New England Tri-state Pilot Project Demonstrates Success in Cutting Energy Costs for Maine Manufacturers

MEP-EPA Partnership Achieves 10:1 Return on Investment in Maine, Massachusetts, and New Hampshire

Augusta, ME – The results of a pilot project to help New England Tri-state manufacturers cut energy costs were announced today by the Maine Manufacturing Extension Partnership (Maine MEP). Touting the energy savings achieved by firms participating in the initiative, Maine MEP expressed its intention to offer its new Lean Energy and Environment program to manufacturers throughout the state.

"The energy savings achieved by companies participating in the pilot project exceeded our expectations. For a modest $140,000 investment, the project generated more than $1.4 million in expected energy savings and operational efficiencies for the six participating manufacturers. The integration of the EPA energy toolkit into our MEP lean training program has the ability to help overcome one of the largest competitive barriers that face New England manufacturers -- the high cost of energy," said Maine MEP Executive Director, Rod Rodrigue.

Earlier this year the MEP programs in Maine, Massachusetts and New Hampshire embarked on a collaborative initiative with the U.S. Environmental Protection Agency (EPA) to evaluate EPA's energy toolkit and integrate it into the MEP's lean training programs. Facilitated by the Maine Department of Environmental Protection, the initiative sought to test a new approach to green sustainability. It integrates 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 identifies manufacturing process inefficiencies that, when improved, can reduce or eliminate the need for energy in the first place.

The integrated Lean Energy and Environment program was pilot tested in six regional manufacturing clients, two in each of the three participating states. In Maine the Lean Energy and Environment initiative was implemented by Jøtul, N.A., of Gorham and U.S. Felt Company, Inc., of Sanford.

The pilot project produced impressive results.

First, it achieved a highly successful return on investment. For $140,000 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 identified and expected impacts from the six participating manufacturers. These included:

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

Second, the pilot project demonstrated that energy efficiency goals are attainable by small manufacturers. Not only are they affordable for small firms; they can actually help drive down production costs.

"This pilot project has helped bust the myth that going green is a financial drag on a company," stated Rosemary Presnar, Maine MEP Operations Manager. "Manufacturers should consider lean and green a natural extension of their efforts to reduce waste and inefficiency."

Cost concerns and long payback periods can deter manufacturers from implementing environmentally sustainable practices. Small manufacturers in particular may want to implement green manufacturing practices but fear that they cannot afford high upfront costs, particularly in a sluggish economy. That barrier does not exist with many of the energy-saving proposals identified in this pilot project, Presnar emphasized.

Jøtul North America revisited a value stream mapping of their stove insert manufacturing line. Point of use storage improvements improved cycle times by seven percent. By incorporating the energy and environmental lens when creating their future state, the Lean team recognized significant process energy savings opportunities. Improved paint booth processes can result in energy savings of $13,900 per year for electricity and up to $8,000 per year for natural gas. Within their Gorham, ME facility, another key result of this pilot will be a strengthening of their 6S program by including aerosol usage and disposal processes and investigating alternative marking methods. This simple change will reduce their universal waste stream and result in additional cost savings as well as adding to the 'greening' of their facility.

US Felt worked with their MEP project manager on their initial Lean and Energy process improvement activity targeting US Felt's overall front end process. An energy audit of their office and manufacturing areas helped identify lighting savings of up to $2,200 per year. The Lean manufacturing, energy conservation and environmental focus on their mechanical felt manufacturing process resulted in projected savings of up to $30,000 per year through opportunities including fixing air compressor leaks, recycling and reducing felt scrap, and reducing natural gas and electrical usage based on a more efficient boiler system, material dryer, and the use of electricity saving devices.

The Maine MEP operations manager 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," Presnar stated. "This trend undoubtedly will continue to expand. Our Lean Energy and Environment initiative can help Maine manufacturers meet the growing consumer demand for green products and the ever-increasing number of companies with green supply chain standards."

Finally, the Maine MEP initiative could help offset one of New England's greatest competitive disadvantages for manufacturers.

"High electricity costs create a competitive disadvantage for the vast majority of New England manufacturers. This initiative, by helping cut energy costs for companies, can help offset that regional inequity and create a more level playing field for Maine manufacturers," Presnar concluded.

About Maine MEP

Maine MEP is an affiliate of the NIST under the U.S. Department of Commerce. The national MEP is a network of manufacturing extension centers that provide business and technical assistance to smaller manufacturers in all 50 states, the District of Columbia and Puerto Rico. Through MEP, manufacturers have access to more than 2000 manufacturing and business "coaches" whose job is to help firms make changes that lead to greater productivity, increased profits, and enhanced global competitiveness. For more information on the Maine MEP Lean Energy and Efficiency initiative call 1-800-637-4634.