



Manufacturing and Energy Supply Chains

Program Overviews:

- State Manufacturing Leadership Program
- Industrial Assessment Center Program

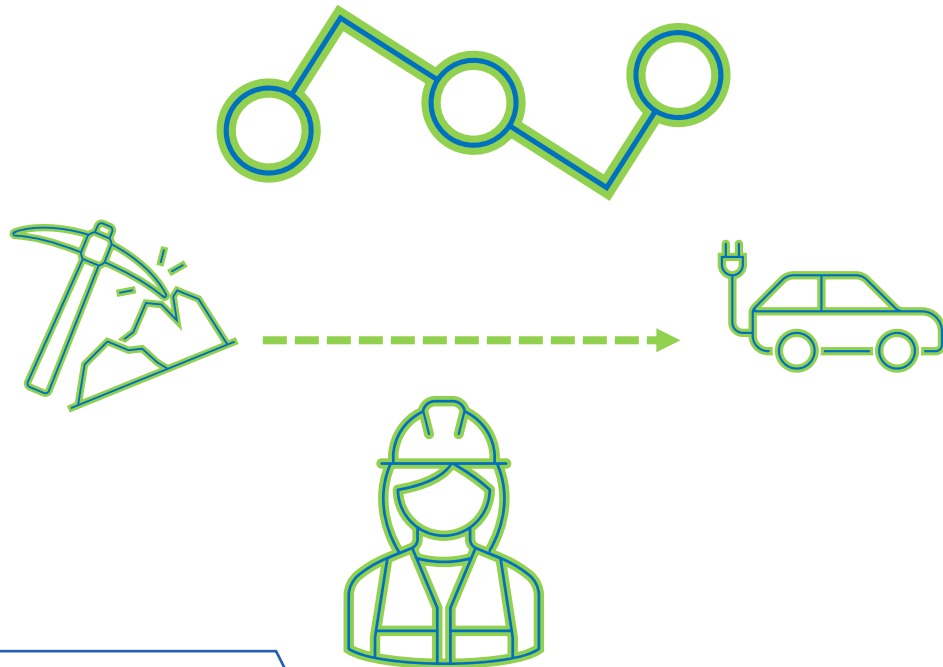
Alex Hydrean and Jeremy Avins

April 2023



Overview: Office of Manufacturing and Energy Supply Chains

Mission: Support Scale-Up and Deployment of **manufacturing infrastructure** critical to the Nation's energy supply to assure a resilient and sustainable **energy sector industrial base (ESIB)**.



~ \$16 Billion in programs of grants and industrial tax credits

- **Scale-Up and Deployment** of new manufacturing infrastructure
- **Support Manufacturing** Facility Upgrades to achieve decarbonization goals
- **Bolster small- and medium- sized manufacturing** enterprises and support communities in energy transition.
- **Develop domestic manufacturing** clean energy workforce capabilities and resources

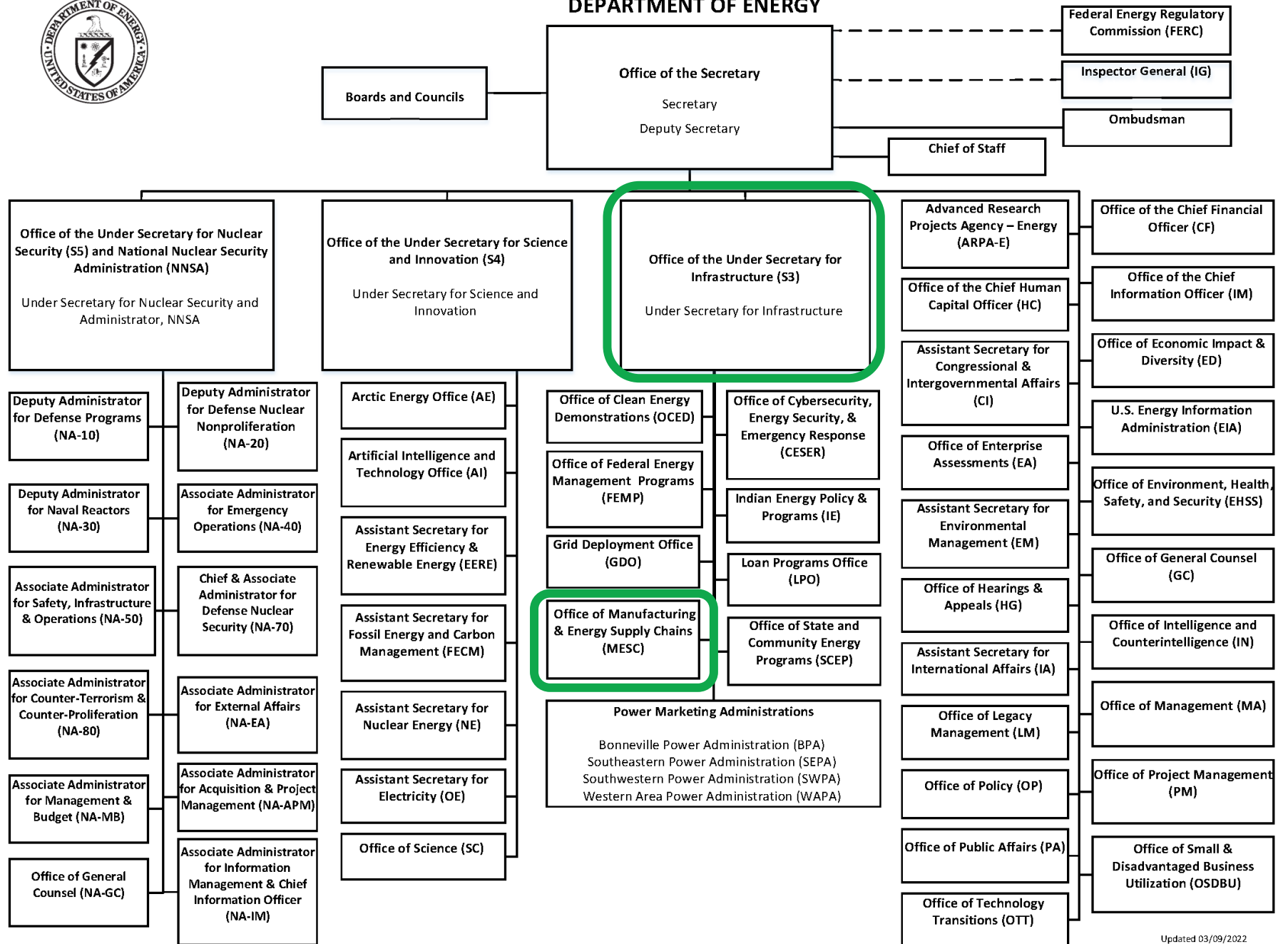


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OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS



DEPARTMENT OF ENERGY



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State Manufacturing Leadership Program

Bipartisan Infrastructure Law (Section 40534)

DE-FOA-0002969

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Alex Hydrean

Supply Chain Deployment Manager

Office of Manufacturing and Energy Supply Chains

Undersecretary for Infrastructure, DOE

BIL 40534: State Manufacturing Leadership Program

Full Applications Due:
May 30, 2023 at 5:00pm ET

FOA Released March 31, 2023 for up to \$50 million in funding

- Funding will support **State Programs** to assist small- and medium-sized manufacturers (SMMs) through:
 - Facilitating the deployment of **smart manufacturing technologies** and practices; and
 - Increasing access to **high-performance computing (HPC)** resources
- Awards of **up to \$2 million** with a 3-year term and at least a 30% cost match
- States are encouraged to **leverage existing national/state/regional/local partners and resources**

Promoting the benefits of smart manufacturing technologies among SMMs based on economic development and supply chain priorities

Connecting SMMs with a diverse coalition of public and private technical assistance providers

Partnering with labor, workforce and other stakeholders to expand and diversify the smart manufacturing talent pool

Developing, promoting, and scaling adoption of smart manufacturing training that can foster innovation on SMM shop floors

Providing financial assistance to facilitate SMMs' access to and implementation of smart manufacturing resources and technologies

Setting State-level performance metrics, targets and goals for program participation and desired outcomes

FOA can be found at: <https://infrastructure-exchange.energy.gov/Default.aspx>

Ensuring that the benefits of smart manufacturing adoption by SMMs flow to disadvantaged communities and dislocated workers

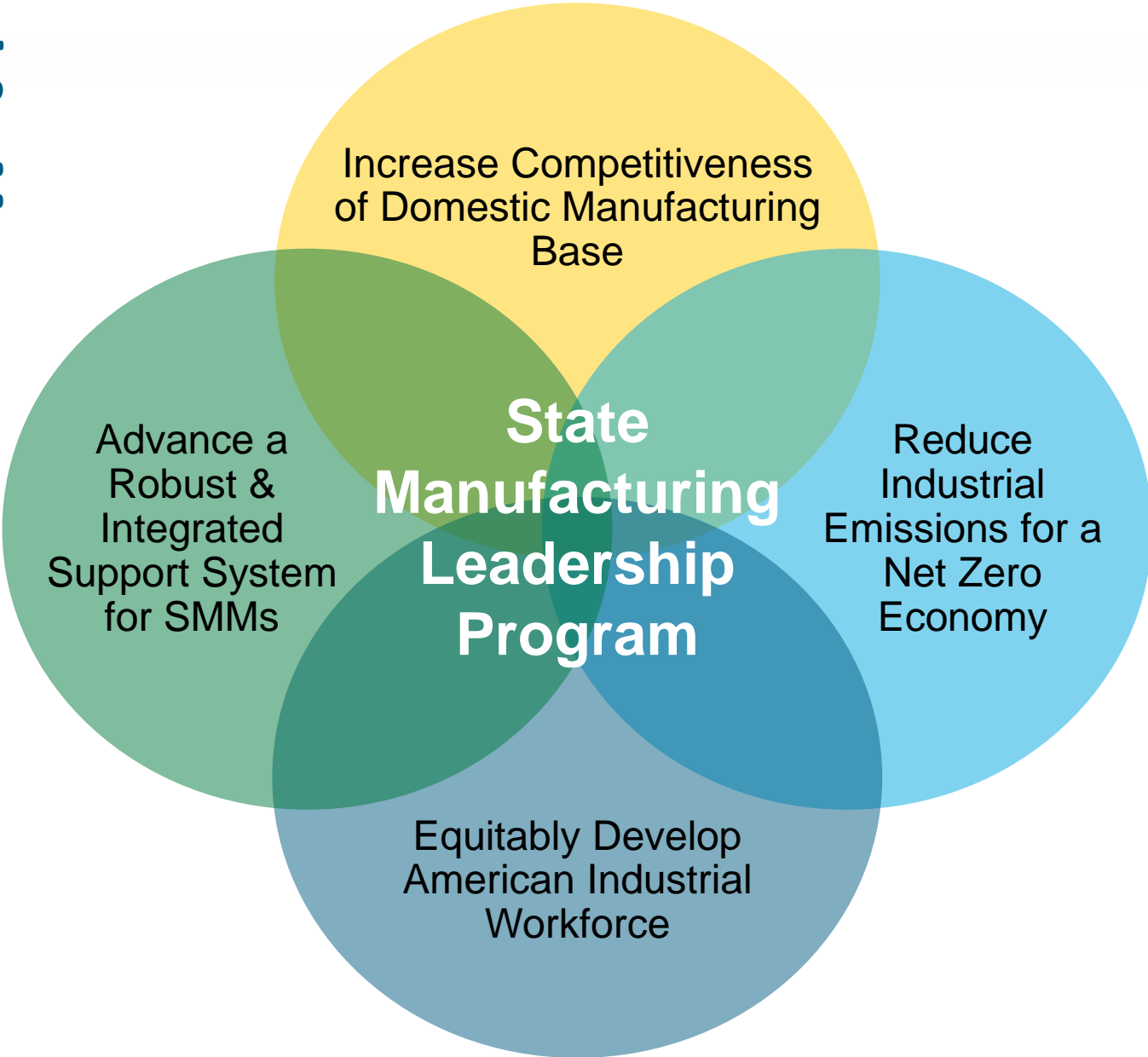
Establishing programs that will be self-sustaining in the long run, following a federal award



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State Manufacturing Leadership Program:

Strategic Goals



Program Design

Supporting smart manufacturing adoption and HPC access for SMMs through leveraging **existing technical assistance (TA) providers and programs**

Existing Resources

Expertise available to:

- Deliver workforce training
- Provide access to technology resources
- Facilitate use of HPC technology

Example resources:

- MEP Centers
- Manufacturing USA Institutes
- Industrial Assessment Centers
- National Laboratories
- Institutes of Higher Education

State Programs

Proposed use of funds

- Create/expand TA Programs
- Identify TA Providers
- Provide financial assistance for Smart Manufacturing adoption and HPC access
- Leverage existing regional/state resources
- Recruit SMMs to participate in the program
- Assist SMMs with accessing in-state or national resources

SMMs

Receive

- Training and TA from state-run programs
- Financial assistance for technology and resource adoption / access
- Access to resources available through existing smart manufacturing resources

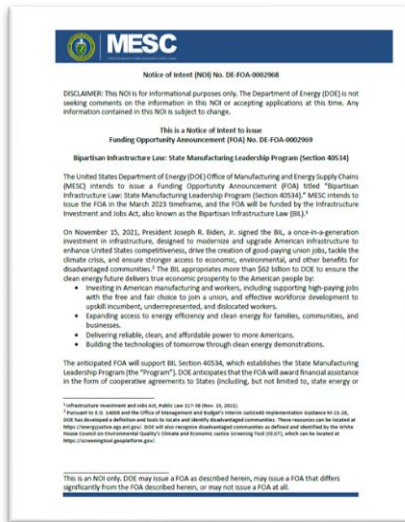


Links and Engagement Opportunities

State Manufacturing Leadership Program

<https://www.energy.gov/mesc/manufacturing-leadership-sec-40534>

Read the Funding Opportunity Announcement (FOA)



[Link here](#)

Join the Program's Teaming Partner List

DOE is compiling a "Teaming Partner List" to facilitate forming of new project teams for Program

- Express your participating interest to other applicants
- Explore **potential partnerships**

Updates to the Teaming Partner List will be available on the Infrastructure Exchange [website](#) and updated regularly

Submission instructions can be found in the FOA



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Industrial Assessment Centers (IAC) Program Overview

Jeremy Avins

Program Manager – IAC Program

Office of Manufacturing and Energy Supply Chains

Undersecretary for Infrastructure, DOE

April 24, 2023



IAC Program: A two-part vision



1. A skilled clean energy & manufacturing workforce
that represents the diversity of
America

2. A reinvigorated manufacturing base
prepared to lead the global
clean energy transition



Overview: IACs have strengthened manufacturers for over 45 years

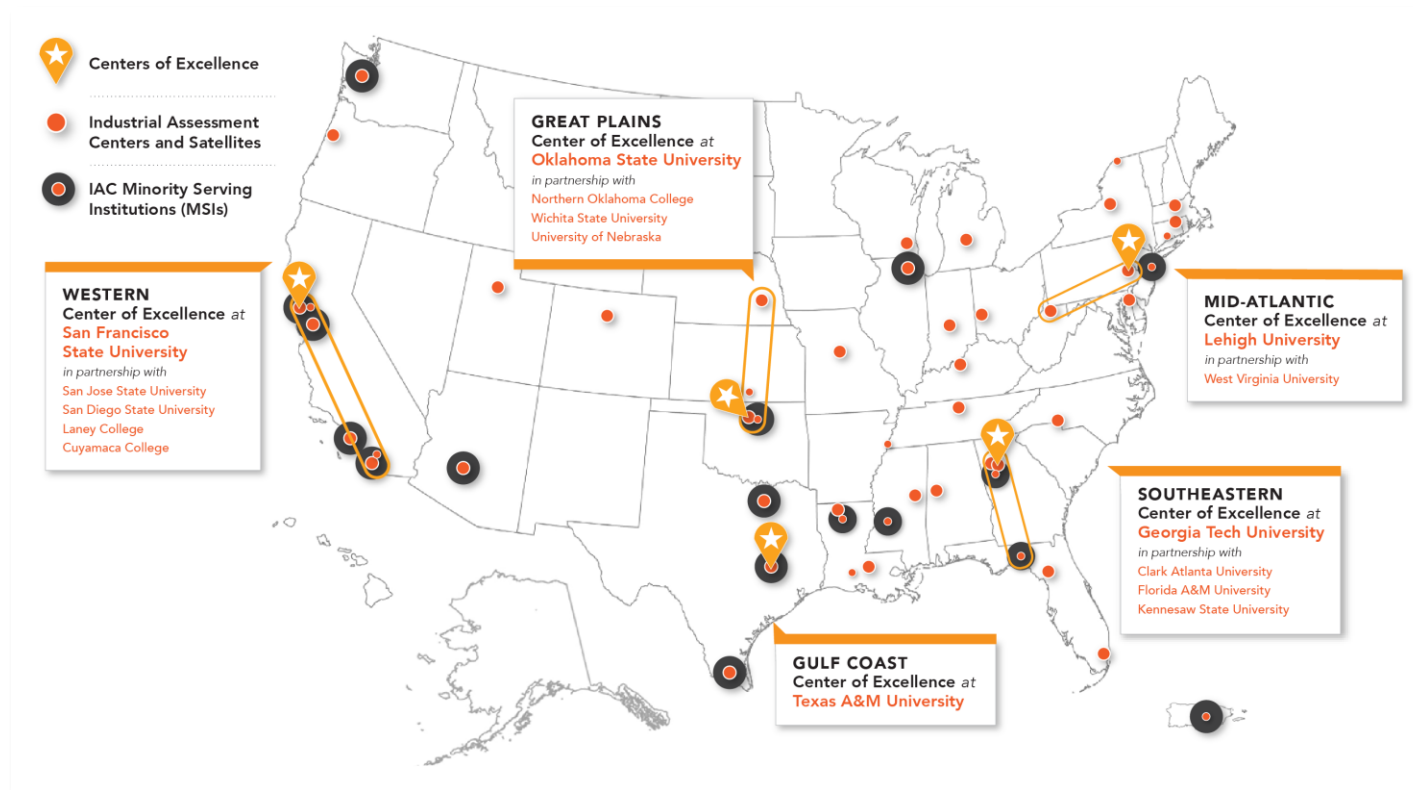
- IACs have two purposes:
 - Train the next generation of energy-savvy engineers and energy management workers
 - Provide no-cost, in-depth energy assessments and TA to small and medium-sized manufacturers (SMMs)
- IACs have operated since 1976 with bipartisan support
 - The program receives direct Congressional funding ~(\$15M year), along with major BIL expansions
 - Continuous adaptation to changes in the manufacturing sector, industrial processes, and energy policy sustain the program's support
- There are 37 IACs today. IACs have conducted nearly 20,000 assessments and provided nearly 150,000 recommendations to SMMs.



New expansions: Bipartisan Infrastructure Law allocates \$550M

- **\$150M to enlarge the program**
 - **5 Regional Centers of Excellence** to support the IAC network, accelerate innovation, and expand outreach to SMMs
 - **New skilled trades IACs** at community colleges, trade schools, and union/labor-management programs
 - **Apprenticeships and internships** with a federal cost share
 - **A national clearinghouse** of best practices
- **\$400M for implementation grants**
 - **Cost-share grants to SMMs** to take on recommendations from IAC and DOE Combined Heat and Power TA assessments
 - **Opportunities to qualify** other assessors for SMM grant eligibility

DOE recently announced five IAC Centers of Excellence



Current opportunity: \$54M to create skilled trades IACs and “BTACs”

FOA Topic 1 (\$35M): IACs at community colleges and trade schools

- 12-65 awards, as cooperative agreements
- \$150k-\$1M/year for 3 years

FOA Topic 2 (\$10M): IACs at union training programs

- 1-15 awards, as cooperative agreements
- \$150k-\$3M/year for 3 years

FOA Topic 3 (\$9M): Building Training and Assessment Centers (BTACs)

- 8-10 awards, as cooperative agreements
- \$300k-\$400k/year for 3 years

The new IACs will reinforce the Program’s focuses

Expand clean energy career pathways through credential, degree, apprenticeship and apprenticeship readiness programs, and labor-management training programs

Assess and support SMM plants, independently or in conjunction with IACs at 4-year universities, possibly including support for installation and initial operation

Promote applications of emerging concepts and technologies in SMMs in concert with IAC Centers of Excellence

NB: BTACs will operate analogously, with a focus on commercial and institutional buildings’ energy performance



Upcoming opportunities: More TA and grants to SMMs



First tranche of implementation grants to SMMs who have received an IAC or DOE Combined Heat and Power TA assessment



Qualification of additional assessors as “IAC-equivalent” to make client SMMs eligible for implementation grants



Regional collaboration through IAC COEs to align IAC efforts with other manufacturing efforts, incl. AMCC Communities and partner networks





Questions?

Email:

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Industrial Assessment Center Programs: Jeremy.Avins@hq.doe.gov



Thank you!



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Backup Slides



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Helpful Links

Bipartisan Infrastructure Law Homepage

<https://www.energy.gov/bil/bipartisan-infrastructure-law-homepage>

Office of Manufacturing and Energy Supply Chains Homepage

<https://www.energy.gov/mesc/office-manufacturing-and-energy-supply-chains>

State Manufacturing Leadership Program

<https://www.energy.gov/mesc/manufacturing-leadership-sec-40534>

Industrial Assessment Centers Program

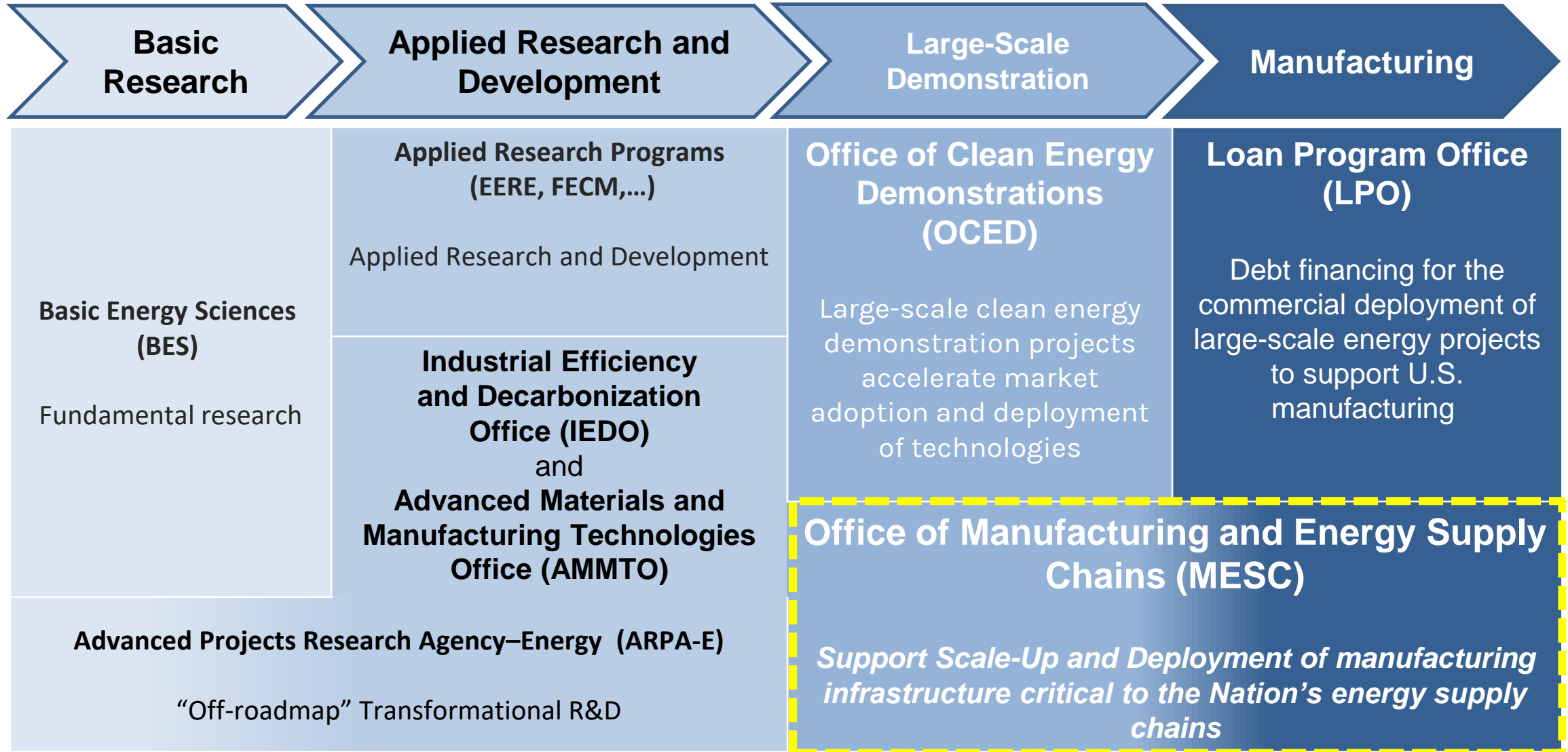
<https://www.energy.gov/mesc/industrial-assessment-centers-iacs>



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Overview: DOE Innovation, Demonstration, Manufacturing Landscape



Overview: Smart Manufacturing and High-Performance Computing

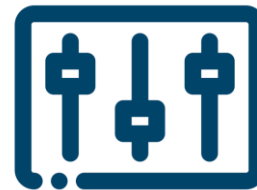
Smart Manufacturing: the use of emerging and advanced technologies to increase the efficiency of traditional manufacturing processes, resulting in fully-integrated, collaborative manufacturing systems that respond in real time.



Sensors
Controllers



Digital Prototyping
Network
Hardware



Machine Learning
Additive Manufacturing



High Performance Computing (HPC): the use of supercomputers, sophisticated models, and/or large data sets to study and solve complex scientific and technological challenges.



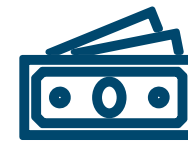
Safer design
testing



Faster error
detection



Fewer rejected
parts



Lower product
costs



Greater
competitiveness

