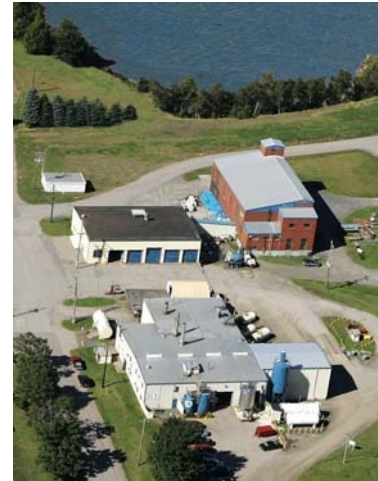


Acadian Seaplants Limited
Cornwallis, Nova Scotia, Canada

2005 Case Study

Acadian Seaplants Limited (ASL) is an internationally recognized industry leader in the manufacturing of seaweed-based products for global agricultural feed and fertilizer markets, food ingredients industries and in the cultivation and processing of unique seaweeds for the Asian food market. Several noteworthy and innovative aspects of ASL's operations include: the advanced methods used to harvest seaweeds as a sustainable, renewable resource and the technologies created to process the natural seaweed resources into value-added finished products for sale in exacting global markets. These activities have brought employment to Maritime Canadians and environmentally safe benefits to users of the finished products.



Acadian Seaplants has developed a Resource Management Program which ensures the long-term sustainability of its licensed seaweed resources and protects the seaweed ecology. All seaweeds harvested are hand-raked by trained fishermen under the direct control of the company from company-managed and licensed harvest territories. Acadian Seaplants has a full-time team of experienced resource managers who plan, execute and control annual harvests based on regular biomass assessments. Stringent management codes are in place to control harvesting efforts and intensity, thus ensuring resource sustainability, and the protection of the marine ecology. Acadian Seaplants has received government and industry recognition for its innovation and achievements in technology, management, economic impact, exporting and environmental practices.

The company employs 300 and operates five manufacturing plants in Atlantic Canada. The Cornwallis plant operates 24 hours per day, 7 days per week and manufactures specialty fertilizers and Plant Growth Regulator products. In the summer of 2004, Acadian Seaplants undertook an Opportunity Assessment as part of the Eco-Efficiency Program for Manufacturers. The Program is a two-step incentive program that 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 step 3, an Implementation Plan/Feasibility Assessment. The assessments were conducted by Neill & Gunter (Nova Scotia) Limited.

The Process

Fresh rockweed arrives at the Cornwallis seaweed processing facility by truck and is prepared for processing. Excess water and solids are removed through a series of processes which makes this operation a heavy user of water and energy.

The Assessment

The Opportunity Assessment identified five key opportunities for improvement involving water supply, water re-use, wastewater reduction, conversion of energy supply and recycling of waste

materials. Several of the opportunities were deemed to be actionable by company personnel and have already been implemented while others became the subjects of detailed analysis in the Implementation Plan/Feasibility Assessment. These included:

1. Switch from municipal water supply to on-site wells
2. Capture and re-cycle evaporator water
3. Provide storage capacity for re-cycled water

The Implementation Plan proved the technical and economic feasibility of each of these three projects and provided conceptual designs for them. Detailed supporting calculations were provided for each option studied.



Assessment Results

The assessment estimated \$64,000 per year in potential savings for the three opportunities assessed with paybacks ranging from 2.5 to just over 5 years.

Potential energy savings	1789 GJ/yr	\$12,500/yr
Conversion to well water (net savings)		\$45,850/yr
Potential water savings	7724 cubic meters/yr	
Reduce wastewater emitted	7724 cubic meters/yr	\$5,700/yr

Acadian Seaplants is interested in new and innovative programs that offer the potential to save costs and reduce the environmental impact of its operations. To demonstrate the company’s commitment to implement sustainable eco-efficient solutions for its business, it recently created the new position of Director, Environmental Affairs. “The eco-efficiency recommendations will take a little time to implement,” said Jean-Paul Deveau, President of Acadian Seaplants, “but with sound leadership and the will to ensure the opportunities are implemented in an orderly manner, we will make the necessary investments to ensure our processing operations are eco-efficient.”

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

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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