

E3 PROJECT JUMP STARTS CONTINUOUS IMPROVEMENT

ABOUT CLINCH-TITE CORP D/B/A CTC PACKAGING. CTC Packaging began in 1955 as Clinch-Tite Corporation, a pallet manufacturing business in Sandy Lake, Pennsylvania. The Staples family purchased the company in 1973, and today the family-owned business has around 30 team members. In 2015, the company changed its name to CTC Packaging to better reflect their unique and cost-effective supply chain packaging programs that reduce the total cost of acquisition and ownership of all packaging, pallet, crating, and supply chain requirements.

THE CHALLENGE. CTC Packaging was interested in gathering accurate data to evaluate their energy usage and conservation efforts. The company's maintenance director had been working with CTC team members on Continuous Improvement initiatives to conserve energy, increase efficiency, and improve safety. Company leaders recognized the value of having accurate data to assess the energy efficiency of different areas of the operation. They reached out to the Northwest Industrial Resource Center (NWIRC), a division of the Pennsylvania Manufacturing Extension Partnership (PA MEP) and part of the MEP National Network.

MEP CENTER'S ROLE. NWIRC worked with the Pennsylvania Technical Assistance Program (PennTAP) and a Lean consultant to deliver an E3 project (Energy, Environment, Economics) for CTC Packaging. A grant from the Department of Energy supported the project, and PennTAP facilitated the involvement of senior engineering students who provided a customized, hands-on analysis of CTC's processes. The analysis identified efficiency gains, cost reductions, waste, emission reductions, and energy savings for the company.

CTC's saw line was responsible for the majority of the electrical usage, due to the strength and durability of the wood used for cutting. PennTAP provided a detailed technical and economic analysis of this usage. The Lean consultant worked with the CTC team to gather additional data, including fuel consumption rates and jitney fleet costs. Together, they diagramed flows of equipment, processes, and cycle times to chart findings and develop various layout and design options.

As part of CTC's Continuous Improvement initiative, the team evaluated the costs and benefits of product movement throughout the entire facility. The company invested in plant and equipment upgrades and determined the optimal layout for reducing energy use, distance travelled, and costs.

"The Northwest IRC was a great organization to work with. They provided help by listening and then being responsive, bringing resources to the table to address our need. This E3 assistance will ultimately make CTC a more competitive company and provide a more energy efficient and environmentally sound footprint. Thank you NWIRC!"

-Chris Groger, Maintenance Director

RESULTS



\$20,909 in cost savings



\$500,000 investment in plant and equipment upgrades



\$400,000 in cost avoidance

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