An American discount retailer achieves multiple goals with AI, IoT and remote operations

Standardized store and equipment operations, improved occupant comfort and exceeded target cost savings across over 1,830 stores in the USA.

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The Client	An American chain of discount department stores which operates in over 39 states in the USA. Their focus has been on bringing customers a constant stream of high-quality department and specialty store brands at extraordinary savings, while providing an easy, fun and organized shopping experience.
The Challenge	The retailer faced the challenges of improving occupant comfort while reducing their energy and maintenance costs. They wanted to standardize the policy and configuration across stores, remotely monitor equipment performance to pre-empt maintenance issues and proactively identify and resolve issues to improve the equipment performance. The complexity of in-store equipment and their wide distribution intensified the challenge.
The Solution	To achieve the targeted energy savings of 3%, EcoEnergy Insights deployed their AI and IoT driven service across the retailer's store network.

The initiative leverages the existing building management system, sensors, meters and devices for data collection and provides actionable insights through the CORTIX™ platform. The retailer's store network was mapped and the operations of over 1,830 stores having nearly 12,000 HVAC systems were analyzed to discover energy efficiency and store operation improvement opportunities.

The stores were supported by a 24/7 Command Center - a centralized service desk for remote diagnostics and technical assistance that captures insights and takes effective measures to resolve issues. The Command Center with its team of data scientists, HVAC, controls and other domain experts enabled the retailer to meet their business objectives through round-the-clock service, proactive actions and continued supervision of the stores' buildings, equipment and operations.

The CORTIX platform provides proactive insights to the Command Center to ensure the asset health effectiveness. These insights provide corrective actions, potential impact, recommendations, prioritization, key observations and enables effective operations for the retail stores. The insights further led to the formulation of energy savings strategies throughout the stores.

Equipment inefficiencies or breakdowns are flagged by the platform and addressed by the field service partners, with coordination by the Command Center. This process is central to helping the stores maintain strict indoor environmental quality conditions, ensuring occupant safety and providing significant energy savings.
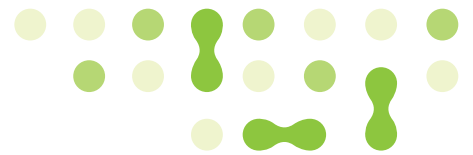
The program standardizes the way retail stores manage energy and implement deep HVAC and lighting controls-based savings strategies. In addition to cost reduction, the retailer gets unprecedented visibility into store energy operations leading to an increase in overall compliance levels.

The Result

The program deployment was scaled up from 300 stores to cover 1,830 stores within a short span of 4 months. Complex control logics were implemented to deliver significant cost savings and efficiency in operations. This partnership with EcoEnergy Insights became cash-positive for the retailer in its first year through a share of the energy cost savings delivered by the program, exceeding expectations. The program had the following outcomes:

- Energy savings: cumulative savings of **5.8%** for the year 2020 excluding COVID-19 impacted months (March, April and May) resulting in cost savings of **USD 2.1 million**

- Handled over **9,000+** schedule change requests during March to June 2020

- **49%** of work orders were resolved remotely resulting in savings of **USD 0.97 Million** from truck roll avoidance

- Met the set operational service-level agreement (SLA) for calls and tickets - **90%** calls answered within **20 seconds**

- Average ticket response time was lower than **30 minutes** and resolution time lower than **2 hours**

COVID-19 Response

The disaster management response and assistance provided during the onset of the pandemic was particularly significant. We enabled the retailer to close and reopen stores at very short notice and tackled a multitude of challenges to maintain occupant safety and comfort, manage risks, prevent equipment failures, and sustain the overloaded equipment.

Pandemic response dramatically increased the Command Center workload to ensure operations weren't disrupted and equipment breakdowns were prevented. The team swiftly adjusted the focus to managing day to day store operations during the challenging period.

The re-opening of stores post lockdowns had to be done in stages while constantly managing the frequent dynamic request to ensure unhampered equipment operations and compliance.

❝ We thank the EcoEnergy team for your support during COVID-19. We sent a lot of changes to the EcoEnergy team, and we really appreciate the extra effort that your team put forth to support our stores. The team did an amazing job, and that has been recognized by our company's leadership.

Thank you for your partnership through this crisis. We are looking forward to getting back to business as usual! **❞**

A Director at the Retailer

Write to us at **info.ecoenergy@carrier.com** and elevate your business now.