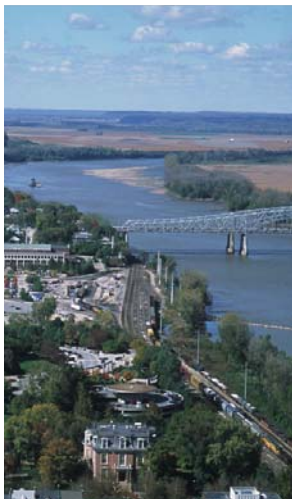
ECONOMY
ENERGY
ENVIRONMENT

E3:

Helping Communities Transition into a Green Economy



What is E3?

Modeled after the Green Suppliers Network, E3—*Economy, Energy, and Environment*—is a coordinated federal and local technical assistance initiative that helps communities work with their manufacturing base to adapt and thrive in a new business era focused on sustainability.

Joining forces with the local community, E3 provides manufacturers with customized, hands-on assessments of production processes to reduce energy consumption, minimize their carbon footprint, prevent pollution, increase productivity, and drive innovation. As a result, E3:

- Helps foster a smarter and more efficient green workforce.
- Promotes sustainable manufacturing and growth through innovative technology.
- Improves the regional economy by retaining jobs in companies that are better positioned for global competition.
- Reduces environmental impacts while regaining a competitive advantage.

How Do Communities Benefit?

America's manufacturing sector significantly contributes to the economic viability and success of many communities. By participating in E3, communities realize benefits that reach far beyond their manufacturers' production lines. These communities will be able to:

- Improve the profitability and competitiveness of existing manufacturers.
- Enhance their ability to attract new business.
- Stimulate the local economy by creating new, well-paying jobs and by helping to retain existing ones.
- Train and equip workers with the skills necessary to compete in a global economy.
- Minimize the frequency of abandoned manufacturing facilities.
- Enable utilities to expand manufacturing customer base without increasing capacity.

"Green manufacturing practices provide strong benefits for communities on many fronts. It's important that businesses recognize that environmental stewardship can work hand in hand with sound business practices."

—Michael Coleman, Mayor of Columbus, Ohio

E3 in Action

Columbus, Ohio

Noting its successful partnership in the Green Suppliers Network, American Electric Power (AEP) approached Columbus Mayor Michael Coleman's office to garner his support to pilot an E3 project. Mayor Coleman quickly saw the potential for E3 to help Columbus manufacturing businesses achieve the city's *Get Green Columbus* goals. And as a signatory to the 2007 U.S. Conference of Mayors Climate Protection Agreement, the mayor firmly believed in working with the business community to spur proactive thinking on carbon dioxide emissions ahead of any future carbon legislation.

AEP and Mayor Coleman worked with the Solid Waste Authority of Central Ohio (SWACO); the local MEP, TechSolve; and the University of Dayton Industrial Assessment Center to carry out E3 assessments at six manufacturers that employ more than 1,000 local residents. The E3 Team of federal agencies selected these manufacturers based on their high energy use and large generation of solid waste. The results were astounding—the E3 Team identified opportunities to save an average of $800,000 per facility. Within a few months after completing the assessments, two of the suppliers have already saved $240,000 by implementing E3 recommendations.

San Antonio, Texas (Lean. Clean. Energy. Program)

CPS Energy, the nation's largest municipally owned electric utility, has a goal of reducing 9 megawatts of electrical demand from the San Antonio manufacturing sector by 2020. To help achieve this goal, CPS Energy partnered with the Texas Manufacturing Assistance Center (TMAC), the Texas MEP, to provide lean, clean, and energy efficiency training, as well as resources and tools, to help San Antonio manufacturers implement opportunities that increase efficiencies in energy and materials use.

> ***"To be competitive in this industry—especially with the economy like it is—keeping utility costs low is important. The utility savings have been huge."***
>
> *—Joe Chavez, Director of Operations, Southern Folger, San Antonio, Texas*

The nine facilities that participated in the program in 2009 are expected to save more than 2 million kilowatt-hours of electricity annually—that's enough electricity to supply 2,500 homes in San Antonio for about a month. This also translates into about 1,400 metric tons of carbon dioxide emissions reduced, or about the amount emitted from nearly 300 cars on the road for a year. TMAC estimated that the facilities will save $300,000 annually and could recover the capital costs associated with implementing the improvements in an average of less than two years.

Working Together for Practical Solutions

E3 serves as a unique model by working directly with local communities and businesses and streamlining the delivery of the best available technical assistance for manufacturers across five federal agencies.

Environmental Protection Agency's (EPA's) Green Suppliers Network, a collaboration between EPA and the National Institute of Standards and Technology's (NIST) Manufacturing Extension Partnership (MEP) program to assist manufacturers with lean and clean assessments, has evolved to include E3 in its stable of services. EPA's Climate Leaders program also partners with manufacturers to assist with measuring greenhouse gas emissions and setting aggressive goals for their reduction.

Department of Commerce houses the NIST MEP, which operates a network of 59 centers across the country with expertise in manufacturing cost reduction, business growth, and lean manufacturing.

Department of Energy's (DOE's) Save Energy Now initiative provides access to industrial energy assessments, software tools and training, new technologies, and numerous other resources, promoting industrial energy efficiency as a profitable business model.

Small Business Administration (SBA) provides individualized business counseling to small businesses through a national network of Small Business Development Centers, and assists companies in implementing the recommended improvements through SBA loan programs.

Department of Labor (DOL) actively supports the development of green jobs and green skills training through workforce development grants and programs.

E3 Moving Forward

The E3 concept is designed to be scalable and replicable. Now that E3 has proven successful with two community-based assessment projects, the program looks toward the future. With sufficient funding and support over the next three years, E3 has the potential to:

- **Leverage federal resources to provide 1,750 assessments annually.** E3 can be implemented across states and regions and throughout company supply chains nationwide by taking advantage of an existing federal network that includes NIST MEP centers, SBA district offices and Small Business Development Centers, and DOL job training centers located at widely dispersed locations throughout the country.
- **Improve small manufacturers' profitability while reducing greenhouse gas emissions.** E3 could reduce manufacturers' energy usage by 10 million megawatt-hours, save more than 1 billion dollars in energy bills, and prevent 14 million metric tons of carbon dioxide emissions.
- **Expand job opportunities.** E3 could help the manufacturing sector create more than 30,000 new well-paying jobs based on expected level of investment in new technologies.

"These businesses have stepped forward and are leading the way when it comes to reducing waste. The results from E3 can become a blueprint to renew American businesses."

—Ron Mills, Executive Director, Solid Waste Authority of Central Ohio

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