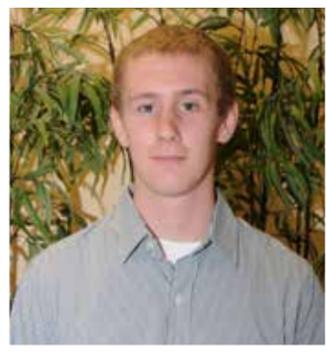


# CLYSAR, LLC



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### COMPANY PROFILE

Clysar, LLC, established in 1963 and headquartered in Clinton, Iowa, manufactures industry-leading polyolefin films. These high-performance shrink wraps are applied in the packaging of frozen pizzas, baked goods, produce, meat, poultry, hardware, office supplies, and a wide array of other consumer products. Clysar operates 24 hours per day, seven days per week, and employs more than 300 people.

### PROJECT BACKGROUND

The primary focus of the project at Clysar was to reduce the environmental impact and expenses associated with solid waste generation and disposal. The items with the greatest potential for recycling are paper, cardboard, and plastics. The secondary focus of the project was to conduct an audit of Clysar's compressed air utility in order to reduce energy usage and promote cost savings.

### INCENTIVES TO CHANGE

The management at Clysar is committed to sustainable growth and supports initiatives to divert landfilled waste, reduce energy usage, and address wasteful or inefficient practices. By implementing a campus-wide recycling program, the company will divert solid waste away from landfills while saving money on waste disposal costs. In addition, an audit and leak analysis of the compressed air system will help Clysar identify sources of energy waste and opportunities to improve efficiency.

### RESULTS

**Comprehensive Recycling Program:** Implementation of a recycling program for a variety of solid wastes will allow Clysar to reduce disposal costs, create revenue from recycling/reuse opportunities, and reduce their environmental footprint. Office paper, mixed paper, cardboard, and assorted plastics will be collected and handed off to a recycling service who will return a percentage of the market value. As an added bonus, the same recycling service will accept scrap metal, fluorescent bulbs, ballasts, and old lighting fixtures among other wastes. Annually, Clysar will save \$4,650 while diverting 98 tons of waste away from the landfill.

**Compressed Air Leak Detection and Repair:** Clysar uses four air compressors to supply their facility with compressed air. Air leaks in the utility's lines create artificial demand and force the compressors to run more often and use more energy. Using an ultrasonic leak detector, 111 leaks were located in the facility's compressed air lines. The leaks were measured, documented, and submitted to the maintenance department for repair. Repairing the compressed air leaks could reduce annual utility costs by \$35,654, which represents more than 15 percent of the total cost to run the compressors.



PROJECT	ANNUAL COST SAVINGS	ENVIRONMENTAL RESULTS	STATUS
COMPREHENSIVE RECYCLING PROGRAM	\$4,650	98 TONS	IN PROGRESS
COMPRESSED AIR LEAK DETECTION AND REPAIR	\$35,654	600,233 KWH	IN PROGRESS
ELIMINATE USE OF POLYSTYRENE FOAM CUPS	\$578	0.26 TONS	RECOMMENDED



**Eliminate Use of Polystyrene Foam Cups:** Operators working at Clysar are required to use only clear cups with lids at their stations; however, polystyrene foam cups are the only cups made available to operators in the break areas. The polystyrene foam cups are inconvenient for operators and generate a waste that is difficult for Clysar to recycle. It has been proposed that each operator be supplied with a clear acrylic tumbler and lid that can be used at their stations, washed, and reused. These tumblers are expected to offset the cost of using of disposable cups. The remaining polystyrene disposable cups in use could be replaced with recyclable paper cups. If the acrylic tumblers offset the use of disposable cups by two-thirds and the remaining foam cups are replaced with paper cups, the company could save an estimated \$578 annually and divert 0.26 tons from the landfill each year.

### ESTIMATED CONVENTIONAL AIR POLLUTANTS DIVERTED IN METRIC TONS

For Implemented and In Progress Recommendations

TOTAL FOR ALL SECTORS						
CO <sub>2</sub>	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC
563.26	0.01	1.09	0.16	0.12	2.21	0.04

### ESTIMATED GREENHOUSE GASES DIVERTED IN METRIC TONS

TOTAL FOR ALL SECTORS			
MTCO <sub>2</sub> e	CH <sub>4</sub>	N <sub>2</sub> O	CFC
632.81	20.80	3.46	3.38

### ESTIMATED CONVENTIONAL AIR POLLUTANTS DIVERTED IN METRIC TONS

For Recommendations in Recommended Status

TOTAL FOR ALL SECTORS						
CO <sub>2</sub>	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC
3.10	0.00	0.01	0.00	0.00	0.01	0.00

### ESTIMATED GREENHOUSE GASES DIVERTED IN METRIC TONS

TOTAL FOR ALL SECTORS			
MTCO <sub>2</sub> e	CH <sub>4</sub>	N <sub>2</sub> O	CFC
3.48	0.11	0.02	0.02

