

ENERGY EFFICIENCY BUSINESS CASE STUDY

LIBERTY TIRE RECYCLING

Pittsburgh, Pennsylvania



CHALLENGES

Liberty Tire Recycling operates more than 50 facilities across North America, each with different operations and equipment. Energy use (particularly from truck fleets, shredders, and granulators) represented one of the company's largest operating costs and a key source of greenhouse gas emissions. They wanted a strategy that both reduced environmental impact and improved operational efficiency across its facilities.

SOLUTIONS

Liberty joined the U.S. Department of Energy's Better Plants Program and committed to reducing energy intensity by 25% by 2032. The company adopted a production-based energy intensity metric, normalizing energy use per ton of output, to benchmark progress across facilities. Liberty also launched a series of efficiency initiatives, including:

- » Partnered with DOE's Industrial Assessment Center to identify efficiency opportunities
- » Repairing compressed air leaks and upgrading lighting to LED systems
- » Monitors variance alerts to reduce high energy consumption
- » Implemented manufacturing execution systems with sensors for predictive maintenance

RESULTS

At facilities in Columbus and Delta, Liberty projects efficiency gains of 2–12%, saving hundreds of thousands of kilowatt hours and over \$250,000 annually in energy costs. Across the company, production has continued to grow while energy use per ton has declined, delivering both environmental and financial benefits.

HIGHLIGHTS

- » Committed to 25% energy intensity reduction by 2032
- » Implemented projects saving over **\$250,000 annually**
- » Normalized energy use metric tracks efficiency per ton of output
- » Combined data-driven systems with employee culture

SUCCESS FACTORS

Liberty's success comes from combining strong data tracking with employee engagement. Using a normalized metric ensures improvements are visible across facilities, while consistent training and oversight help prevent backsliding. This alignment of systems and culture has made energy efficiency both achievable and sustainable.

LOOKING FORWARD

Liberty plans to scale these energy projects company-wide and continue integrating efficiency into everyday operations. By linking sustainability to cost savings and resilience, Liberty is building long-term value while reducing its environmental footprint.

BUSINESS PROFILE

Business Type » Tire recycling
Headquarters » Pittsburgh, PA
Facilities » 50+ across North America
Employees » 3,000+

