



A Case Study

A leading Canadian grocery chain achieves significant energy cost savings with ECRp[®] Program

The Challenge

One of the largest supermarket chains in Canada with hundreds of locations spread across the country was looking to reduce its 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 store construction and incorporates energy-efficient design in all new construction. While its new stores are highly energy-efficient and have a significantly smaller carbon footprint, it was looking to improve energy efficiency in its existing locations. The challenge was to identify significant energy cost reductions with ease of implementation and minimal interruption to store operations during implementation.

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 20 energy cost reduction measures were initially selected and tested on multiple pilot locations. The top 10 measures were selected based on key financial metrics and the ease of implementation for a large-scale rollout across the portfolio. Significant energy cost reductions were observed and, based on the excellent pilot results, over 500 eligible locations were selected for implementation of the program through the rollout phase across the country.

Profile

The chain has different store 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 store:

45,000 Sq. Ft.

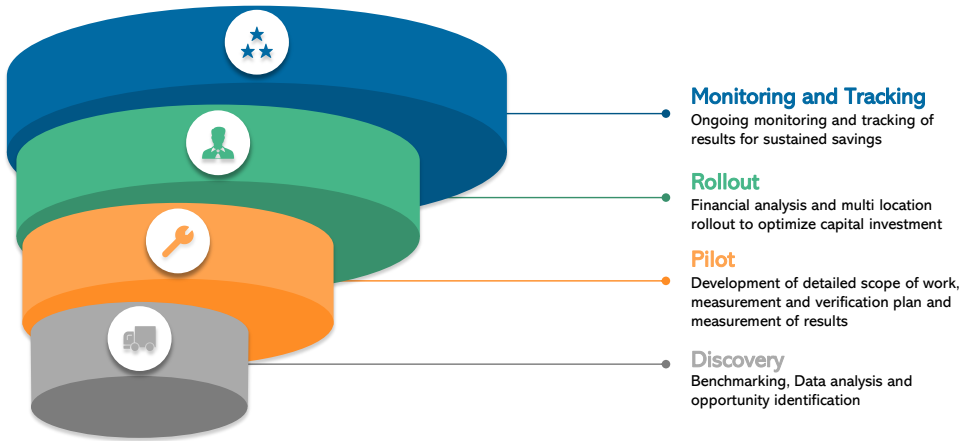


Average electricity use index:

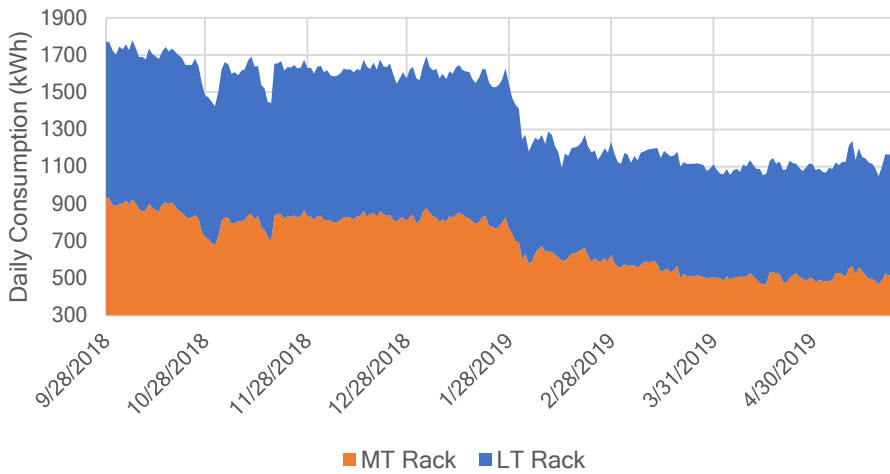
55kWh/Sq. Ft.



Program: Major steps

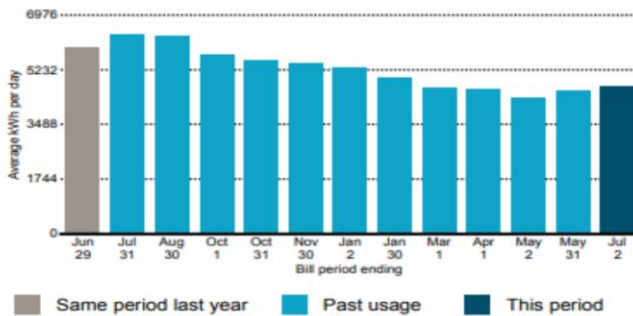


Refrigeration Energy Consumption Reduction (kWh)



Your electricity usage over time

21%
decrease of 1,250 kWh
per day in electricity
used compared to the
same period last year



Proven
results
from
Utility
bills

Highlights

\$40,000
Average electricity cost
reduction per store.
Range \$22,000 - \$69,000

13% Average
savings on annual
electricity cost of the
store. Range 8% -19%

Less than 4 years
Average simple payback
from all implemented
measures.

Over 24% IRR

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

Over
\$150,000
NPV/Store



Star Energy is an energy management company that specializes in the retail sector with an emphasis on supermarkets. Our experience working with major supermarket chains 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.

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