saveONenergy℠
FOR BUSINESS

Auto Parts Maker Drives Electricity Savings by Updating Air Compressor Systems

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ANDREW CARROLL,
Technology Manager at Kautex Textron

PROJECT DETAILS

ENERGY SAVINGS:
1,677,300 kWh

ANNUAL ELECTRICITY COST SAVINGS:
$168,000

PAYBACK WITHIN A YEAR WITH INCENTIVE

INCENTIVE: $71,637

Industry Sector:
- Automotive parts manufacturer

Project:
- Upgrade compressed air system

COMPRESSED AIR INCENTIVE

Windsor based Kautex Textron is a supplier of blow moulded auto parts to the vehicle makers of Ontario. If you own a Canadian-made vehicle, chances are it has a few components, such as plastic multi-layer fuel tanks and clear vision systems that were made by the 200 dedicated workers at Kautex.

Complex compressed air systems are essential to making these products. They require a lot of electricity, and in a factory with three shifts operating up to 24 hours a day, they are a big driver of electricity costs. Even a small tweak can save thousands of dollars over a year.

The good news is that energy saving technology and equipment upgrades are available to reduce the amount of energy required to operate compressed air systems. With the help of the Ontario Power Authority's **save**ON**energy** incentives available to businesses, Kautex was able to make several improvements, allowing it to save money and reinvest in other operations.

The local electricity utility, EnWin Utilities, partnered with Trident Compressed Air to plot out an array of solutions for Kautex that would allow it to take advantage of these incentives and upgrade all aspects of the compressed air system to improve energy efficiency. The main objective was to save money in a competitive sector where energy is a major portion of operating costs.

"The bottom line is that we are in a competitive industry and we need to be as efficient as possible with our manufacturing inputs," said Kautex's Technology Manager Andrew Carroll. "The **save**ON**energy** program allowed us to upgrade our equipment and save enough money on electricity for this project to pay for itself within a year."

VARIABLE FREQUENCY DRIVE ROTARY SCREW AIR COMPRESSOR

COMPRESSED AIR SOLUTIONS

A key improvement to the operating efficiency of the compressed air system at Kautex was with the installation of a variable speed drive rotary screw air compressor, according to Lawrence Musyj, Director of Conservation & Energy Management, at EnWin Utilities.

Kautex's old compressor system essentially operated at full capacity all the time, and did not have adequate "turndown" capabilities when the full compressed air flow rate was not required by the blow moulding process. This resulted in energy being needlessly wasted.

"Variable speed drives have been around for some time, but the technology has been slowly adapted by the compressor manufacturers," said Jeff Scott, Industrial Key Account Manager, Conservation & Energy Management, at EnWin.

Leading up to this project, Kautex had made other energy saving improvements on their compressed air system, including lowering the pressure set point for the air compressors, installing new high efficiency air dryers, and installing a new sequencing unit for better control of pressure flow.

HOW THE LOCAL ELECTRICITY UTILITY HELPED

EnWin helps address energy conservation in a community with a lot of manufacturing facilities that use enormous amounts of electricity. Before joining EnWin, Scott worked closely with businesses like Kautex to reduce energy consumption, so he was familiar with the compressed air solutions available and the work involved.

"I encouraged Kautex to look at the compressor system since I knew there would be significant savings potential," said Scott.

The application was approved by EnWin in three weeks, allowing work to commence in fairly short order. Trident compiled a data log of activity to calculate potential energy savings that was included in the **save**ON**energy RETROFIT PROGRAM** application, and would ultimately determine the incentive amount.

INCENTIVES

The **save**ON**energy RETROFIT PROGRAM** provided over $70,000 in incentives or roughly 50% of the $145,000 total cost to cover the compressor, installation, materials, labour and permits.

THE RESULTS

The savings from the new compressor system along with the sequencing unit, new dryers and reduced pressure set point have been dramatic. Kautex's peak electricity demand has been reduced by 206 kilowatts, according to EnWin. This translates into energy savings of over 1,677,000kWh of electricity for Kautex.

"We are looking at saving approximately $168,000 a year in our electricity costs," said Carroll. "Thanks to the **save**ON**energy RETROFIT PROGRAM**, our company was able to upgrade our compressed air system, improve our capabilities, conserve energy and reinvest the savings into other aspects of the business to make our plant more competitive."

In addition, the **save**ON**energy** program has focused the plant management's attention to probe for other opportunities there may be to save energy, improve performance and enjoy savings.

"We have great partners with the local electricity provider EnWin and a knowledgeable, helpful contractor in Trident," said Carroll. "They have really opened our eyes to a great deal of energy- and money-saving opportunities. It's not just good for business, it's good for everybody."

ABOUT saveONenergy

Businesses across Ontario are benefitting from incentives to support energy efficiency projects that conserve electricity, use innovative technology and deliver savings. You can learn more here:

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