Russell Metals Inc.

2009 Case Study

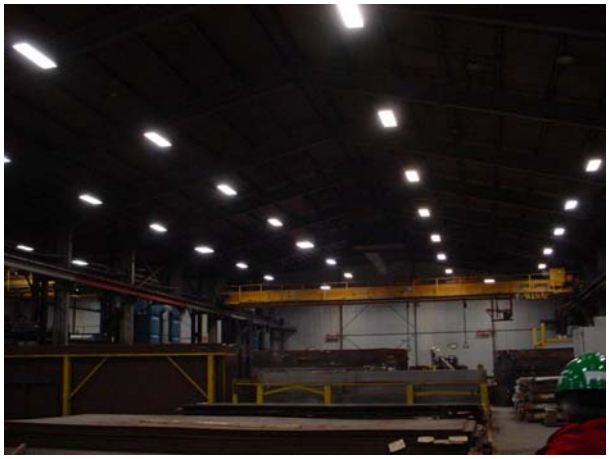
Lakeside, Nova Scotia, Canada

The plant, located in Lakeside Industrial Park in Halifax, NS, is a large modern, semi automated warehouse with high tech cutting capability. The facility, employing 100, was operating 24 hours, five days per week when the assessments were completed but is now operating two shifts daily.

The original building erected in 1964 has had 8 expansions, adding both office and warehouse space. It serves as the main service centre for the company for Atlantic Canada.

The Process

Steel, other metals and other materials are brought in by truck, stored, and delivered to customers as is or cut to customer specifications. Limited fabrication is performed utilizing a sophisticated laser cutting capability and other equipment. Delivery from the plant to customers and other smaller service facilities throughout the region is performed by trucks.



The products of the operation are metals and other materials such as fiberglass. Office supplies, cleaning supplies and other site based consumables are used at the site but are insignificant in the big picture.

The Assessment

This Opportunity Assessment examined the entire facility. The primary facility inputs included electricity for lighting as well as office heating and cooling and propane used to heat the plant using infrared radiant heaters. The plant uses various compressed gases, water for domestic purposes and small amounts of cleaners are consumed in the facility resulting in negligible environmental effects. The assessment identified a number of opportunities for saving energy but the major one was a lighting upgrade for the plant area. It also found that the office lighting could be improved, an outside air intake for the compressor would improve efficiency, de-stratification fans could be installed in the plant and a potential financial saving could be derived from switching to a different fuel.

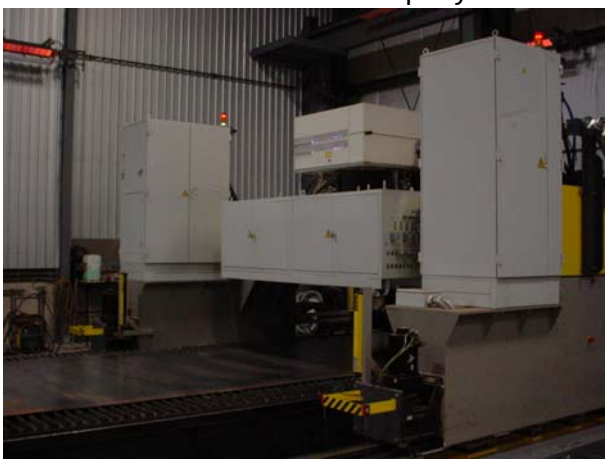
More detailed study of the opportunities in an Implementation Assessment revealed that replacing the most significant opportunity involved upgrading the plant lighting to T5 high output, high bay fluorescent tubes which provided improved lighting in several areas and reduced electrical energy consumption for the lighting by 50% or almost $20k/year. However, it was noted that the heating cost for the plant will increase by about $7k/yr to make up for the heat energy that was supplied by the old lights.

Assessment Results

Potential energy savings	576 GJ/yr	$13086/yr
GHG reduction	170 T/yr	

Implementation

In a follow up visit with the company it was reported that the plant lighting upgrade has already been implemented and the costs and savings estimated are on track. The company took advantage of both Nova Scotia Power's Custom Electrical Efficiency Program and NRCan's ecoEnergy Industrial Retrofit Program to reduce their implementation cost by almost 50% and improving their payback period to less than 2 years. The office lighting project has not been done as even with incentive program support the payback was not attractive. The compressor fresh air intake is not yet been implemented as it is a relatively minor saving.



Ed Peckham, General Manager said, "the Eco-Efficiency Program for Manufacturers provided concrete validation for the fact that improving efficiency produces economic benefits. We were pleased to be able to use the program and impressed with the minimal bureaucracy and effort required to use it."

The Eco-Efficiency Program for Manufacturers is working for Russell Metals Inc. and is demonstrating that there are significant opportunities for improving environmental performance and at the same time improving the bottom line for the company.

The Eco-Efficiency Program for Manufacturers is aimed at small and medium sized manufacturers (SMEs) in Nova Scotia and is designed to increase awareness for pollution prevention and eco-efficiency and to stimulate implementation of cost-efficient opportunities. The cost of hiring a qualified consultant to identify eco-efficiency and pollution prevention opportunities is offset by the program. There is a cost shared arrangement with the program contributing 75% and the participating company contributing the 25% balance. The program is also intended to help build capacity in the consulting community throughout the province.

Cooperating agencies and program sponsors for the program have been Environment Canada (Atlantic Region), Atlantic Canada Opportunities Agency, Natural Resources Canada, Nova Scotia Department of Environment, Nova Scotia Economic Development, Nova Scotia Department of Energy and Nova Scotia Power Inc. The program is delivered by Dalhousie University's Eco-Efficiency Centre - a university - based extension service established to enhance the efficiency of individual businesses while encouraging the cooperative and collective efforts of groups of companies.

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