

CHIPS for America SIA Membership Briefing

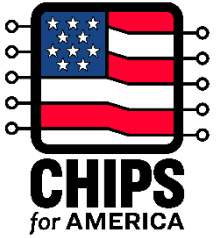
March 8, 2023



NIST



Today's CHIPS Program Office Speakers



Michael Schmidt
Director of the CHIPS
Program Office

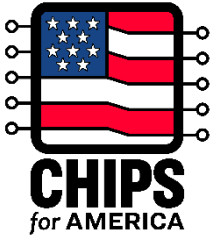


Morgan Dwyer
Chief Strategy Officer



Todd Fisher
Chief Investment Officer

CHIPS for America Vision



Economic Security

The CHIPS Act will strengthen supply chain security and increase economic resilience in critical sectors.



National Security

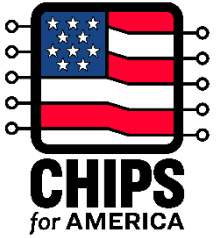
The CHIPS Act will ensure that the U.S. can manufacture advanced technologies, including secure chips for the U.S. military.



Future Innovation

The CHIPS Act will spur innovation, increase competitiveness, and ensure long-term U.S. leadership in the sector.

Funding Opportunities



February 28, 2023

1st Notice of Funding Opportunity

For commercial leading-edge, current, and mature node fabrication facilities

Focus of today's webinar

Late Spring 2023

2nd Notice of Funding Opportunity

For material suppliers and equipment manufacturers

Fall 2023

3rd Notice of Funding Opportunity

To support the construction of semiconductor R&D facilities

Submission of Statements of Interest for all funding opportunities encouraged

Vision for Success



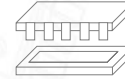
Leading-Edge Logic

- ✓ The U.S. will have at least **two new large-scale clusters of leading-edge logic fabs**
- ✓ **U.S.-based engineers** will develop the process technologies underlying the **next gen of logic chips**



Memory

- ✓ U.S.-based fabs will **produce high-volume memory chips on economically competitive terms**
- ✓ **R&D for next-generation memory** technologies critical to supercomputing and other advanced computing applications will be **conducted in the U.S.**



Advanced Packaging

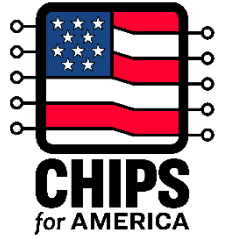
- ✓ The U.S. will be home to **multiple high-volume advanced packaging facilities**
- ✓ The U.S. will be a **global leader in commercial-scale advanced packaging technology**



Current-Generation and Mature

- ✓ The U.S. will have **strategically increased its production capacity** for current-gen and mature chips
- ✓ Chipmakers will also be able to **respond more nimbly** to supply and demand shocks





ACCOMPLISHING THESE OBJECTIVES REQUIRES:

Catalyzing private investment

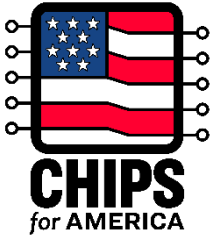
Protecting taxpayer dollars

Building a skilled and diverse workforce

Engaging with U.S. partners and allies

Driving economic opportunity and inclusive economic growth

Funding Eligibility



For organizations
that are...

- private
- non-profit
- consortia

that can
substantially...

- construct
- expand
- modernize

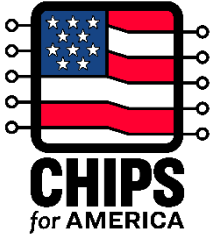
a U.S. facility for...

- fabrication
- assembly
- testing
- packaging
- production

of...

- semiconductors

**More details available in the funding opportunity announcement*



PROJECTS THAT HAVE BEEN ANNOUNCED OR ARE UNDER CONSTRUCTION

- Funding must incentivize the applicant to make investments in facilities and equipment in the U.S. that **would not occur in the absence of CHIPS incentives**
- Relevant applicants must demonstrate that...
 - CHIPS Incentives requested will enable the applicant to **meaningfully enhance the size, scope, speed, or technical ambition of the overall application**

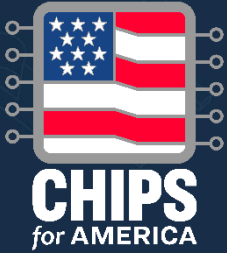
OR

- This project would not occur **without CHIPS funding**

FABLESS COMPANIES

- **Fabless companies play a critically important role in the success of the CHIPS program:**
 - Can engage or partner with potential applicants
 - Support commercial viability of potential projects
 - Generate demand for domestic semiconductor industry
 - Beneficiaries of expanded domestic chip production
- Fabless companies not seeking to construct, expand, or modernize an eligible facility are not eligible for this NOFO, but there will be funding in the third NOFO for R&D facilities

Program Priorities



Economic
and national
security
objectives



Commercial
viability



Financial
strength



Technical
feasibility
and
readiness

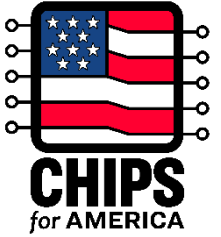


Workforce
development



Broader
impacts

Economic Security



SEEKING PROJECTS THAT

- Increase U.S. semiconductor production and align with U.S. strategic needs
- Create a more resilient semiconductor supply chain
- Build foundry or other capacity to serve many different customers
- Attract supplier, workforce, and other investments
- Contribute to a self-sustaining ecosystem and catalyze future upgrades

Leading-edge

- Use the most advanced tech and produce products that are most critical to enhancing U.S. competitiveness
- Commit to ongoing investment in U.S.

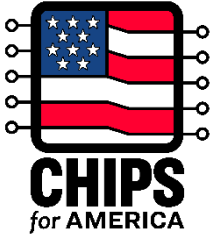
Current-generation and mature-node

- Support production of chips vital to automobiles, aerospace and defense, and other critical infrastructure
- Use processes that convert to make other types of chips in times of disruption

Back-end production

- Advanced packaging

National Security



SEEKING PROJECTS THAT

Produce semiconductors that are relied upon by the Department of Defense, other government systems, or by critical infrastructure

Support U.S. government national security needs, such as by providing U.S. government access to facility output, or adapting commercial production for low-volume and high-mix national security components

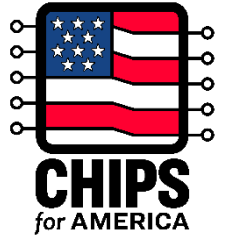
Mitigate operational and cybersecurity risks

Strengthen supply chain resilience by analyzing and managing risks to their own supply chains

Ensure that foreign entities of concern will not pose undue risks

Produce mature-node semiconductors that are then supplied to critical manufacturing industries

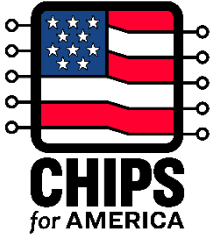




Guardrails

- We plan to release a notice of proposed rulemaking implementing the guardrails in March
- Funds may not be provided to a foreign entity of concern
- Recipients will be required to agree to restrict their ability to expand semiconductor manufacturing capacity in foreign countries of concern for ten years
- Recipients must not knowingly engage in any joint research or technology licensing effort with a foreign entity of concern that involves sensitive technologies or products
- Failure by CHIPS incentives recipients to comply with these restrictions may result in recovery of the full amount of funding

Commercial Viability



Demand for the product

Size / diversity of customer base

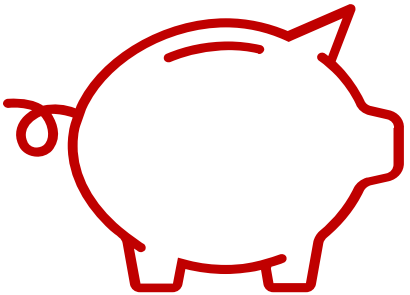
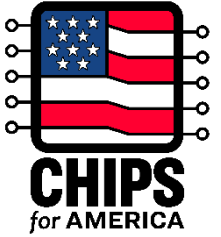
Existing and planned supply

Expected volume and pricing dynamics

Ability to counter potential technological obsolescence of the facility

Stability and predictability of key supplies

Financial Strength

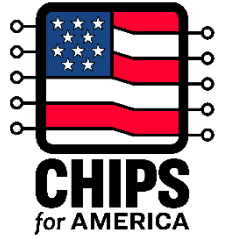


Financial strength of the applicant / parent

Financial strength of the project

Commitment of private/third-party investment

Reasonableness / suitability of CHIPS funding request



A “covered incentive” includes...

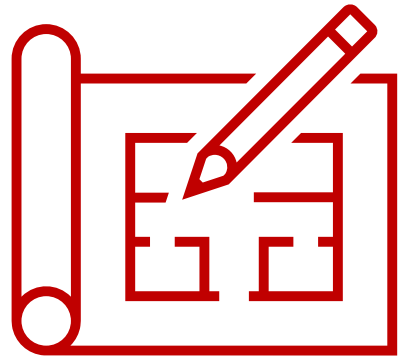
- Tax incentive
- Workforce-related incentive
- Concession with respect to real property
- Funding for R&D



STATE & LOCAL INCENTIVES

- Eligibility Requirement:
 - Applicants must be offered a **state or local** government incentive **in the jurisdiction** where the facility will be built, modernized, or expanded
- Letter from state or local government entity is required
- Incentives that create spillover benefits encouraged
- CPO will be providing resources to state and local governments

Technical Feasibility and Readiness

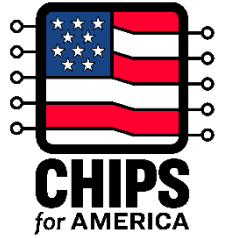


Organizational
readiness

Technology and
manufacturing
processes

Construction
plan

Environmental
risk

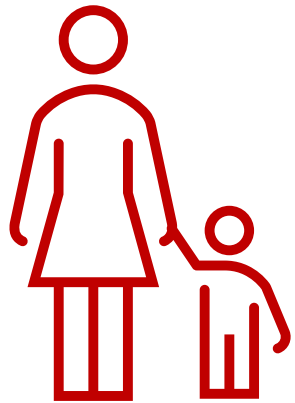
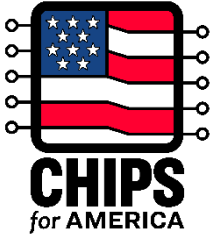


National Environmental Policy Act (NEPA)

Start now

- 1 Submit an environmental questionnaire with pre-app or app
- 2 CHIPS environmental review team will use the environmental questionnaire to ensure required information is available as soon as possible
- 3 Upcoming webinars will provide detailed information

Workforce Development (1/2)



Create good jobs

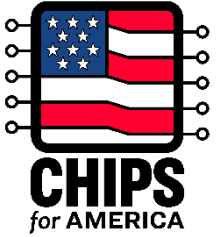
Recruit, hire, train, and retain a diverse and skilled construction and manufacturing workforce

Include women and economically disadvantaged individuals

Engage with community partners

Child care plan required in any application with direct funding request over \$150M

Workforce Development (2/2)



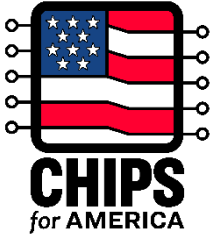
Strategic partners required; **sectoral partnerships** strongly encouraged

Good Jobs Principles should be applied to newly created and pre-existing jobs



The **Workforce Guide** will be a key resource, available later this month

Broader Impacts



Commitments
to future
investment

Support for
semiconductor
R&D

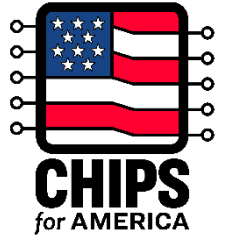
Inclusive
opportunities
for businesses

Climate and
environmental
responsibility

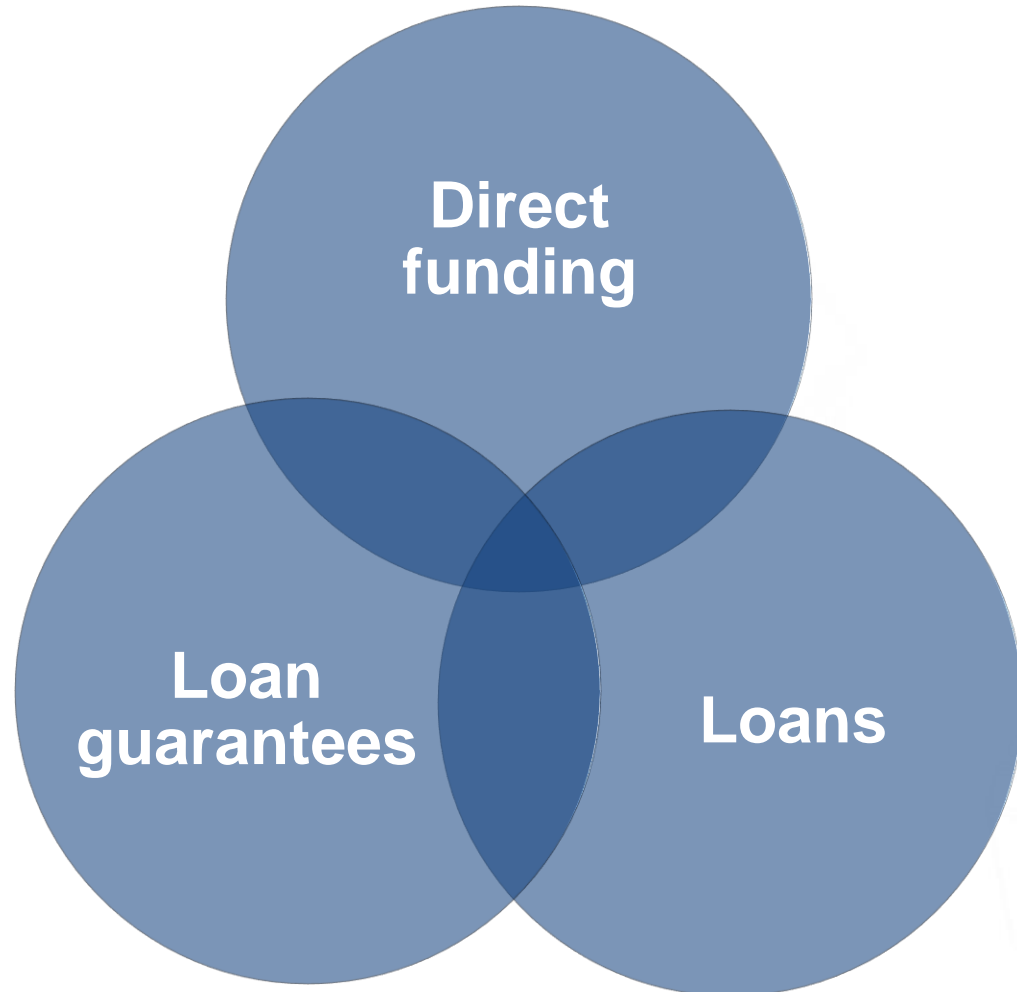
Community
investments

Domestic
content
preferences

Funding Instruments



CHIPS Incentives Funding

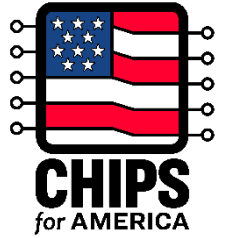


Other Funding Sources

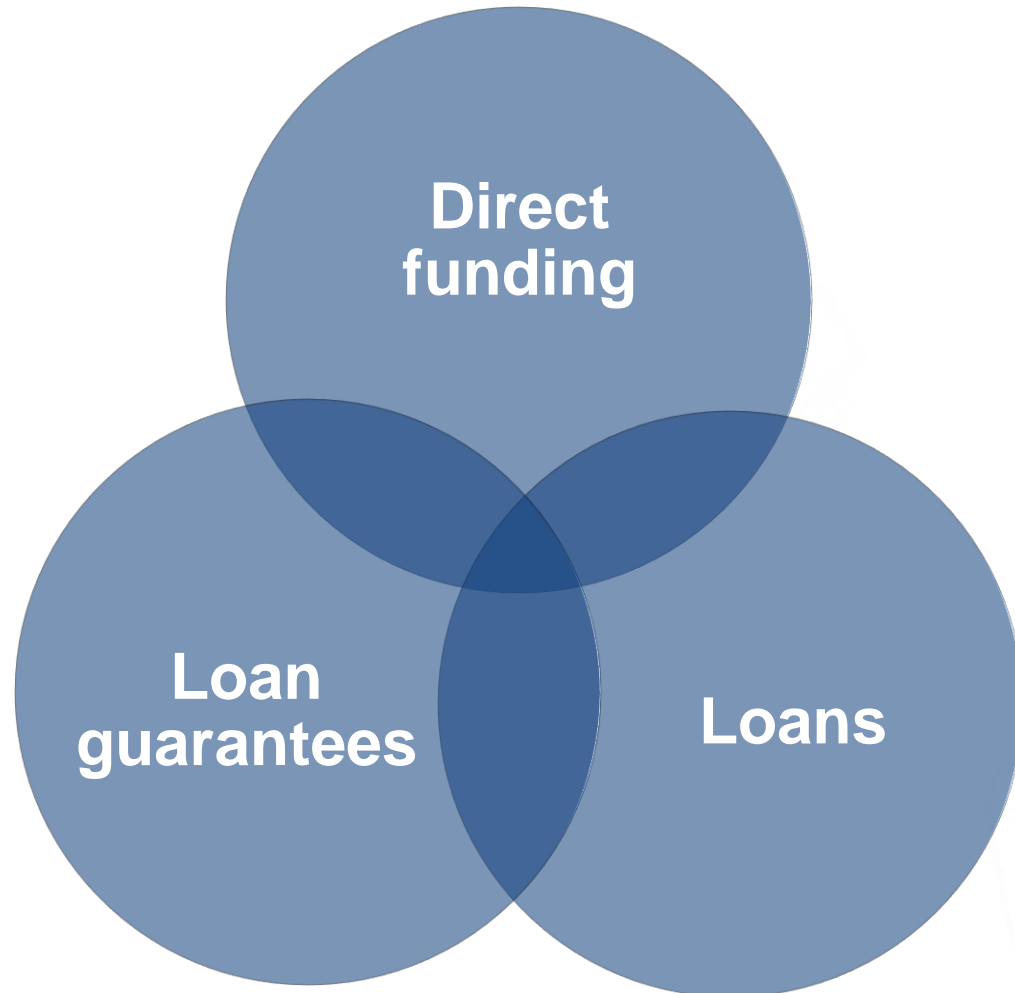
Private Investment

Investment Tax Credit
(26 U.S.C. § 48D)

State & Local Incentives



Funding Allocation (1/2)

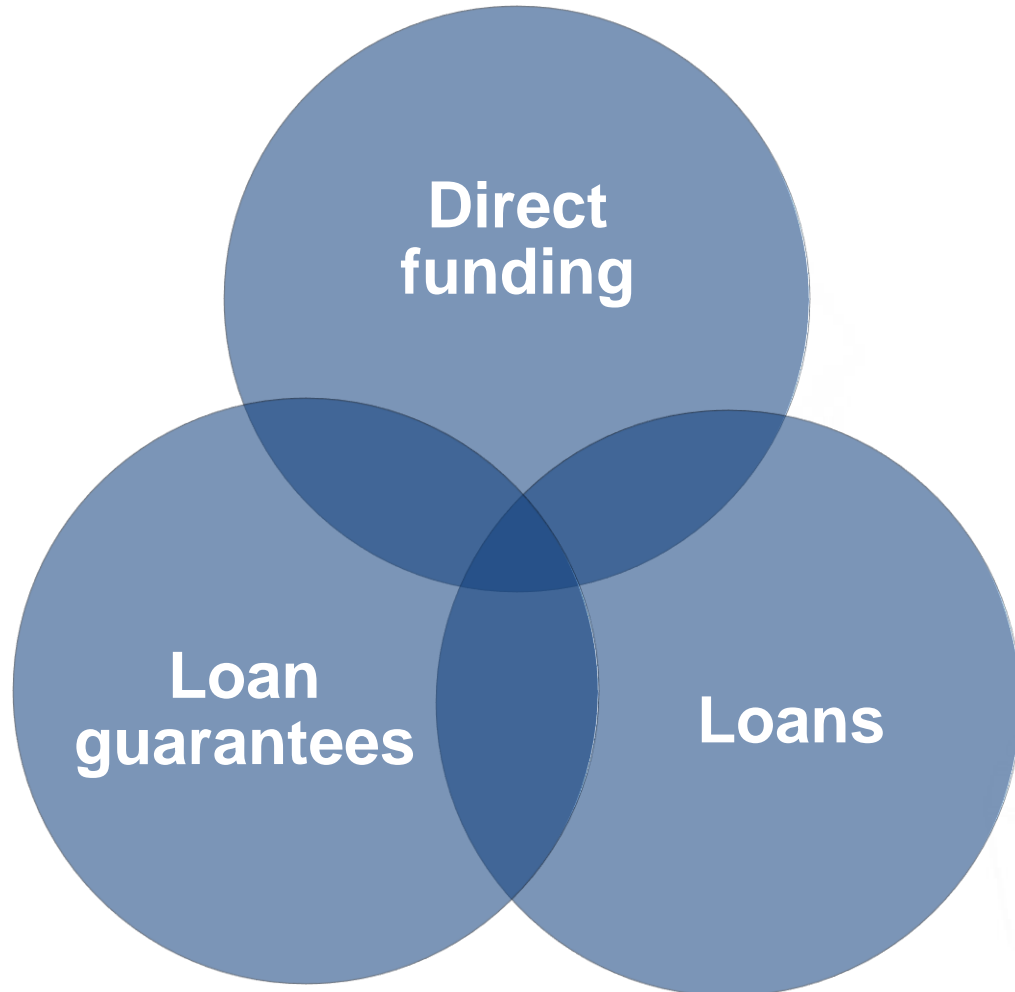
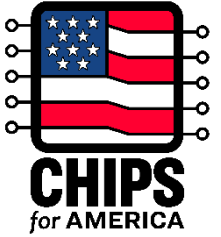


Total funding

For CHIPS **Direct Funding**,
up to **\$38.2B**
available in total

For CHIPS **Loans** and **Loan Guarantees**, up to **\$75B** in total in direct loan or guaranteed principal

Funding Allocation (2/2)

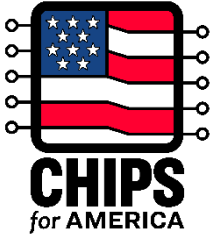


Funding by project

Direct funding expected to be **5-15% of project capital expenditures**

Expected total amount of a CHIPS Incentives Award expected not to exceed **35% of project capital expenditures**

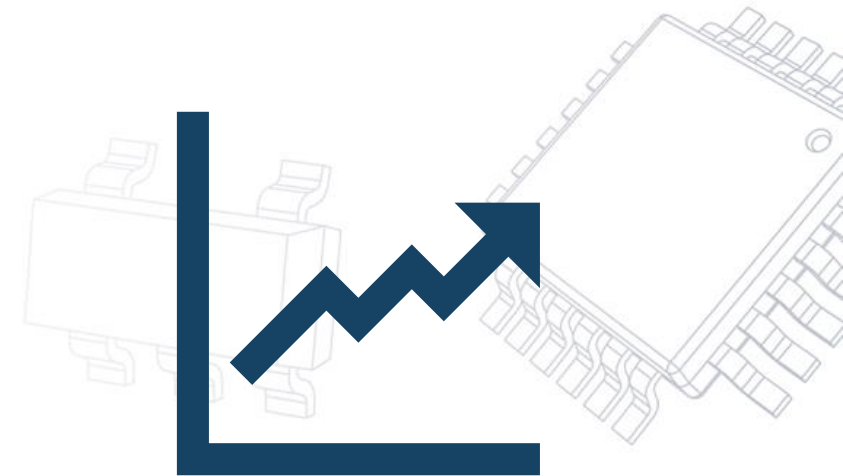
Dividends, Buybacks, and Upside Sharing

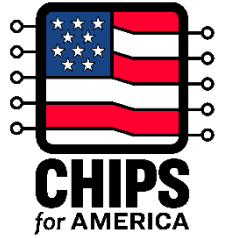


Reinvesting capital in the U.S. semiconductor industry is a priority.

CPO will preference applications that **credibly commit to investing in the domestic semiconductor industry** as well as the extent of the applicant's commitment to **refrain from stock buybacks**. Award recipients **cannot use CHIPS funds** for buybacks or dividends.

Upside sharing for projects whose **profits significantly exceed projections**.





Application Overview



Highly iterative and dynamic



Substantial back and forth between the CPO and applicant



Applications accepted on rolling basis



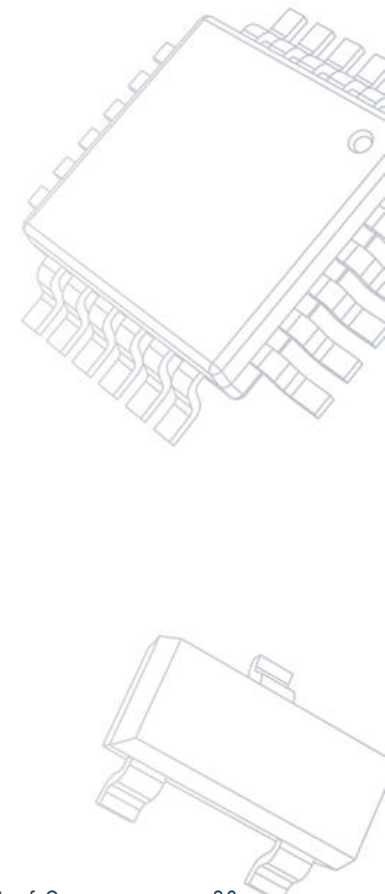
Holistic review process



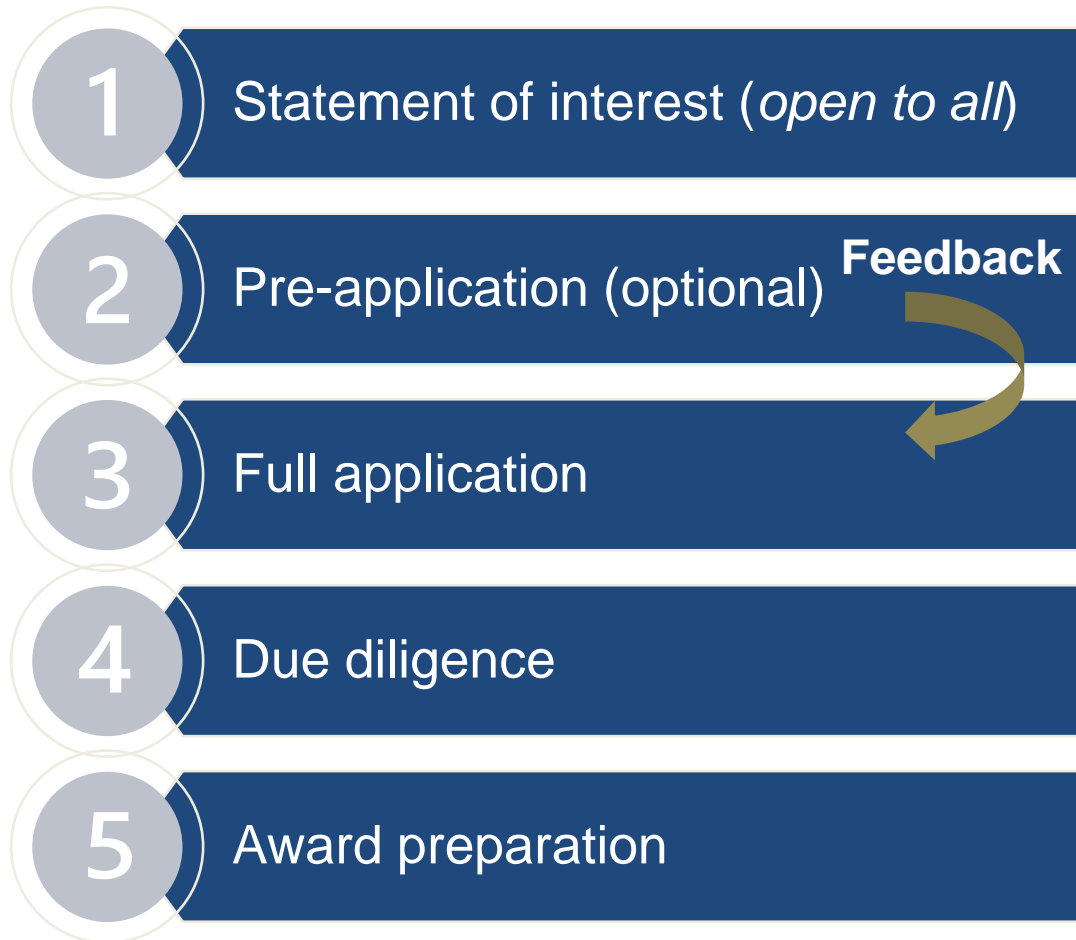
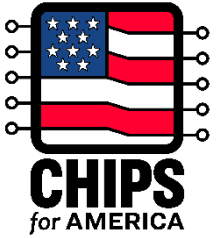
Multiple projects can be on the same application; a single applicant can submit multiple applications



CPO takes extremely seriously the importance of protecting confidential business information



Application Process

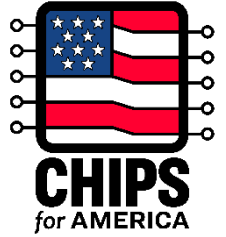


Submissions accepted as of...

Leading-edge	Current-gen, mature-node, and back-end
February 28, 2023	February 28, 2023
March 31, 2023	May 1, 2023
March 31, 2023	June 26, 2023

1

Statement of Interest (SOI)



Purpose

Help CPO gauge interest in the program and the types of projects and applicants applying, and prepare to review applications

The SOI will not be evaluated for purposes of review and selection of awards

What is needed?

- Applicant information
- Basic project information including nature of the project and potential scope
- Estimated timeline for next submission
- 1 SOI per application



All applicants eligible for funding across any funding opportunity



Earliest submission on February 28, 2023

Required 21 days before next submission



Submit an SOI via CHIPS.gov

2

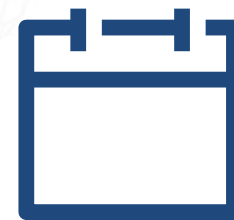
Pre-Application

Purpose

Create an opportunity for dialogue between CPO and the potential applicant *before preparation of full application* to ensure it is ready to meet program requirements and address program priorities

What is needed?

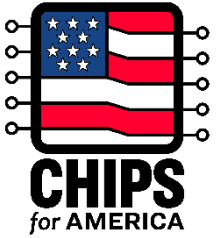
- More detailed description of proposed project(s)
- Summary financial information (refer to NOFO section IV.H.3)



Strongly recommended for current-generation, mature-node, or back-end production facilities

Earliest submission for leading edge applicants: March 31, 2023

Earliest submission for current-generation, mature-node or back-end production facilities: May 1, 2023



3

Full Application

Purpose

Submit a full application to be officially considered for a CHIPS Incentive Award

What is needed?

- Detailed information on the proposed project(s) to enable evaluation of its merits
- Detailed financial modelling (refer to NOFO section IV.I.7)
- CPO will make use of available benchmarks in the semiconductor industry

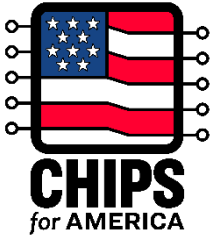


Required for all applicants



Earliest submission for leading-edge applicants: March 31, 2023

Earliest submission for current-generation, mature-node or back-end production facilities: June 26, 2023



4

Due Diligence

If CPO determines that a full application is reasonably likely to receive an award and there is, or likely will be, agreement on a **Preliminary Memorandum of Terms**, the application will enter the due diligence phase.

What is needed?

- Validation of national security, financial, and other information
- Possible engagement of outside advisors; applicants will be asked if they are willing to cover costs before moving to this stage

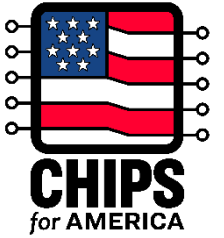
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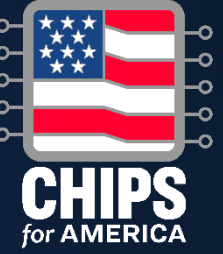
Award Issuance

The Department will prepare and issue one or more CHIPS Incentive Awards for applications selected for funding. Specific terms and conditions will vary by award.

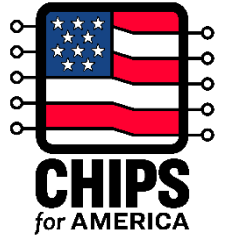
When will these funds be disbursed?

- Disbursements will be tied to project milestones
- Project milestones will be determined during the application process
- Milestones will vary by project



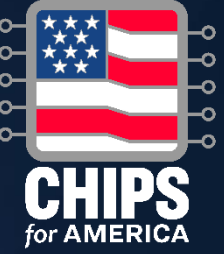


Resources

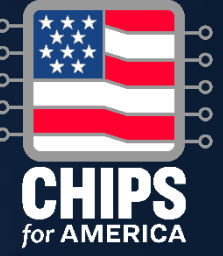


Next Steps

- Submit a Statement of Interest
- Visit [CHIPS.gov](https://chips.gov) for resources, including:
 - Applicant guides and templates
 - Notice of Funding Opportunity
 - Vision for Success paper
 - FAQs and fact sheets
 - Webinar schedule (and recordings of prior webinars)
- Join our mailing list
- Contact us
 - askchips@chips.gov – general inquiries
 - apply@chips.gov – application-related inquiries



Question and Answers



Thank you