

# How We Saved a Client Over \$500,000 Dollars in One Year



## Executive Summary

Southeastern Container in Hudson, New Hampshire, is one of nine plants that produce and supply plastic bottles to Coca-Cola bottlers. We worked with Southeastern Container to aggressively pursue initiatives in reducing energy consumption and install cutting edge efficiency measures in their plastic bottle production facility. As a result, the Hudson location is the company's most energy efficient plant.

## The Goal

We collaborated with Southeastern Container to set a clear-cut multifaceted strategy to optimize the efficiency and output of their facility.

Our primary focus was on improving the efficiency of the blowmolding system to produce more bottles using less energy. Compressed air using both high and low pressure is the major source of energy consumption in plastic bottle production. By installing two Air Recycling Systems (ARS), we were able to recycle the low-pressure air exhaust back into the low-pressure system. This allows low-pressure compressors to be turned on or off depending on the type of product being produced.

After the installation of the new ARS systems, we focused on making the rest of the manufacturing process as efficient as possible. To do this, we set up a new method to improve the recycling of rejected plastic bottles and to minimize total waste produced by the plant. Doing so lowered raw material costs and allowed more of Southeastern Container's budget to be used elsewhere within the manufacturing system.

Finally, we installed industrial ceiling fans to re-circulate excess heat from their blow molding machines. This provided comfort heating for workers and reduced gas heating bills an average of \$10k to \$15k per year. Finally, we also installed high efficiency lighting fixtures and motion controls to cut costs on electricity.

## Efficiency Measures at a Glance

- Installed three Air Recycling Systems to recycle low pressure air back to the blow molder LP air circuit.
- Streamlined recycling of rejected plastic bottles, strapping and corrugated reducing plant total waste.
- Implemented fans to re-circulate excess heat from the blow molders for use as no cost comfort heating.
- Introduced high efficiency lighting fixtures and motion controls to cut costs on lighting electricity.

## Total Annual Energy Reduction:

■ 4,907,885 kWh

