

Facility Size	59,865 ft ² (5,561 m ²)	
Facility Type	Fish Hatchery (Manufacturing)	
Location	93 Oak Haven Rd Oak Bay, NB	

ADM provided an Energy Opportunity Identification Assessment at this facility under Efficiency New Brunswick's Small & Medium Industrial Program. The goal was to provide the client with a thorough report outlining site findings and a prioritized list of best potential Energy Conservation Measures (ECMs) to pursue further for Feasibility Study and Implementation.

Our client's goal was to reduce the site's overall energy intensity and utility costs as well as perform a detailed evaluation of the filter pumping systems for various fish pond lines. Some of the production lines had their vertical sand filters retrofitted with a new plastic medium filtration, thus reducing the total system head for the pump to overcome. The evaluation was performed as per the ASME Standard EA-2-2009 Pumping System Assessment, level 2 which requires spot measurements of flow, head and power draw of each pump. In addition it requires pumping energy reduction ECMs to be evaluated.

In total, seven (7) energy conservation measures were evaluated during this study covering a wide range of areas such as solar water heating, air gap sealing, boiler retrofits, lighting retrofits, building automation systems upgrades, piping insulation, pumping systems and smart metering. Out of these seven (7) ECMs, five (5) were included in the report which represented a total cost and energy cost avoidance of nearly \$240,000 (including \$19,800 from incentive programs) and \$17,000 respectively yielding a total simple payback of 14 years. The study concluded that only three (3) ECMs should be pursued, namely the piping insulation, pumping variable flow and optimization and lighting retrofits.

The challenge with yielding good paybacks for the ECMs was the low annual utility costs, and the requirement for short payback measures due to the high economic risks involved with fish hatcheries.