



A Case Study

How a national association helped their members to uncover major energy cost reduction opportunities

The Challenge

A national association with over 500 members in the restaurant industry with multiple restaurant banners across the country investigated the possibility of decreasing energy consumption through their existing mechanical and electrical systems. Lighting, refrigeration, and HVAC systems are the major source of energy consumption in the restaurant industry, accounting for up to 60% of total energy spend.

The association was looking to improve energy efficiency for their restaurant members. The challenge was to identify significant energy cost reduction opportunities with ease of implementation and minimal interruption to their operations.

The Solution

Star Energy was engaged to identify the energy conservation projects and to conduct measurement and verification to validate the energy savings obtained through implementation of these projects for multiple facilities located in Ontario. Star Energy was selected due to its previous experience in the restaurant industry, specifically for its expertise in refrigeration, HVAC, and lighting systems. To ensure that the energy savings are sustained over the lifetime of the retrofit, a rigorous monitoring and tracking system was also developed.

The Result

Across these locations, Star Energy identified multiple energy cost savings opportunities. Over 12 energy cost reduction measures were initially identified. After thorough engineering assessment and calculations, the top 8 measures were picked based on key financial metrics and the ease of implementation in multiple locations across the portfolio. The measurement and verification for some of these measures was also performed to validate the energy savings. Significant energy cost reductions were observed from these locations.

Profile

The association has various restaurant members spread across multiple weather zones and has a variety of refrigeration, HVAC, and lighting systems.



Average area:

12,000 Sq. Ft.

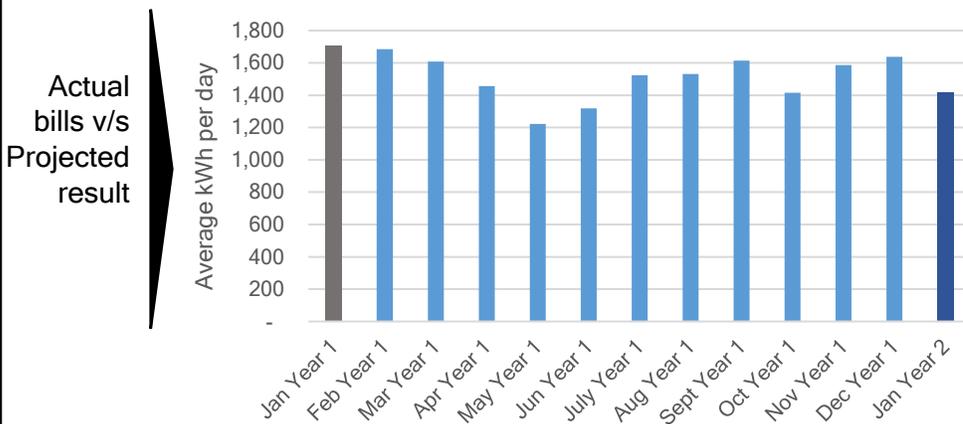
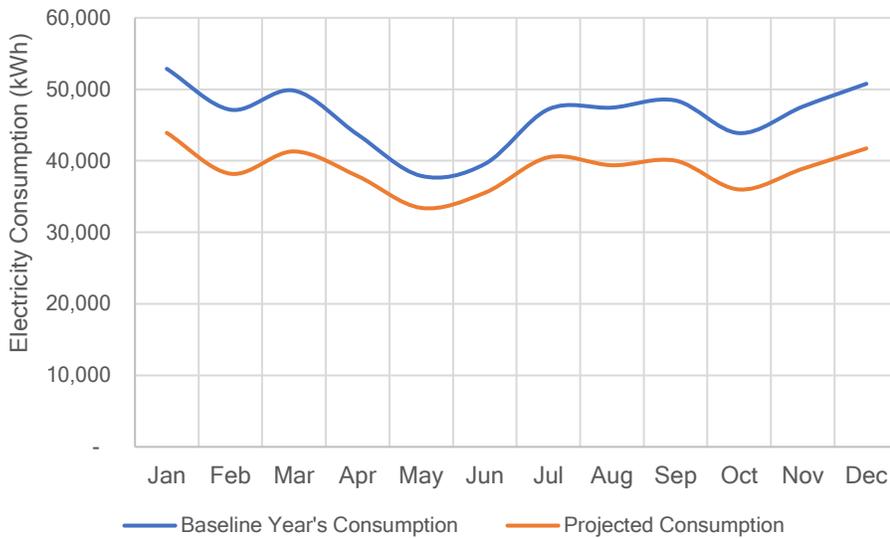
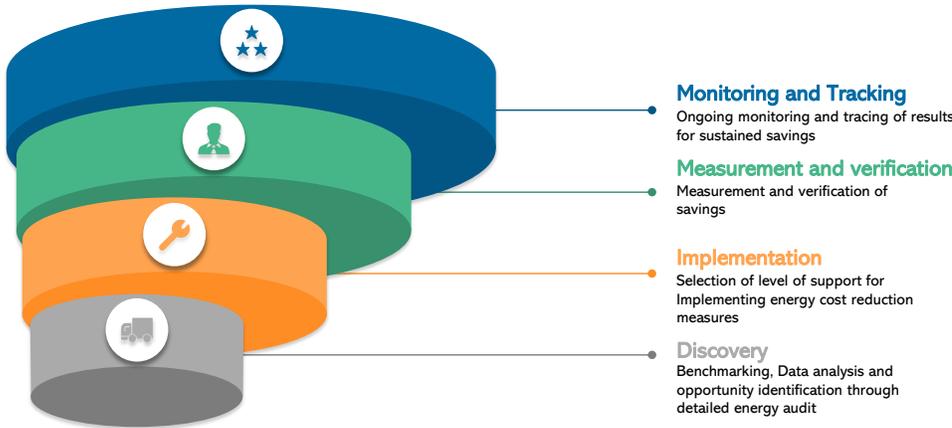


Average electricity use index:

46.7 kWh/Sq. Ft.



Program: Major steps



Highlights

(Average projection per facility)

\$10,900

Average electricity cost reduction per facility.

16% Average

savings on annual electricity cost of the facility.

Approx. 3.5 years
Average simple payback

Over 25% IRR

7.5 kwh/Sq. Ft
Average reduction in energy use index

Over \$40,000
NPV/facility



Star Energy is an energy management company that specializes in the restaurant 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.

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