

New England Pilot Project Cuts Energy Costs for Massachusetts Manufacturers

MEP-EPA Partnership Generates 10:1 Return on Investment

Worcester, MA –The Massachusetts Manufacturing Extension Partnership ([Mass MEP](#)) today released the results of a tri-state pilot project designed to cut energy costs for manufacturers. Developed as a collaborative initiative between northern New England manufacturing extension partnerships (MEPs) and the U.S. Environmental Protection Agency (EPA), the project generated a 10:1 return on its investment. As a result of the pilot project's success, MassMEP will offer the energy-cutting program to manufacturers throughout the state.

"The energy savings achieved by companies participating in this pilot project validated the approach. By integrating the EPA energy toolkit into our MEP lean manufacturing program, we can provide a much more effective method for identifying opportunities for energy savings. This approach represents the next level in sustainable green manufacturing," said Jack Healy, executive director of the Mass MEP.

Earlier this year the MEP programs in Massachusetts, New Hampshire and Maine embarked on a collaborative initiative with the U.S. Environmental Protection Agency (EPA). The initiative sought to test a new approach to green sustainability. It integrated energy and environmental metrics into the lean manufacturing methodologies used by MEPs in order to target opportunities for energy savings. Unlike conventional methods of reducing energy consumption, the pilot project identified manufacturing process inefficiencies that, when improved, can reduce or eliminate the need for energy in the first place.

Six New England manufacturers, including Sullivan Paper of Springfield and Algonquin Industries of Bellingham, were selected to participate in the pilot project. Guided by MEP project managers, the six firms achieved impressive results. For a modest \$140,000 investment in direct and program management costs (\$67,000 coming from the EPA and \$73,000 in associated match dollars), the project produced a total of \$1.4 million in expected energy savings and operational efficiencies for the participating firms. These included:

- **Energy** savings exceeding \$652,000 per year;
- **Environmental** savings exceeding \$34,000 per year;
- **Lean** manufacturing savings exceeding \$750,000 per year.

Sullivan Paper of Springfield offered an example of how Mass MEP's Lean Energy and Environment program can achieve energy savings. The company previously had taken steps to reduce waste and energy use, such as retrofitting its lighting with assistance from a utility rebate program. But Mass MEP, by combining the tools of lean manufacturing with a baseline energy evaluation, was able to identify large opportunities for energy savings. By leaning the operation, the project team identified efficiencies that could enable the company to consolidate its operations into three facilities, instead of the existing four, resulting in annual savings of more than \$100,000 in electricity and gas, as well as reducing the amount of trucking between the facilities by an estimated 800 miles per year.

Cost concerns can deter manufacturers from implementing energy-saving changes. Small manufacturers in particular may fear that the payback period for energy efficiency investments is too long. But the MEP pilot project demonstrated that the energy-saving paybacks from its approach typically begin immediately and are attainable even for small manufacturers.

"This pilot project offers convincing proof that lean energy investments make financial sense," Healy stated. "Manufacturers should consider our Lean Energy and Environment program a natural extension of their efforts to reduce waste and inefficiency. Competing in today's economy requires manufacturers to

seriously examine how to contain energy costs. Our pilot-tested approach gives firms a sophisticated new set of tools to do so," Healy stated.

The Mass MEP executive director pointed to another advantage of the initiative. It can help small and mid-size manufacturers satisfy the green supply chain requirements that many large manufacturers and retailers increasingly require of their suppliers.

"Companies like Northrop Grumman are asking suppliers to rate their own environmental performance on a Green Supply Chain Report Card in five categories that includes energy," Healy stated. "This trend undoubtedly will continue to expand. Our Lean Energy and Environment initiative can help Massachusetts manufacturers meet the growing consumer demand for green products and the increasing number of companies with green supply chain standards."

Companies that meet new green supply chain requirements can often leverage that advantage by branding their products green. Market surveys reveal the premium that consumers place on environmentally-responsible products. Green branding, Healy said, is a complementary benefit that energy-efficient manufacturers can utilize for their advantage.

Healy concluded by summarizing four main benefits of adopting a lean-energy approach:

- first, immediate cost savings through decreased energy consumption that go directly to the bottom line;
- second, compliance with green supply chain requirements that many large manufacturers and retailers increasingly require of their suppliers;
- third, a marketing advantage that can come from branding a company's products green; and
- finally, the environmental benefit that results from decreased energy consumption.

"This pilot project sets a new standard for lean manufacturing. Mass MEP's Lean Energy and Environment initiative will help companies achieve process improvements that cut costs, improve efficiency and yield environmental benefits. By cutting energy costs for companies, it can help overcome one of the largest competitive barriers that face New England manufacturers -- the high cost of energy," said Healy.