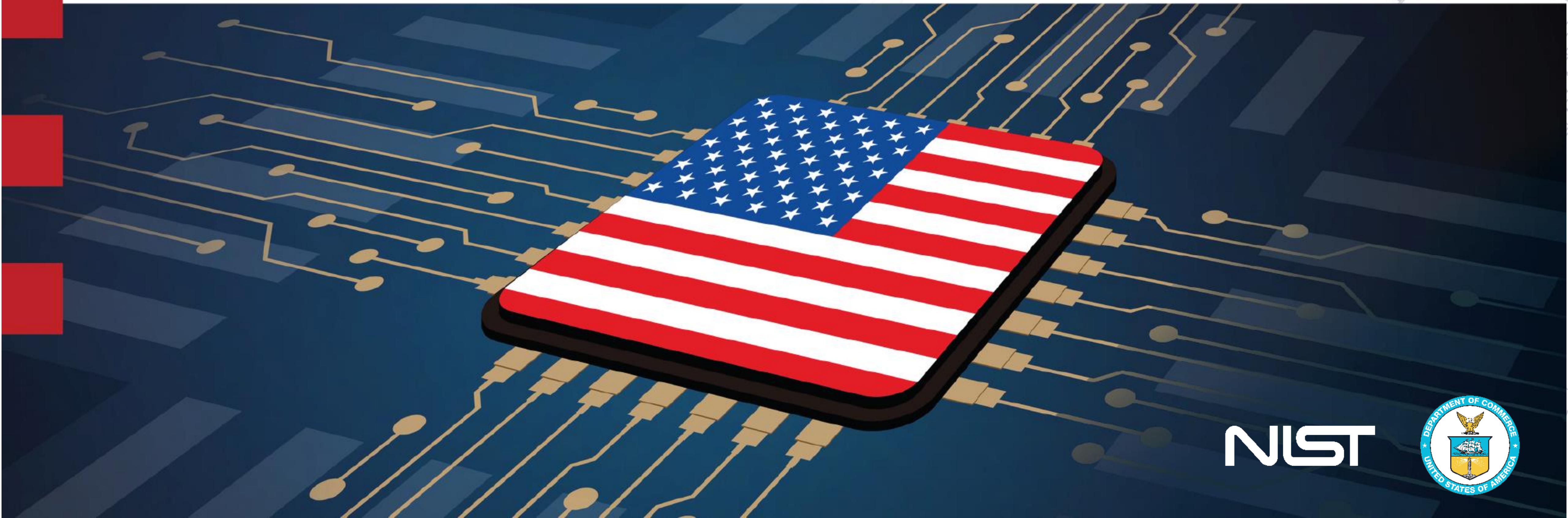
CHIPS for America
SEMI Membership Briefing

March 7, 2023



NIST

DEPARTMENT OF COMMERCE
UNITED STATES OF AMERICA

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 <u>commercial leading-edge, current</u>, and <u>mature node fabrication facilities</u>

Focus of today's webinar

Late Spring 2023

2nd Notice of Funding Opportunity

For <u>material suppliers</u> and <u>equipment manufacturers</u>

Fall 2023

3rd Notice of Funding Opportunity

To support the construction of **<u>semiconductor R&D facilities</u>**

Submission of Statements of Interest for all funding opportunities encouraged

Vision for Success

By the end of the decade…

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**

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**

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.**

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	Current-generation and mature-node	Back-end production
• Use the most advanced tech and produce products that are most critical to enhancing U.S. competitiveness • Commit to ongoing investment in U.S.	• 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	• 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

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

Workforce Development (2/2)

Incentive funds may be used to **support workforce development** for a facility

Applicants **can partner with educational institutions**, including universities and community colleges

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
- Upside sharing

Addressing Your Questions

Application criteria include **strength of intent to use domestically produced iron, steel, and construction materials**

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.

Clawbacks can be triggered by a violation of program requirements

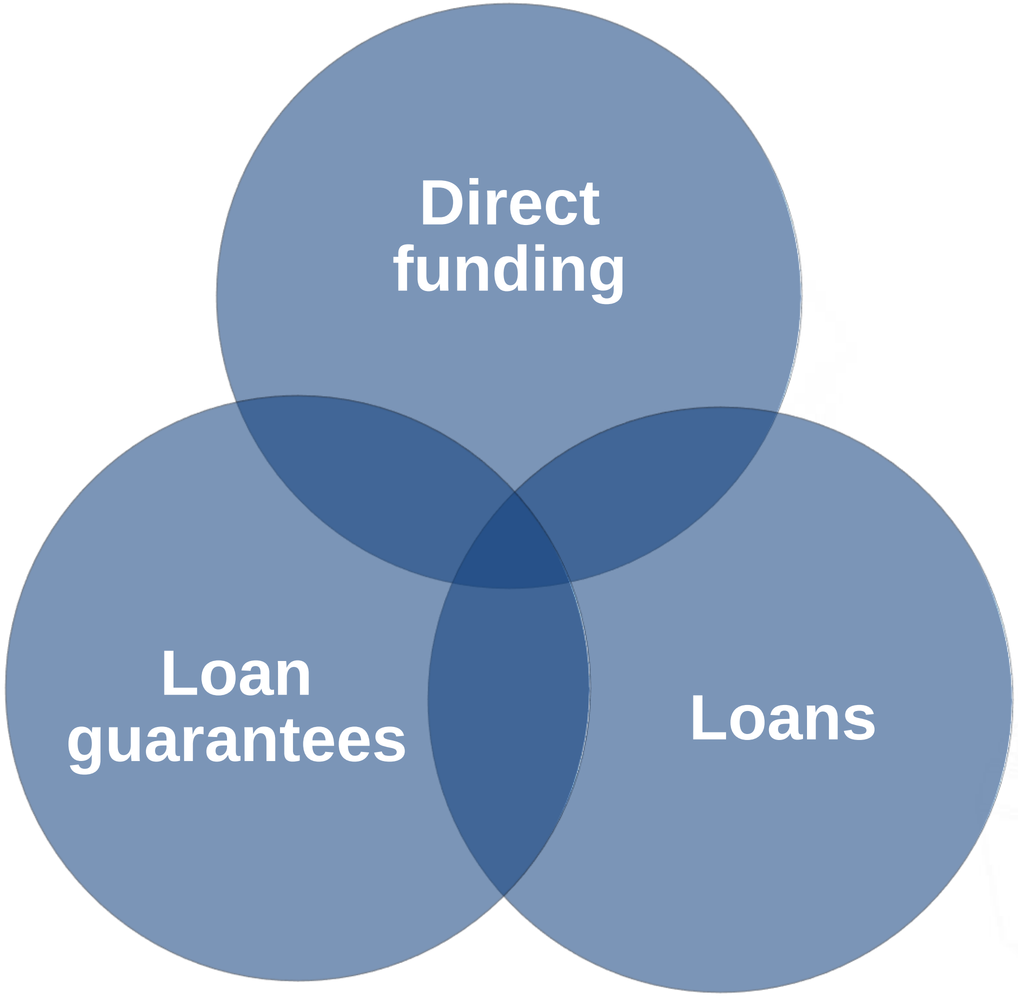
National Environmental Policy Act (NEPA)

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

Funding Instruments

CHIPS Incentives Funding



Other Funding Sources

Private Investment

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

State & Local Incentives

Funding Allocation

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 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**

Award

Appropriate level and **type** of support will be assessed on a **project-specific basis**

Funding Restrictions

No funds may be used to construct, modify, or improve a facility outside of the U.S.

Funds may not be used to physically relocate existing facility infrastructure to another jurisdiction in the U.S., unless the project is in the national interest

Funds to be returned if taxpayer funds are misused

Public funds cannot be used for stock buybacks or dividend payments

Application Overview

☑ Highly iterative and dynamic

☑ Substantial back and forth between the CPO and applicant

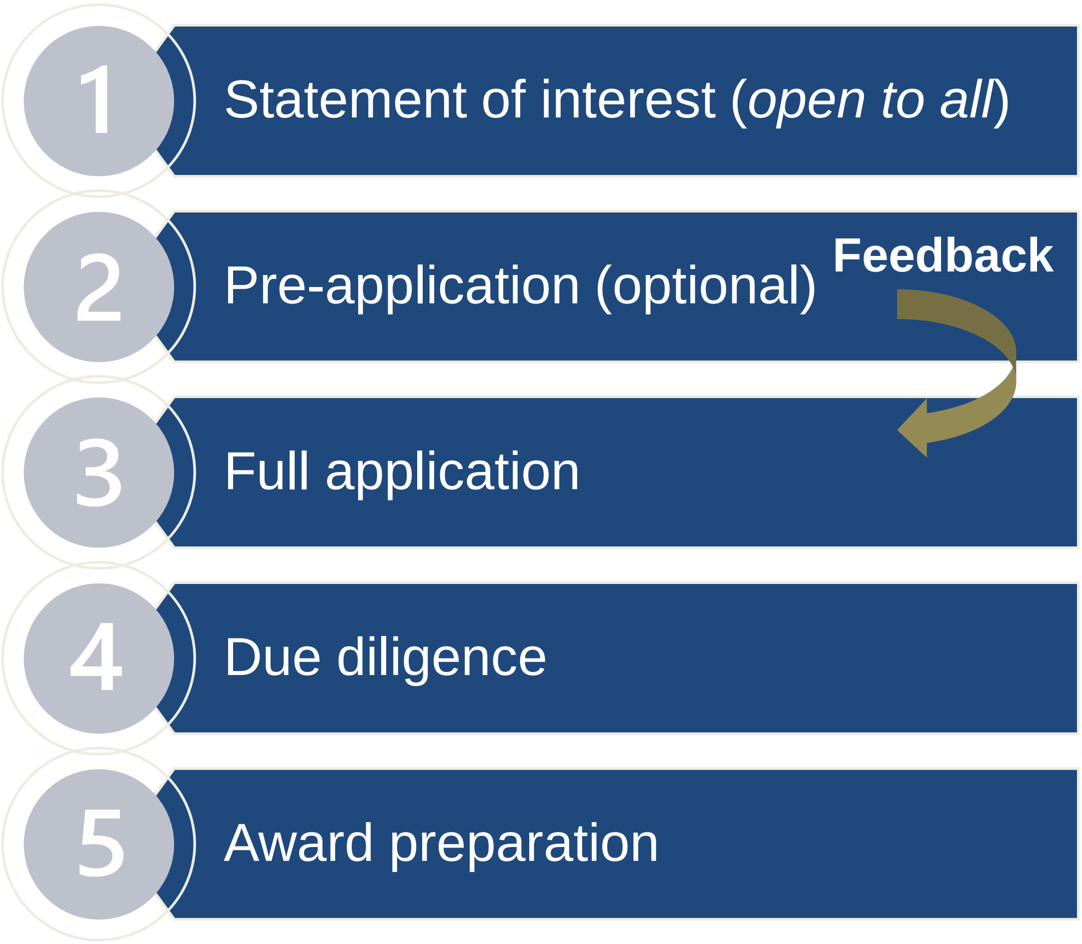
☑ Applications accepted on rolling basis

☑ Holistic review process

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

☑ CPO takes the importance of protecting confidential business information extremely seriously

Application Process



1 Statement of interest (*open to all*)

2 Pre-application (optional)

Feedback

3 Full application

4 Due diligence

5 Award preparation

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)

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

5 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.

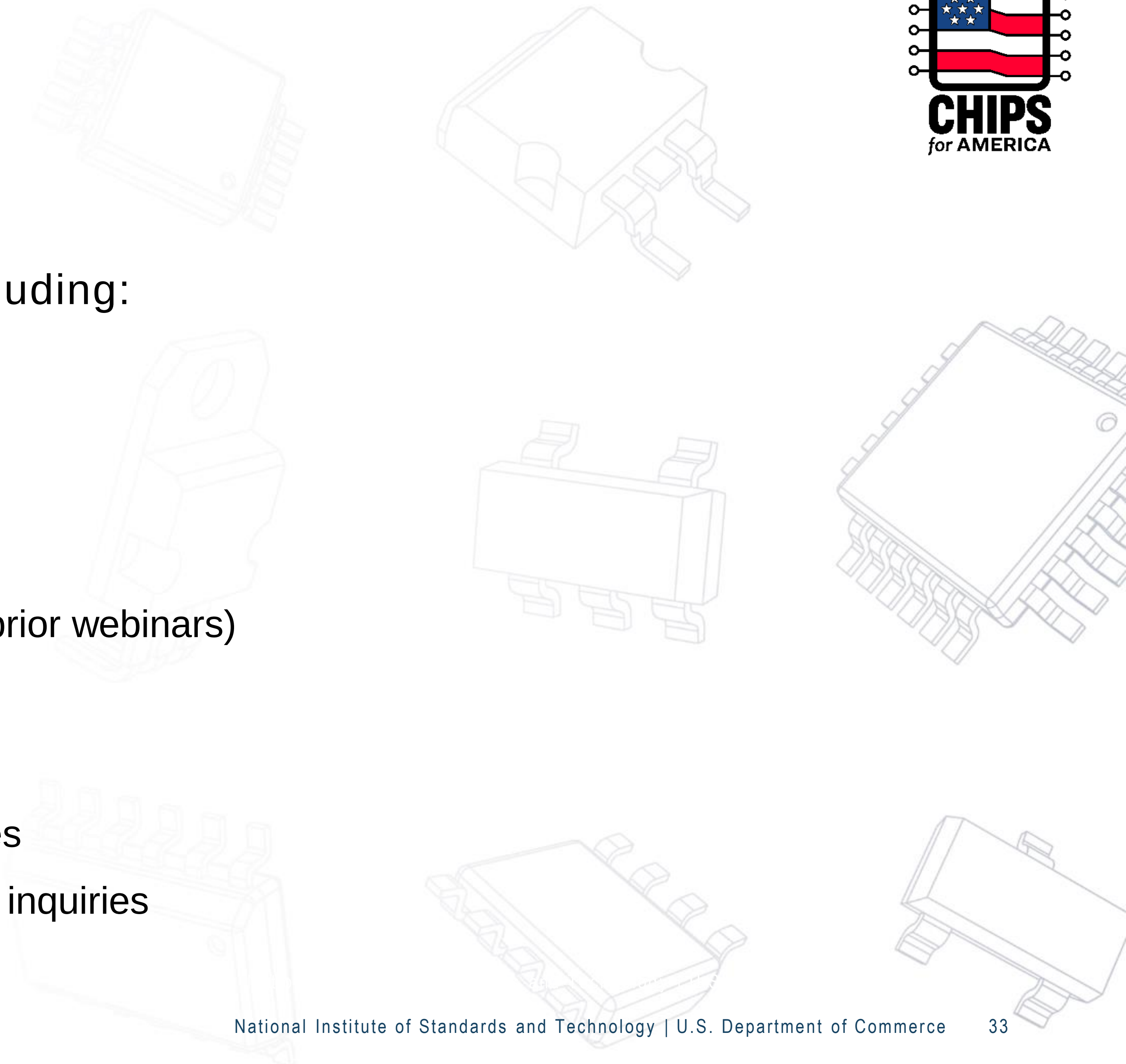
When will these funds be disbursed?

- 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 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