



INDUSTRIAL TECHNOLOGIES PROGRAM

Implementing an Industrial Energy Efficiency Program in Minnesota

Industry accounted for approximately 30.0 percent of all the energy consumed in Minnesota in 2005. In order to support the Minnesota state legislature's requirements that utilities meet an energy savings goal of 1.5 percent of gross annual retail energy sales, the state will implement an efficiency program focused on industrial energy usage. To achieve the program goals, the Minnesota Technical Assistance Program (MnTAP) at the University of Minnesota will coordinate, organize, and conduct trainings, energy assessments, technology demonstrations and pilots, and technical assistance.

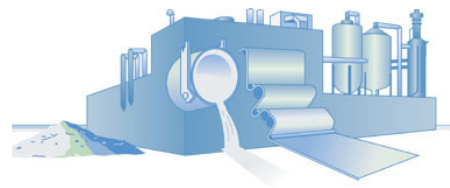
Minnesota has identified seven high-energy-use manufacturing sectors

Project Description

The overall objective of this project is to develop a comprehensive program with industrial energy efficiency resources to assist industry in implementing technologies that save energy. MnTAP will

on which to focus efforts: chemical manufacturing, ethanol production, food processing, metal casting, metal fabrication, mining, and pulp and paper. MnTAP will support these industrial sectors and their subsectors by identifying barriers to efficiency implementation, opportunities for overcoming barriers, and other mechanisms—including utility incentives that will aid in efficiency technology and Best Practices implementation. MnTAP will also utilize a “technology diffusion” model as a multistep risk-reduction methodology to accelerate innovative technology adoption. This model has been proven to increase the technology implementation rate from 30.0 to 50.0 percent.

work with its partners to conduct energy assessments in Minnesota's industrial facilities, and develop follow-up reports and recommendations. In addition, MnTAP will offer postassessment



Benefits

- Will provide potential energy savings in the seven target sectors by 15.0 percent—or 16.2 trillion Btu—equal to 2.9 percent of Minnesota's industrial energy use
- Will train and educate Minnesota manufacturers about energy-reduction opportunities
- Will help manufacturers identify energy-saving opportunities through assessments
- Will provide manufacturers technical assistance to implement energy-saving opportunities
- Will display energy efficiency benefits to companies through technology demonstrations.

Applications in Our Nation's Industry

This project will establish an industrial efficiency collaborative in Minnesota that will help the state meet its economic and environmental goals. In addition to the U.S. Department of Energy (DOE), the key partners include Minnesota's Center for Energy and the Environment; the Minnesota Office of Energy Security; the Iowa State University Industrial Assessment Center (IAC); and utility, industry and trade associations. This project will also solidify the MnTAP collaborative as an important resource for Minnesota industries and utilities. MnTAP will utilize the project's experiences to assist utilities without efficiency programs and help increase the overall implementation of industrial efficiency technologies. The reduction of industrial energy intensity in Minnesota would achieve 2 percent of DOE's Industrial Technologies Program's (ITP's) goal of reducing industrial energy intensity 25 percent over 10 years.



technical assistance, including identifying grant and loan opportunities, utility rebates, and vendor referrals. Throughout the project, MnTAP will seek to highlight activities, such as education opportunities and technology demonstrations, to further advance efficiency in other industrial sectors. Companies that are successful in adopting energy efficiency technologies and practices will be recognized by MnTAP as an industry leader, receiving an award for outstanding achievements.

The program will focus on six task areas: marketing and outreach, training workshops, assessments and benchmarking, technology demonstrations and pilots, project implementation, and plant certification. Specific tasks include

- Developing and executing a marketing strategy that will center on recruiting companies to participate in the assessments
- Offering training workshops to discuss energy-reduction opportunities, DOE tools, and the services provided through the state grant funds
- Conducting energy assessments for Minnesota facilities through DOE's qualified specialists and energy experts from the Iowa State University IAC in conjunction with the Center for Energy and the Environment, inviting utility representatives and industry peers to participate
- Overcoming technology barriers by seeking 10–20 industry stakeholders to participate in technology demonstrations in Minnesota facilities
- Guiding projects from research to implementation through data gathering, testing, and technical assistance using

energy management teams and student interns

- Identifying plants to undergo measurement and verification of energy savings toward attainment of certification of meeting the International Standard Organization (ISO) Energy Management Standard (EMS).

Progress and Milestones

The project's planned tasks include

- Implementing a marketing and outreach strategy to increase participation in assessments and MnTAP activities through the project period
- Delivering two DOE training workshops during each year of the project, seeking utility cosponsorship
- Conducting 10 energy assessments each year of the project period for companies that participate in the training workshops
- Issuing a postassessment report at 2–4 weeks, followed by a status inquiry at 6 weeks and data gathering at 3–6 months, 9–12 months, and ongoing from the second year
- Conducting two technology demonstrations and pilots each year of the project period
- MnTAP staff providing onsite technical support to participating companies two to four times per month
- Providing one Minnesota plant with ISO-EMS certification in year three of the project period.

Primary Investigator

Minnesota Technical Assistance Program,
University of Minnesota, Minneapolis, MN

Project Partners

Center for Energy and Environment,
Minneapolis, MN

Iowa State University Industrial Assessment
Center, Ames, IA

Minnesota Department of Commerce, Office
of Energy Security, St. Paul, MN

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

For Additional Information

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