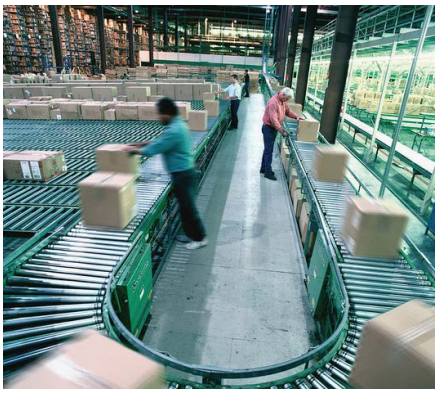
E3: Economy Energy Environment

A Sustainable Growth Strategy



What Is E3?

E3—Economy, Energy, and Environment—is a coordinated federal and local technical assistance framework that helps communities work with their manufacturing base to adapt and thrive in a new business era focused on sustainability.

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 gaining a competitive advantage.

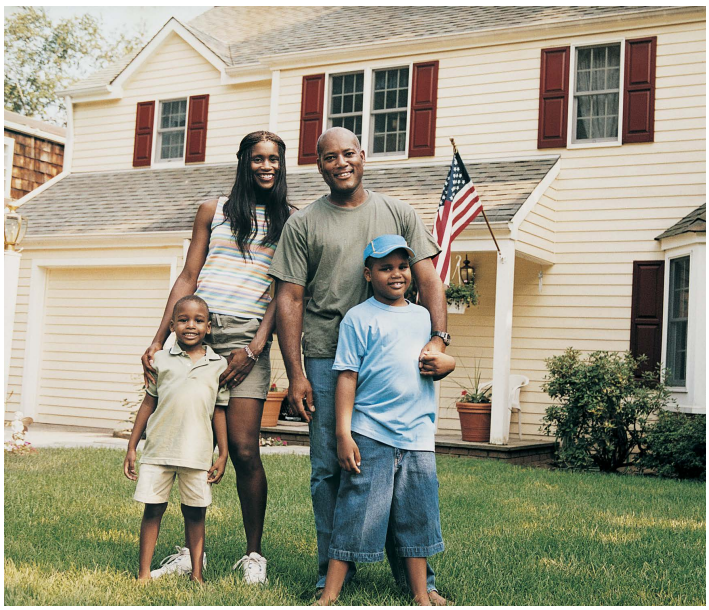
How Do Communities Benefit?

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 B. Coleman, Mayor of Columbus, Ohio



E3 in Action

E3 Beginnings

In 2009, E3 started two successful pilot programs in Columbus, Ohio, and San Antonio, Texas. Interest in Ohio began when American Electric Power (AEP) approached Columbus Mayor Michael B. Coleman to garner his support to pilot an E3 project. Mayor Coleman quickly saw the links between E3 and the city's Get Green Columbus goals. AEP and Mayor Coleman worked with the Solid Waste Authority of Central Ohio; the local Manufacturing Extension Partnership, 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 results were astounding—the E3 Team identified opportunities to save an average of $800,000 per facility, and within a few months, two suppliers had already saved $240,000 by implementing E3 recommendations.

In Texas, 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, to provide lean, clean, and energy efficiency training to help San Antonio manufacturers implement opportunities that increase efficiencies in energy and materials use. The 10 facilities that participated in the program in 2009 are expected to save more than 2.9 million kilowatt-hours of electricity annually and save over $300,000 as a result of the pilot.

North Carolina

The North Carolina National Institute of Standards and Technology's Manufacturing Extension Partnership (NIST MEP) affiliate has joined forces with more than 150 statewide partners to develop and implement an E3 initiative. In addition to advancing sustainable manufacturing and workforce development strategies, E3: North Carolina includes a worker safety review for all participating manufacturers with support from the state's Division of Occupational Safety and Health.

"The E3 Program gave us the framework in which to take an objective look at all key functions of our business and identify opportunities for improvement as well as execute those changes."

—John O' Neill, plant manager at Besam Entrance Solutions, Monroe, North Carolina

With the support of all the partners in 2011, E3: North Carolina has engaged 21 manufacturers, conducted 68 assessments, trained over 100 workers and identified $9.3 million in savings*. In 2012, North Carolina leaders will bring E3 to seven new communities and 14 new manufacturers. This will bring E3: North Carolina's geographic reach to approximately 25 percent of the state.

* Results as of 12/9/11

NCMEP is a part of North Carolina State University's Extension Service

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