

Case Study



A large franchisee of a pizza restaurant chain takes a slice out of energy consumption

The award-winning engagement saved 21.3 million kWh in 6 years.

The Client

A large franchisee of an American multinational quick-service restaurant which operates approximately 300 Quick-Service Restaurants (QSRs) in the states of California and Utah, USA. The franchisee has always been invested in running highly efficient modern restaurants.

The Challenge

In 2015, the franchisee set a goal to achieve over 15% energy savings across their restaurant network. To fulfil their goal, they engaged with Carrier ABOUND on a 5-year program with a vision to make its quick-service restaurant network more sustainable and energy-efficient.

With over 220 restaurants and a total floor size of over 370,000 sq. ft. and 5,400+ pieces of equipment, it was important to deliver energy savings while assuring that the food safety compliance standards were met.

The Solution

Carrier ABOUND's Connected Restaurant Program was deployed across the client's restaurant network. This program leveraged the power of the ABOUND™ Insights platform to identify opportunities to improve operations and conserve energy, thereby reducing costs. It leveraged IoT and advanced analytics to proactively identify rooftop unit (RTU) health issues, hazard analysis and critical control points (HACCP) based deviations as well as refrigeration equipment performance. The program also identified operational issues leading to compliance deviations.

Carrier ABOUND liaised with the client's technical team to understand the store equipment through data. The team studied energy consumption, temperature, and equipment performance data for the baseline period. This vast amount of data from all restaurants, equipment, sensors, controllers, energy meters and systems at numerous outlets was fed to the ABOUND Insights platform. Upon complete integration, the

platform processed over 12,200 data records per day. It provided actionable insights on three aspects of the equipment's performance - health, availability, and efficiency. The BluEdge™ Command Center, a team of experts, drew correlations using data from weather feeds, energy utility data and preventive and reactive maintenance data to execute maintenance effectiveness analysis and savings analysis. The team identified opportunities to overcome energy leakage, enhance occupant comfort, improve equipment health and optimize restaurant operations. In addition to this, strategies were developed and implemented to better manage thermal compliance of food storage areas across the restaurant network.

The Result

The Connected Restaurant Program addressed multiple challenges across the franchisee's network of connected restaurants. This program helped the franchisee reduce energy consumption, provide a better guest experience, enhance thermal compliance in food storage and improve equipment reliability. The performance of heating, ventilating, and air-conditioning (HVAC) equipment, as well as refrigeration and kitchen equipment, were continuously monitored to address inefficiencies.

Key results as of 2022:

- i) Over 21 million kWh saved
- ii) Over 15,000 tons of CO₂ emissions reduced
- iii) 13.5% energy saving delivered
- iv) Food storage compliance maintained above 68.9%
- v) Occupant comfort maintained above 85%

This engagement won a 2018 Environmental Leader Top Project of the Year Award

Write to us at abound@carrier.com for more on how we can help your company achieve its business and sustainability goals.

About Carrier Abound

Carrier Abound provides digitally connected lifecycle solutions and services for diverse building portfolios. The solutions and services enable building management to see deeply and broadly across their assets, prioritize and act on real-time insights, and refine, adapt, and scale on a continual basis to improve energy efficiency and asset performance, enhance occupant comfort and productivity, and streamline compliance reporting. Carrier Abound is part of Carrier Global Corporation, global leader in intelligent climate and energy solutions.

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