



INDUSTRIES OF THE FUTURE Best Practices

Showcase
Demonstrations

November 2000

OFFICE OF INDUSTRIAL TECHNOLOGIES

ENERGY EFFICIENCY AND RENEWABLE ENERGY, U.S. DEPARTMENT OF ENERGY

BENEFITS

- Gain access to energy-efficient technologies, technical assistance, decision-support tools, and information from OIT
- Achieve bottom-line energy savings and productivity improvements
- Validate the benefits of using advanced technologies and best energy-management practices
- Create good public relations for your company
- Become a leader in energy and resource efficiency

“The expertise that OIT brings is invaluable. They help us pinpoint projects with a short payback that we might otherwise overlook. It’s a good partnership.”

— Howard Snyder, Technical
Director of Operations,
Weirton Steel

SHOWCASE ENERGY EFFICIENCY, COST SAVINGS, AND PROCESS IMPROVEMENTS IN YOUR PLANT

Have you upgraded your manufacturing facility to improve its energy efficiency? If so, what better way to broadcast your achievement than by hosting a Showcase Demonstration.

A Showcase Demonstration is a public event designed to highlight the benefits of energy efficiency and resource productivity by seeing them applied in real-use conditions in a manufacturing environment. The event, held in partnership with the U.S. Department of Energy’s Office of Industrial Technologies (OIT), demonstrates how a comprehensive approach to improving plant operations can lead to increased productivity and cost and energy savings. This is accomplished by conducting plant-wide assessments of energy use and practices, and subsequently implementing better process technologies and more efficient motor, steam, and compressed air systems. The effort includes an independent, third-party validation of technology performance and costs in comparison to baseline practice.

Recent showcases have illustrated significant energy savings and productivity increases. For example, Lester Die Casting realized a 20% extension in usable time between maintenance cycles, produced as much as 20% less scrap, and increased production from 50 parts per hour to 60 parts per hour by using a visualization tool (CastView) to identify die design improvements. At the Pittsburgh Regional Technology Showcase, Weirton Steel featured technologies that are expected to

SHOWCASE YOUR PLANT



Plant-wide improvements are featured during showcase demonstration events.



result in annual savings of \$76,000 in repair and maintenance costs and save \$60,000 annually in energy costs, after making several improvements to their compressed air system.

As an industrial company, you can sponsor a Showcase Demonstration with support from OIT and a trade or industry association. During a Showcase, facility tours are held at one or more of a company's plant sites, and workshops, seminars, and presentations may be conducted. Showcases are open to invited guests and covered by the media.

Benefits to Host Site

By hosting a Showcase Demonstration, your company gains valuable local and national recognition. Your involvement improves public relations by demonstrating concern for resources, the environment, and your community. We will work with your company, and usually, an industry association to help you publicize the Showcase before and after the event.

Your company will work with OIT to develop a case study highlighting any of the new technologies your company has applied and the energy, cost, and productivity benefits realized. You will also explore other emerging technology opportunities supported by OIT and energy savings opportunities through BestPractices.

By partnering with OIT as a host site, you are eligible to receive funding for cost-shared technology implementation and plant-wide, energy-use assessments. In addition, OIT offers your company technical expertise, tools, and information to enhance your manufacturing operations. Finally, your company becomes a leader in the march toward a more energy- and resource-efficient economy, with other companies following your example.

Selection of Showcase Demonstration Companies

OIT showcases companies that represent the country's nine energy-intensive materials and process industries:

- Agriculture
- Aluminum
- Chemicals
- Forest Products
- Glass
- Metal Casting
- Mining
- Petroleum Refining
- Steel

OIT targets these industries through the Industries of the Future (IOF) initiative to accelerate the development and delivery of advanced energy efficiency, renewable energy, and pollution prevention technologies.

Showcases are developed in partnership with companies interested in achieving bottom-line energy efficiency, integrating emerging technologies, and implementing best energy-management practices. OIT considers those sites where at least five energy-efficient technologies can be demonstrated and where at least two of those technologies have been developed with OIT support.

OIT Resources to Help You Prepare

Once your company agrees to host a Showcase Demonstration, OIT works in partnership with you to prepare for the event. Typically, a team comprised of OIT and host site staff spends 6 to 9 months planning for the energy assessments, and the

technology implementation and validation leading up to the event.

Showcase sites provide an opportunity to demonstrate energy-saving technologies in action and under real-use conditions, including technologies your company has implemented and emerging technologies that could be implemented. OIT assists you with the important steps of assessing opportunities and validating the merits of newly applied technologies for energy and cost efficiency, environmental impact, and productivity.

In addition, OIT makes available a spectrum of technologies and technical and financial resources that can help boost productivity and energy efficiency in the plant.



Technical experts assist with plant assessments and technology implementation and validation for showcase demonstrations.

Technology Resources

OIT supports the development of new technologies to help address high-priority needs identified in the IOF technology roadmaps. Some technology solutions targeted by OIT address industry-specific needs; others address needs that cross-cut more than one IOF industry. Many of these technologies are ready for commercial use. For a Showcase Demonstration at your plant site, the appropriate technologies can be selected from a portfolio of OIT projects supported under the following programs:

- Industries of the Future
- Enabling Technologies (materials, combustion, and sensors and controls)
- National Industrial Competitiveness through Energy, Economics, and the Environment (NICE³)
- Inventions and Innovation
- Small Business Innovation Research and Small Business Technology Transfer (STTR)

Technical and Financial Resources

OIT's BestPractices program provides integrated delivery of products and services for plant-wide improvements both in the near- and long-term. The program assists in identifying new technologies for implementation and validation; making decisions on upgrading or purchasing motor, pump, steam, and compressed air systems; and conducting plant-wide assessments for energy efficiency. Through BestPractices, you can take advantage of opportunities and resources, such as:

- Cost-shared funding for comprehensive assessments and technology implementation
- University-based assessments through the Industrial Assessment Centers
- Specialized training to help companies develop a skilled workforce to achieve best energy management practices throughout the plant
- Technical publications, case studies, and software tools that target specific energy system needs

Near the time of the event, OIT will help ensure that the Showcase is well publicized in the trade and general media. Published case studies, success stories, fact sheets, and validation reports also get the word out about your company's energy and cost-saving achievements.

If you are considering technical training, workshops, or presentations as part of the event, you can incorporate OIT energy management and decision tools, such as:

- **3E Plus** software to calculate the thickness of industrial pipe insulation
- **AIRMaster+** software to maximize the efficiency and performance of compressed air systems
- **ASDMaster** adjustable speed drive application software
- **Motor Master+** motor systems management tool
- **PSAT** pumping system assessment tool

How To Get Started

To find out more about hosting a Showcase Demonstration, contact Eric Lightner, BestPractices Program Manager, at (202) 586-8130 or any of these Industries of the Future Team Leaders:

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Learn about OIT Industries of the Future and other technical and financial assistance programs, by visiting www.oit.doe.gov.



BestPractices is part of the Office of Industrial Technologies' (OIT's) Industries of the Future strategy, which helps the country's most energy-intensive industries improve their competitiveness. BestPractices brings together the best-available and emerging technologies and practices to help companies begin improving energy efficiency, environmental performance, and productivity right now.

BestPractices focuses on plant systems, where significant efficiency improvements and savings can be achieved. Industry gains easy access to near-term and long-term solutions for improving the performance of motor, steam, compressed air, and process heating systems. In addition, the Industrial Assessment Centers provide comprehensive industrial energy evaluations to small and medium-size manufacturers.

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

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