



A Case Study

Warehouses of a leading Canadian grocery chain achieve significant energy cost savings with the ECRp[®] Program

The Challenge

One of the largest supermarket chains in Canada with multiple warehouses spread across the country was looking to reduce its warehouse operating costs and improve its carbon footprint at the same time. It decided to target its energy cost which has a significant impact on its profitability. The chain also decided to include deeper retrofits that can stay effective over a longer period.

The chain is very progressive in new warehouse construction and incorporates energy-efficient designs in all new constructions. While its new warehouses are highly energy-efficient and have a significantly smaller carbon footprint, it was looking to improve the energy efficiency in its existing locations. The challenge was to identify significant energy cost reduction opportunities with ease of implementation and minimal interruption to warehouse operations.

The Solution

Star Energy was engaged to implement a comprehensive energy cost reduction program to deliver sustainable and significant energy cost savings to achieve the client's ambitious target. To ensure that the energy savings are sustained over the lifetime of the retrofit, a rigorous monitoring and tracking system was also developed and implemented.

The Result

Over 10 energy cost reduction measures were initially selected. After thorough engineering assessments and calculations, the top 8 measures were picked based on key financial metrics and the ease of implementation in multiple locations across the portfolio. Significant energy cost reductions were projected, and 12 locations were selected for implementation across the country.

Profile

The chain has different warehouse formats spread across multiple weather zones and has a variety of refrigeration, HVAC, and lighting systems. Most of the locations have a refrigeration controller.



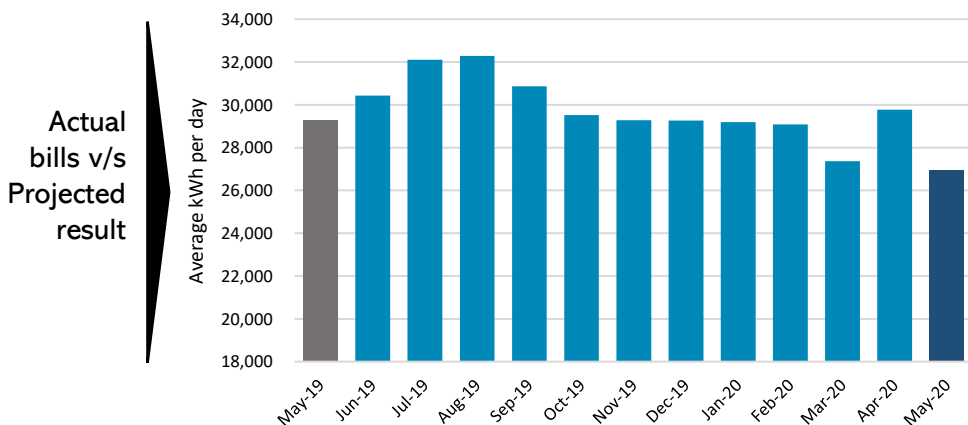
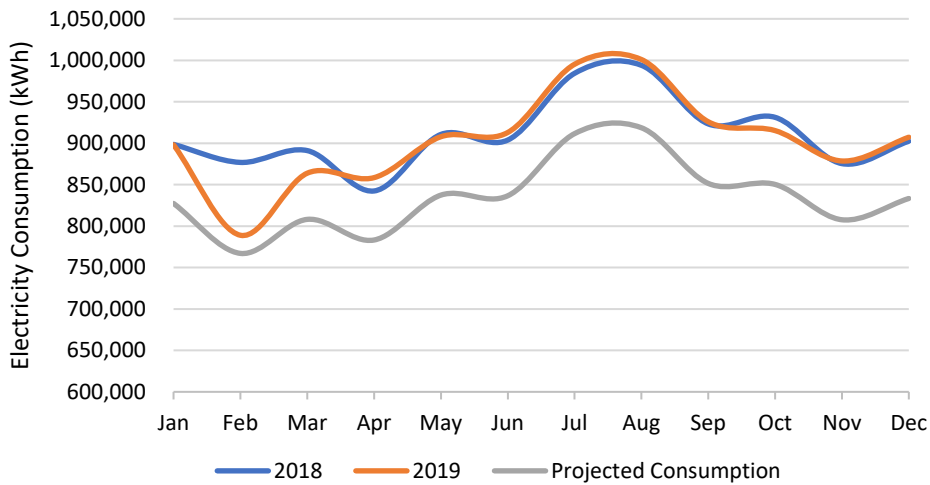
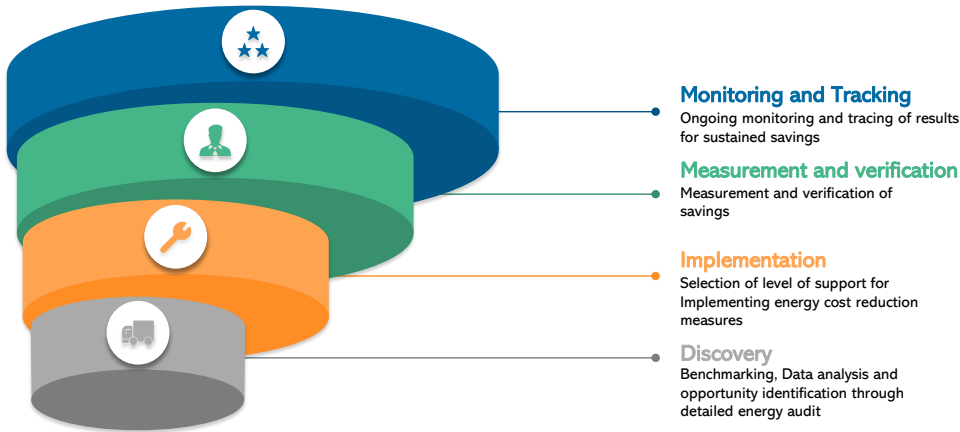
Average area of the warehouse: **320,000**
Sq. Ft.



Average electricity use index: **41kWh/Sq. Ft.**



Program: Major steps



Highlights

\$75,000
Average electricity cost reduction per warehouse

8% Average savings on annual electricity cost of the warehouse

Approx. 3 years
Average simple payback from all implemented measures

Approx. 30% IRR

9 kWh/Sq.Ft. Average reduction in energy use index

Over \$300,000
NPV/warehouse



Star Energy is an energy management company that specializes in the cold storage sector. Our experience working with major clients across North America has helped us to develop a program that not only optimizes the returns on capital but also improves asset values and the life of mechanical and electrical systems. We have worked with utilities across the US and Canada and our program is typically eligible for utility incentives that reduce implementation costs and further improve payback from the program. Our program is highly customizable to each client's financial and operational requirements.

Star Energy Solutions Inc. | Oakville, Ontario | sales@starenergy-solutions.com | (416) 800-7774 Ext. 1