



SEE Action
STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Industrial Energy Efficiency: Designing Effective State Programs for the Industrial Sector

Why State Industrial Energy Efficiency Programs Are Important

Industrial energy efficiency (IEE) programs funded by the public or ratepayers help achieve a variety of benefits including least-cost energy services, improved security against energy supply disruption or rapid price increases, and enhanced economic competitiveness.

The industrial sector is diverse, comprising a wide variety of subsectors with different production processes and energy use characteristics, and a broad spectrum of company size and technical sophistication. Most state governments include programs that cover all customers as part of their overall energy efficiency efforts, with industrial customers often a critical component. IEE is often among the lower cost, if not the lowest cost, energy efficiency resource. Accordingly, many energy efficiency program administrators are not only looking to the industrial sector as a large potential source for energy efficiency resources, but also as a relatively low-cost energy savings acquisition option.

There is wide variation in the types of IEE programs pursued by states, utilities, and energy efficiency program administrators. The dynamics of local economies, existing regulatory frameworks, and characteristics of local industrial sectors help define the most appropriate approaches for an individual state.

How to Use This Guide

This guide provides state regulators, utilities, and other program administrators with an overview of the spectrum of U.S. industrial energy efficiency programs. This report also assesses key features of successful programs in generating increased energy savings and identifies emerging directions in program design and implementation.

Key Points

- Energy efficiency remains a large, untapped potential opportunity for cost-effective technologies, processes, and practices in the U.S. manufacturing sector.
- Energy efficiency reduces costs and increases manufacturers' operational efficiency and productivity. It also often results in co-benefits such as reduced material loss and improved product quality.
- Successful ratepayer-funded industrial efficiency programs exhibit common threads that deliver value to customers.
- Based on experience, this guide summarizes key features of successful programs, and identifies emerging program directions.

Spectrum of Industrial Energy Efficiency Program Approaches

Approach	Description	Examples
Knowledge Sharing and Technical Assistance	No- or low-cost expertise and advice, analytical tools, success stories and case studies, and peer exchanges	West Virginia Industries of the Future, Southwest Energy Efficiency Project
Prescriptive Incentives	Financial incentives or rebates for higher-efficiency eligible technologies commonly used (e.g., lighting, motors, drives, compressed air, process heating equipment)	Rocky Mountain Power, Efficiency Vermont
Custom Incentives	Financial and technical support tailored to the specific needs of individual customers or facilities	Xcel Energy, NYSERDA
Market Transformation	Streamlined and coordinated path for the introduction of new energy efficiency products to the market	Northwest Energy Efficiency Alliance
Strategic Energy Management	Rather than focusing on technology and equipment, these programs promote operational, organizational, and behavioral changes resulting in energy efficiency gains on a continuing basis	Wisconsin Focus on Energy, Energy Trust of Oregon

Program Features that Add Value for Customers

- **Clearly demonstrate the value proposition of IEE projects to companies.** Communicate operating cost savings and other benefits that are being left on the table by not addressing cost-effective energy efficiency improvement opportunities.
- **Develop long term relationships.** It takes time for program personnel to understand company circumstances and needs, and for company personnel to understand what programs can offer.
- **Ensure credibility and quality expertise.** Addressing industrial companies' core needs requires understanding a plant's production processes, operating issues, and the market context that it operates within. Effective programs adopt the language, engagement strategies, and metrics that are meaningful to the corporate managers who drive capital investment decisions.
- **Offer options to best meet customer needs.** A combination of prescriptive and custom program offerings can best meet diverse customer needs and provide flexible choices to industries.
- **Accommodate scheduling requirements.** Scheduling of capital project implementation must consider both operational schedules that dictate when production lines may be taken out of operation and capital investment cycles and decision-making processes.
- **Streamline application processes.** Achieving the right balance between meeting program administration needs for information and keeping program procedures simple and efficient may require a continual process of evaluation and improvement.
- **Conduct targeted outreach.** Even where industrial programs are well established, customers may remain unaware of the IEE offerings that may be most applicable or useful for them due to staff turnover and internal demands.
- **Leverage partnerships.** Successful IEE programs often partner with federal, state, and regional agencies and organizations to leverage their expertise, access to customers, and program implementation support capacities.
- **Send the right investment signals.** Medium- and longer-term goals and coordinated funding cycles set a framework for long-term programming and can signal increased certainty to the market and program administrators.

- **Evaluate efforts effectively.** Measurement and verification of project energy savings is critical to assess the results of program activities and investments, not only for program administrators and regulators, but also for customers.

Emerging Industrial Program Directions

- **Expand and strengthen energy management programs** by including more comprehensive investments, high-impact and low-cost behavioral changes, and operational and maintenance improvements.
- **Provide incentives for whole-facility performance** as opposed to performance of individual investments or measures.
- **Value non-energy benefits** such as increased productivity or water savings, which could tip the scale from "wait and see" to implementation.
- **Expand gas efficiency programs** by, for example, combining with electric programs.

Self-Direct: Successful Approaches

- Structure as part of a larger portfolio of IEE programs responsive to customer needs.
- Allow flexibility in eligible technologies and timelines.
- Require verified energy savings equivalent to what would be achieved with core program offerings.
- Consider escrow-like accounts to structure a "use it-or-lose-it" fund base that encourages greater participation.

Read the Full Report

<http://seeaction.energy.gov/statelEEprograms>

About SEE Action

The State and Local Energy Efficiency Action Network (SEE Action) is a state- and local-led effort facilitated by the U.S. Department of Energy and the U.S. Environmental Protection Agency. SEE Action offers resources, discussion forums, and technical assistance to state and local decision makers as they provide low-cost, reliable energy to their communities through energy efficiency.

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