

Finewood Flooring and Lumber Limited 2005 Case Study

Baddeck, Nova Scotia, Canada

This firm converts local hardwoods and imported wood into a wide range of finished hardwood building materials for the local and export market. The mill operates five days per week, one shift per day. The company was established in 1982 and has expanded and diversified its production capability several times. In the winter of 2004/05, Finewood applied for the Eco-Efficiency Program for Manufacturers. This two-step incentive program is designed to stimulate implementation of cost efficient opportunities within small and medium sized manufacturers (SMEs). Based on the results of the Opportunity Assessment, the company proceeded with an Implementation Plan/Feasibility Assessment. The assessments were conducted by Enerscan Consultants Limited.



Prior to the Eco-Efficiency Opportunity Assessment, the company had installed a wood burning boiler to produce heat for its kilns, climate controlled storage sheds and its manufacturing plant utilizing waste wood chips from the process.

The Process

Graded hardwood boards arrive at the mill and are manufactured into a wide range of products, primarily hardwood flooring and dimensional components. The operation includes kiln drying, planing and ripping, defect and length optimizing, moulding, end profiling, sanding and packaging operations. Finewood processes approximately one million board feet of material per year.

The Assessment

The Opportunity Assessment examined the company's energy systems and the various waste streams identifying a series of improvement opportunities, 6 of which were recommended for further analysis in a feasibility assessment/implementation plan. These included boiler efficiency improvements, power factor improvement, conversion of office building heating system to use hot water from the boiler, consolidation of electrical services and changing rate codes, upgrading lighting and compressed air system changes. These opportunities were further investigated in the Implementation Plan. Estimated implementation costs and implementation direction was provided for each opportunity. Payback periods were also provided for each, allowing the company to prioritize the various projects for implementation.

Assessment Results

The assessments identified over \$20,000 per year in potential savings for the various opportunities with paybacks ranging from a few months to two years, except for one opportunity which has a 9 year payback period. The overall savings estimated are:

Potential energy savings	737 GJ/yr	\$20800/yr
GHG reduction	133 tonnes/yr	

Candace Christiano, V.P. reported that Finewood is currently pursuing two of the six opportunities identified, including an electric motor efficiency upgrade, including power factor correction and a lighting upgrade through more modern technology and control. She said, "The program gave us an overall view of the opportunities available to us and - with the eco-efficiency savings identified and the implementation costs identified we are now able to proceed and plan for future investments in an organized, enlightened manner."



The Eco-Efficiency Program for Manufacturers is working for Finewood Flooring. It has demonstrated that there are opportunities for reducing energy consumption while 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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