Semiconductor incentives.
Sec. 104. Opportunity and inclusion.
Sec. 105. Additional GAO reporting requirements.
Sec. 106. Appropriations for wireless supply chain innovation.
Sec. 107. Advanced manufacturing investment credit.

The CHIPS and Science Act of 2022
CHIPS for America Programs

$39 billion for manufacturing

Components:
1. Attract large-scale investments in advanced technologies such as leading-edge logic and memory
2. Incentivize expansion of manufacturing capacity for mature and other types of semiconductors

$11 billion for R&D

- National Semiconductor Technology Center
- National Advanced Packaging Manufacturing Program
- Manufacturing USA institute(s)
- National Institute of Standards and Technology measurement science

Together with CHIPS initiatives from other agencies, including DOD, State, NSF, and Treasury

Workforce development
CHIPS for America Vision

Economic Security
This act enables us to build more resilient supply chains for important components.

National Security
This act enables us to bring the most sophisticated technologies back to the U.S.

Future Innovation
Chips are key to the technologies and industries of the future, so we need to be at the forefront. This act will ensure long-term U.S. leadership in the sector.
Manufacturing the Future

Under the Biden-Harris Administration, private companies have announced $500 billion in manufacturing, and over $231 billion in semiconductor manufacturing.

Source: invest.gov; last updated September 26, 2023
CHIPS Cluster Vision and the Role of States
Regional clusters as the foundation for a competitive industry

By end of decade, United States will have **at least two new large-scale clusters** of leading-edge logic fabs. Each leading-edge cluster will have the **scale, infrastructure, and other competitive advantages** required to ensure that chipmakers view **continued expansion in the United States** as economically attractive and core to their business models, even in the absence of future funding from the CHIPS Program.
CHIPS vision for success calls for vibrant regional clusters

- **Strengthen Supply Chain Resilience**
  - The U.S. and its allies will reduce chokepoint risks flowing from geographic concentration
  - Supply chain participants will improve the transparency of demand and supply to reduce the risks of production disruptions

- **Advance U.S. Technology Leadership**
  - The U.S. will have incentivized major U.S. equipment and materials suppliers to increase their footprints in the U.S.
  - Non-U.S. suppliers of the world’s most advanced equipment, materials, and subsystems will also establish large-scale footprints in the U.S.

- **Support Vibrant U.S. Fab Clusters**
  - Each CHIPS-funded fab cluster in the U.S. will be supported by dozens of suppliers, including many investing in the U.S. for the first time
  - State and local entities encouraged to help facilitate the expansion of these ecosystems
States can convene and support cluster ecosystems

Local coordination is critical

- Cluster governance and communication
- Local resource mobilization
- Regional planning

Convene across broad cluster topics including permitting, infrastructure, housing, transit, research, startups, sustainability, workforce, childcare

Local cluster partners could include:

- Supplier Facility
- Higher Ed Institution
- State/Local Gov
- Semi-conductor Fab
- Econ Dev Corp
- Labor Union
- Workforce Training Provider
How can states support the CHIPS for America vision?

- **Incentives**: Attracting or facilitating expansion of manufacturing facilities, including materials and equipment.
- **Workforce Development**: Investing in workforce development at all levels of the semiconductor industry.
- **Ecosystem**: Supporting infrastructure, permitting, monitoring needs.
- **R&D and Innovation**: Investing in R&D and innovation to aid in developing the future technology of the industry.
Covered Incentives
CHIPS Incentives Funding Instruments

- **Direct funding**: $38.2B
- **Loan guarantees**: up to $75B
- **Loans**:

**Alternate funding sources:**
- Private Investments
- Investment Tax Credit (26 U.S.C. § 48D)
- State & Local Incentives
The CHIPS for America statute requires that applicants demonstrate they have secured incentives from state or local government.

- An eligible entity must have been offered a covered incentive from a state or local jurisdiction where the project is located, for the purposes of construction, expansion, or modernization of the facility.
- Examples of this can be:
  - Concessions related to real property
  - Workforce pipeline and technical training investments
  - Funding for research and development with respect to semiconductors
  - Investments in industrial infrastructure that specifically support the proposed project, but that also could support broader development of a supplier ecosystem such as shared utility, logistics, and production capacity
States and municipalities could show this commitment in various ways

**Factors for States to consider:**
- **Financial investments:** Support industrial infrastructure that may aid a specific project but could support broader development of a supplier ecosystem such as shared utility, logistics, and production capacity.
- **Permitting:** Expedited processes for environmental, health, and safety reviews and permits.
- **Liaisons:** Point of contact to assist with site selection, supplier discovery, and compliance with local laws.
- **Workforce Training:** Fund programs to ensure broad talent pipelines.
- **Integration:** A systems integrator that works with ecosystem companies to address shared issues like navigating permits, building infrastructure, finding workers, and coordinating incentive applications.
- **Cooperation:** Planning and support for other ancillary investments such as housing and community development.
- **Collaboration:** Where relevant, partnership with other states and localities to develop regional ecosystems and corridors that encompass multiple jurisdictions.

**Financial incentive packages are encouraged to create the potential for large spillover benefits.**

**Permitting** includes expedited processes for environmental, health, and safety reviews and permits.

**Liaisons** can act as a point of contact to assist with site selection, supplier discovery, and compliance with local laws.

**Workforce Training** involves funding programs to ensure broad talent pipelines.

**Integration** refers to a systems integrator that works with ecosystem companies to address shared issues such as navigating permits, building infrastructure, finding workers, and coordinating incentive applications.

**Cooperation** involves planning and support for other ancillary investments such as housing and community development.

**Collaboration** involves where relevant, partnership with other states and localities to develop regional ecosystems and corridors that encompass multiple jurisdictions.
Since August 2022, states have passed their own "CHIPS" legislation, bolstering state incentives to help attract semiconductor investments and support an ecosystem.

- Permitting and Site Selection
- Tax Incentives
- Incentives to Ecosystem Partners
- R&D Funding
- Workforce-related Incentives
- Industrial Land Planning and Infrastructure Investments
Other State Opportunities
States will be critical partners in meeting the CHIPS for America semiconductor workforce vision

*Over the next decade…*

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<th><strong>Double</strong> the U.S. semiconductor workforce overall.</th>
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<td><strong>Triple the number of graduates</strong> in semiconductor-related fields, including engineering.</td>
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<td><strong>Train 100,000 new technicians</strong> through apprenticeships, career and technical education, and career pathway programs.</td>
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<td>Expand recruitment for <strong>more people from underserved communities</strong> – including women and veterans – to launch semiconductor industry careers.</td>
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<td>Hire and <strong>train an additional million women in construction</strong> to meet the demand across a range of industries, including CHIPS projects.</td>
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Since the passage of the CHIPS and Science Act, at least seven states have announced new funding to support semiconductor workforce development, including:

- Community college expansion
- Instruction & equipment
-tuition assistance
- Registered Apprenticeships
- Curriculum development
- Matching funds

Workforce development to support a facility is an eligible use of funds for manufacturing incentives funds. In addition, workforce development has been named as one of the top three priorities for the National Semiconductor Technology. Over fifty community colleges in over 19 states have announced new or expanded programming to support semiconductor opportunities.
New state investments in infrastructure development are also facilitating cluster development, including:

- Grid resilience and energy sustainability, including renewables
- Roads, transportation, and transit
- Housing and zoning
- Water and wastewater
- Site development / site preparation funds

Fab projects bring significant industrial infrastructure needs (such as upgraded power grids, gas lines, and water treatment facilities) and other local infrastructure needs, such as housing and community amenities. State investments in these areas can contribute to building U.S. strength and competitive advantage in the industry.
States can contribute to strengthening domestic supply chain resilience

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<th>Address key vulnerabilities</th>
<th>Acclimate foreign firms new to business in the U.S.</th>
<th>Create inclusive business opportunities</th>
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<td>• States can attract continued investment to fill critical gaps in the ecosystem, including advanced materials and manufacturing equipment</td>
<td>• States can facilitate access to services, shared facilities and infrastructure, and guide critical suppliers through complexities of permitting or finding new customers</td>
<td>• States can work with partners to identify and engage with small, minority-owned, veteran-owned, and women-owned businesses and help these firms leverage the opportunity created by CHIPS</td>
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Some states are supporting the semiconductor innovation ecosystem

1. Investments in research and development
2. Start-up incubators and accelerators that can advance next-generation technologies
3. Innovation centers, cleanrooms, and other facilities

States can enable continuous interplay among universities, R&D facilities, startups, and manufacturing upgrades.
Program Update and Next Steps
Funding Opportunities

- **February 28, 2023**: For commercial leading-edge, current, and mature node fabrication facilities
- **June 23, 2023**: For large semiconductor materials and equipment facility projects $300M+
- **September 29, 2023**: For smaller semiconductor materials and equipment facility projects under $300M

To support the construction of semiconductor R&D facilities

The CHIPS Program Office has received over 530 statements of interest and more than 130 pre-applications and full applications
CHIPS Small Supplier Opportunity
Strongly Encourages Consortia

What does a strong consortium look like?
- At least 2 suppliers
- A state or local government entity
- An anchor institution
- May also contain workforce training providers, labor unions, econ dev corps, higher ed, and more
- Does not require an umbrella organization or formal legal structure

Benefits
- We generally expect applicants applying as part of consortia to be better positioned to meaningfully contribute to the development or sustainability of a cluster.
- Applicants can work together to satisfy certain requirements
- Achieve greater economies of scale, efficiency, and effectiveness
- Take advantage of the shared skills and resources

Example: Science Park
- Land
- Shared Utilities and Infrastructure
- Streamlined Permitting
- Incentives for Suppliers
CHIPS for America R&D

- National Semiconductor Technology Center
- National Advanced Packaging Manufacturing Program
- Manufacturing USA institutes
- Metrology

WORKFORCE
Next Steps

• Visit CHIPS.gov for resources, including:
  • Notice of Funding Opportunity
  • Vision for Success papers and Implementation Strategies
  • Applicant guides and templates
  • FAQs and fact sheets
  • Webinar schedule (and slides/recordings of prior webinars)
• Teaming Partner List
• Join our mailing list
• Contact us
  • askchips@chips.gov – general inquiries
  • apply@chips.gov – application-related inquiries