

Industrial Center of Excellence



Background, Objectives, and New Learnings

The Electric Power Research Institute's (EPRI's) Industrial Center of Excellence (ICoE) was established in 2010 to encourage specific energy- and technology-related developments. Using EPRI, utility, and industry subject matter expertise, the Center is supporting applications, demonstrations, and commercialization of advanced efficient electric technologies and utilization methods, as well as expert resources to help industrial end users identify opportunities for energy efficiency and energy-efficient load building.

There is an expanding array of opportunities for large commercial and industrial (C&I) customers to use electricity more efficiently, eliminate or reduce fossil fuel use, and manage costs while reducing carbon emissions, decreasing power demands and increasing productivity. Large C&I customers are facing increasingly complex energy-related issues along four dimensions:

- Green branding
- Environmental compliance
- Competitive positioning
 - Cost control

Underlying these four dimensions is a fifth important factor particularly important for the industrial sector: risk

- Facility investigations and audits
- Insights and guidance on major industry developments
- Industrial inquiry service and other knowledgebased resources
- Strategic industry alliances
- Identification of key industrial electrotechnology opportunities

management. Even more than most commercial and residential end users, industrial customers will be resistant to new technologies that have not yet been demonstrated reliable, proven, and economical. Research conducted by EPRI for the California Energy Commission showed that less than 10% of industrial load is readily available for demand response due to concerns around risks to productivity. This is especially true of any technology that will interface or affect industrial processes or production. Expert information on industrial energy efficiency technologies is needed to break down this barrier.

Current activities within EPRI's ICoE focus on the following areas:

- Expert industrial energy efficiency audits and case studies: For each ICoE funder, EPRI will conduct an energy efficiency audit. Selected key thermal, electrotechnology, and classic energy-use systems such as lighting, motors and drives, compressed air, etc. will be candidates for inclusion in the audit, as will identification of key waste heat opportunities and, where appropriate, power quality.
- Further updates to the Industrial Electro-Technology Reference Guide.

- Industrial energy efficiency technology briefs: EPRI's information transfer will focus on providing expert resources and guidance for the new ISO 5001 standard and Superior Energy Performance certification that can accompany it, which provide a framework for end uses to manage energy use.
- Industrial Center of Excellence knowledge transfer including the ICoE hotline: EPRI will continue to develop web-based resources through the ICoE website and hotline inquiry service. Strategic meetings and webcasts will be coordinated and conducted periodically to facilitate funder input and industry liaison.

Benefits

EPRI's Industrial Center of Excellence encourages specific energy- and technology-related developments. Using EPRI, utility, and industry subject matter expertise, the Center supports knowledge transfer and applications and seeks to identify opportunities for demonstrations and commercialization of advanced efficient electric technologies and utilization methods. The Center supports members and their customers through testing, training, education, and outreach.

Project Approach and Summary

The objective of this work is to develop and staff the EPRI Industrial Center of Excellence for industrial technologies, processes, and applications and to provide expert resources and knowledge for assisting industrial customers in addressing their key drivers. The proposed approach is:

- Provide expert energy efficiency and power quality auditing capabilities.
- Provide expert knowledge and resources in key areas such as ISO 5001 and Superior Energy Performance certification.
- Assist in organization and managing research and development (R&D) that responds to the needs of electric utilities and their customers.
- Effectively leverage individuals and organizations with expertise in a particular field to complement the technical strengths of EPRI staff.

Deliverables

The non-proprietary results of this work will be incorporated into EPRI Program 199: Electrification for Customer Productivity and made available to the public, for purchase or otherwise. Other proposed deliverables include:

- Focused collaborative project (one per utility)
- Industrial energy efficiency case studies and collaborative resources from each of the program year ICoE-focused collaborative projects
- Technical briefs as prioritized by funders
- National industrial energy efficiency program reference guide updates
- Knowledge development and technical support

Price of Project

\$50,000 per participant per year. This project qualifies for tailored collaboration and self-directed funding.

Project Status and Schedule

The project commences the first quarter of the funding year and finishes the first quarter of the following year.

Who Should Join

Those seeking to expand the available stock of energy efficiency resources and those looking for resources to address industrial energy efficiency.

Contact Information

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (<u>askepri@epri.com</u>).

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