

Project Factsheets

Selections from Funding Opportunity Announcement (FOA) Number:
DE-FOA-0002866

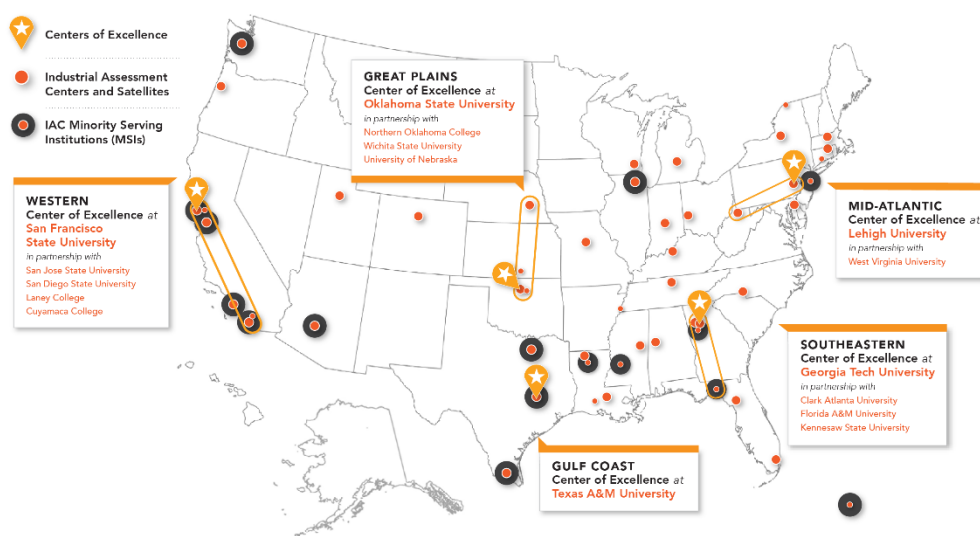
The Industrial Assessment Centers (IAC) Program: For more than four decades, the U.S. Department of Energy's (DOE) Industrial Assessment Centers (IAC) Program has provided more than 20,000 assessments at small- and medium-sized manufacturing (SMM) facilities, which comprise **more than 90% of the nation's manufacturing base**. IACs typically identify more than \$130,000 in potential annual savings opportunities for every manufacturer assessed.

The IAC Program landscape: Today, DOE-supported IACs exist at **37 universities in 28 states** across the country, with 17 of those institutions participating in a pilot to provide similar assessments to small and medium-sized commercial buildings.

The Bipartisan Infrastructure Law is enhancing and expanding the IAC Program: The Bipartisan Infrastructure Law invests **\$550 million** to expand the IAC Program, create regional centers of excellence, and implement centers' recommendations to support the Biden-Harris administration's goals of creating pathways to high-quality jobs with the free and fair choice to join a union, reducing industrial emissions, and enhancing American manufacturing competitiveness in a net-zero economy.

Centers of Excellence: DOE has competitively-selected **five new Regional Centers of Excellence** to enhance and expand the IAC Program for **\$18.75 million**. These new Centers will serve as regional hubs that collaborate and coordinate with government, nonprofit, labor, and industry actors to train clean energy workers and support SMMs in their respective regions.

Map of the IAC program



Next Step - More Jobs

Investing in good-paying jobs that do not require a four-year degree

The expansion will **create new IACs at community colleges, trade schools, and union training programs** to expand access to energy- and manufacturing-related career pathways while providing hands-on support to SMMs. **Funding opportunity now open.**

- Concept papers are required and are due on May 25, 2023 at 5 p.m. ET
- Full applications due on July 31, 2023 at 5 p.m. ET

Through the expansion, the IAC Program will:

- Provide \$400 million for grants to manufacturers to hasten implementation IACs' expert recommendations - **stay tuned**
- Continue to support engineers-in-training and SMMs nationwide, including through the program's growing emphasis on decarbonization and resiliency planning alongside efficiency and performance improvement.
- Build a clearinghouse of expertise, tools, and resources to support IACs, SMMs, and like-minded leaders nationwide.
- Support related internship and apprenticeship programs to invest in the next generation of workers who will lead the clean energy transition Establishment.

Mid-Atlantic Regional Center of Excellence

Lead: Lehigh University (Bethlehem, PA)

Partners: West Virginia University

Federal Cost Share: \$3,750,000

Project Description:



LEHIGH
UNIVERSITY



West Virginia University®

The Mid Atlantic Regional IAC Center of Excellence (MARICE), led by Lehigh University IAC and West Virginia University IAC, will focus on identifying new assessment technologies, tools, and practices for application in the region. MARICE will coordinate with regional stakeholders, utility providers, and private industry for maximum benefits toward energy efficiency and management efforts. MARICE will serve as a development entity and a clearinghouse for information dissemination to regional stakeholders. Emphasis will be given to coordination with SMEs in disadvantaged communities to obtain cognizance of the manufacturers' changing needs and capabilities. MARICE will consistently mentor IAC Directors, staff, and students located throughout the region in enabling the most effective assessments. In this context, extensive training efforts will be put forth by MARICE in terms of enabling in-situ assessments and virtual assessments. Emphasis will be placed on student-focused activities in research, recognition of students' achievements, collaboration with private industry participants, and fostering positive interaction between current students and IAC alumni. MARICE will enable the development of partnership-based relationships and agreements with labor unions and management-led apprenticeship programs. New degree programs in energy management and manufacturing productivity enhancement are planned.

MARICE will conduct 10 multi-day assessments, 10 specialized assessments, and 10 coached self-assessments for small- and medium-sized manufacturers (SMEs) in the mid-Atlantic region per year. In addition, MARICE will train several LU-WVU- students and 20 non-LU-WVU students, with 10 students receiving the existing DOE certificate, and 10 students receiving a new MARICE certificate each year. LU and WVU IACs will fill 8 MARICE summer research internship positions. Finally, MARICE will adhere to the DOE Justice40 Plan, where 40% of IAC visits, summer internship openings, and trainings will benefit disadvantaged communities and underserved minority groups.

Lehigh and West Virginia University Centers have successfully operated industrial assessment centers for over twenty years (>450 assessments by LU-IAC and >650 assessments by WVU-IAC). Together they have demonstrated capabilities to serve Americans' SMEs, suppliers, and employers by identifying recommendations to reduce energy, water usage, and waste and to increase productivity and competitiveness using smart manufacturing while simultaneously aiding in the development of an energy-savvy workforce for SMEs. Moving forward, MARICE will target community colleges, trade unions, and technical schools for workforce training opportunities, providing upskilling opportunities in energy efficiency. MARICE will make a robust effort to help SMEs enhance cybersecurity and provide necessary and relevant information. MARICE will employ ISO 50001 energy management system standard models as the methodology for IAC assessments.

Southeastern Regional Center of Excellence

Lead: Georgia Tech (Atlanta, GA)

Partners: Clark Atlanta University
Florida A&M University
Kennesaw State University

Federal Cost Share: \$3,750,000

Project Description:

The Southeastern Center of Excellence involves two neighboring industrial assessment centers (IACs) comprising four universities (i.e., Georgia Tech and Kennesaw State University, Clark Atlanta University, and Florida A&M University) will serve as a regional and national enrichment resource for fellow IACs. Specifically the proposed Center of Excellence will: i) leverage team expertise to advance the identification of technologies and approaches which increase energy efficiency, decarbonization and productivity in cost-effective manner; ii) provide exemplars that facilitate networking and leveraging between IACs and complementary stakeholders (e.g., NIST MEP); and iii) equitably develop the clean energy workforce of the future - in part via the leadership role of the two HBCUs and the expansion of the Technologies for High Efficiency Realization via Minority Scholars (THERMS) program.

The proposed Center of Excellence is a natural leverage point and extension of the team's present activities including:

- Applied EERE research projects that directly map to highlighted technology interests within the FOA, hence vivid subject matter expertise to aid identifying implementation opportunities;
- Direct involvement of NIST MEP;
- Delivery of credentialing energy management courses that are periodically enrolled by active workforce professionals, as well as faculty and students from other IACs.

Finally, the proposed Center of Excellence will also be a hub to receive and distribute insights from IACs within the region, and there will be keen attention upon distinctive needs within the Southeast (e.g., both clean and resilient energy enhancement given disruptive possibilities such as hurricanes). The two IACs' location in metro-Atlanta and Georgia/N. Florida allows the Center of Excellence to service underserved communities both in urban and rural disadvantaged locations.



**Georgia Institute
of Technology**



**KENNESAW STATE
UNIVERSITY**

Gulf Coast Regional Center of Excellence

Lead: Texas A&M University (College Station, TX)

Partners: None

Federal Cost Share: \$3,750,000

Project Description:

Texas A&M University proposes an Industrial Assessment Center of Excellence that will serve the Gulf Coast region and surrounding states. The primary purposes of the Center of Excellence will include:

- Enhancing industrial performance of regional manufacturers,
- Coordinating and support the efforts of regional stakeholders, and
- Leading teaching, training, and workforce development efforts for a broad range of students, trainees, and manufacturing professionals.

A specific technical focus of this center will be the development and deploying of smart assessment technologies, including sensing devices, intelligent diagnostic software, and virtual assessment tools to enhance energy assessments. The creation of curriculum and training materials will include a variety of formats, be disseminated broadly, and be accessible to underserved or disadvantaged groups. These learning resources will be accompanied by a formal learning evaluation protocol to assess the impact of learning materials and enable continuous improvement. Texas A&M is an experienced IAC and has the infrastructure and personnel to support regional IACs and their students through online training, hands-on equipment demonstrations, and regional student events. Over the past 37 years, the Texas A&M IAC has a demonstrated a pattern of excellence in educating and training students, serving industrial clients, partnering with other energy efficiency agencies, mentoring other IACs, and saving energy. The current proposal will build on this legacy to serve as a hub for coordination among regional IACs, stakeholders, state energy offices, manufacturers, and the current and future industrial workforce.



Great Plains Regional Center of Excellence

Lead: Oklahoma State University (Stillwater, OK)

Partners: Northern Oklahoma University
Wichita State University
University of Nebraska
Hamm Institute of American Energy
Center for Educational Research and Evaluation



Northern Oklahoma College

Federal Cost Share: \$3,750,000

Project Description:

Great Plains Center of Excellence (GPCoE) will serve as a regional hub for the DOE, its strategic partners, in the great plains from Oklahoma to Minnesota. The Great Plains Center of Excellence (GPCoE) seeks to develop, deploy, and test the next generation of integrated tools and technologies in the form of smartphone apps, drones, and virtual/augmented reality (VR/AR) to allow virtual/remote data collection. To support this endeavor, the GPCoE will also develop interactive learning environments for teaching, training, and workforce development activities through an interactive virtual curriculum for IAC personnel, manufacturers and employees, and university and community college students.

Second, the GPCoE will produce competent, motivated energy engineers through a combination of classroom/VR/AR experiences, mentoring, and on-the-job training. Our education mission will center on energy conservation technologies, in conjunction with increased productivity and its economic benefits, as well as client relationships.

Finally, the GPCoE will provide resources and expertise to complement these objectives that directly support the National Clearinghouse's needs, equitably develop the clean energy workforce, and form significant collaboration focused on improving our region's industrial competitiveness.

The project will also serve as an important advisor for new IACs at community colleges, trade schools, and union training programs. The proposed region is substantially rural in nature and encompasses vast numbers of census tracts designated as "disadvantaged communities." Because of its central location, this project will focus substantial efforts on improving the lives of Native Americans. Proposed outcomes include:

- Support the expansion of existing assessment practices and development of new tools.
- Coordinate efforts with national and regional stakeholders.
- Support the development of materials and resources for the National Clearinghouse.
- Coordinate regional outreach activities.
- Mentor all the IAC directors, staff, and students regionally.
- Develop and train on new methods of delivering IAC assessments.
- Support student-focused activities.
- Forge new relationships and articulation agreements.
- Support regional and national clean-energy workforce development activities.

Western Regional Center of Excellence

Lead: San Francisco State University (San Francisco, CA)

Partners: San Jose State University
San Diego State University
Laney College
Cuyamaca College

Federal Cost Share: \$3,748,399



Project Description:

San Francisco State University, along with its partner IACs San Jose State University and San Diego State University, will establish and operate a new Western Region Center of Excellence, headquartered in San Francisco, CA and covering a multi-state region ranging from Hawaii and Alaska to the western U.S.

In addition, Laney College (Oakland, CA) and Cuyamaca College (El Cajon, CA) will partner on the project, which will also involve numerous other manufacturers, regional IACs, community colleges and industry training programs, and additional stakeholders - both as project partners and as member organizations for the center's advisory board.

The overall goals of the Western Region IAC Center of Excellence are to strengthen U.S. manufacturing, improve energy efficiency, reduce emissions and waste, as well as train the next generation of diverse, energy engineers. Specific project tasks relate to advancing new technologies and developing new industrial assessment tools, coordinating and collaborating with regional entities, and developing curricular and training materials for IACs and other organizations.

The Center of Excellence will engage with labor unions and their apprenticeship programs, invest in workforce training with a focus on minority serving institutions, work with tribal communities, and address environmental justice issues by reducing harmful airborne pollutants in disadvantaged, shared residential-industrial neighborhoods.