THE HERITAGE HOTEL - DUBAI CASE STUDY

AUTOGRAPH COLLECTION HOTELS

INTELLI-HOOD KEY SAVINGS

Overview

The Heritage Hotel, a renowned property located in Dubai, UAE, sought to address rising energy costs and improve sustainability by equipping its kitchen ventilation system with Intelli-Hood's Demand Control Kitchen Ventilation (DCKV) controls. With the increasing focus on energy efficiency and environmental responsibility in the hospitality sector, the hotel aimed to reduce utility expenses while enhancing its operational sustainability. The decision to implement Intelli-Hood into the hotel's existing infrastructure was driven by the need to optimize energy consumption and ensure minimal downtime for their kitchen.

Total Energy Savings
196,423 AED/Year

Carbon Dioxide
248,639 kg/Year

Operating Expense Reduction
53%

Implementation

The installation of Intelli-Hood's DCKV controls at the Heritage Hotel's commercial kitchen was carefully planned to minimize downtime and integrate seamlessly into daily operations. To maintain the hotel's high service standards, the retrofit was scheduled during off-peak hours, ensuring the kitchen remained fully functional without disrupting workflow or guest experiences. Intelli-Hood's AI-driven technology learned the kitchen's cooking schedule, adjusting fan speeds in real-time based on demand. This smart, demand-driven system optimized energy use while allowing the hotel to continue providing top-tier service without interruptions.

Figure A

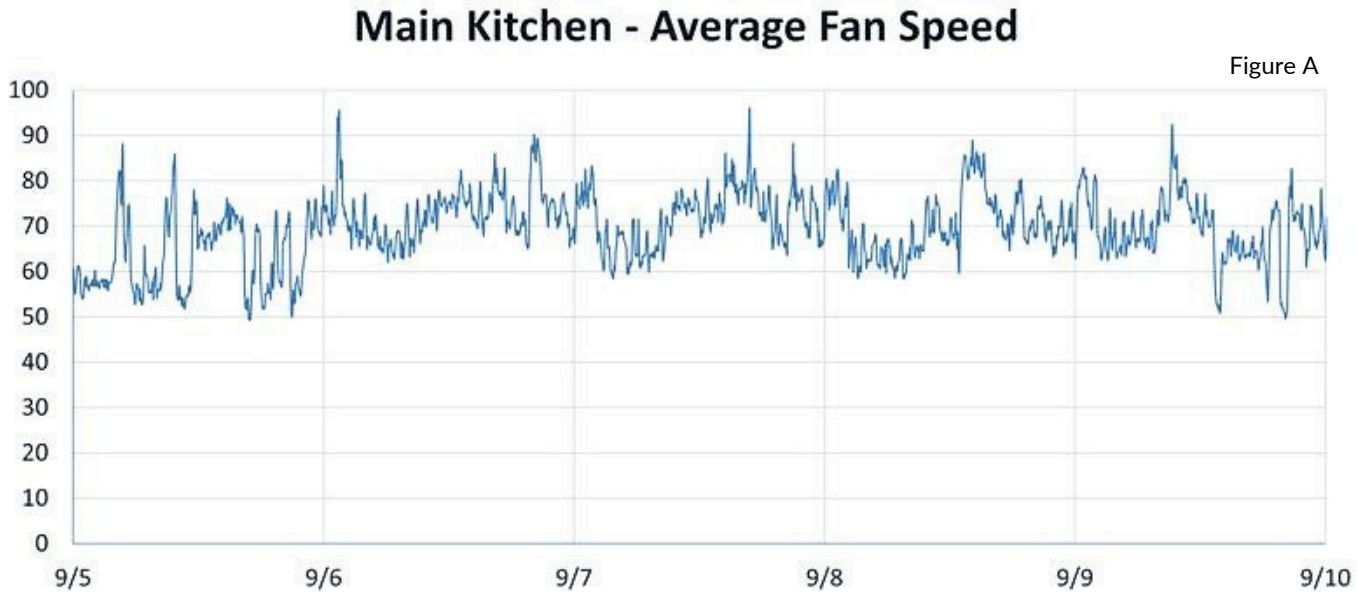

Figure A shows a sample of the hotel's average fan speed with Intelli-Hood's DCKV controls modulating during hours of operation over the course of 6 days. The average fan speed with Intelli-Hood's modulation was 67% for this hotel.

Performance Results

The impact of the Intelli-Hood installation at the Heritage Hotel was immediately evident. Before the retrofit, the hotel's annual utility costs for kitchen operations were 368,951 AED. Following the installation, operating expenses were reduced by an impressive 53%, resulting in substantial savings. In addition to these financial gains, the hotel achieved annual CO2 savings of 248,639 kg, significantly reducing its carbon footprint and aligning with its long- term sustainability objectives.

A key factor behind these results was Intelli-Hood's advanced modulation technology, which adjusted fan speeds in real-time based on cooking demand. This allowed the kitchen's exhaust fans to run at full capacity only when necessary, with the average fan speed at 67%. By minimizing energy waste and optimizing energy consumption, the hotel was able to enhance kitchen efficiency without sacrificing performance, leading to both financial savings and environmental benefits.

Conclusion

The installation of Intelli-Hood at The Heritage Hotel showcases the impact that energy-efficient technologies can have on both financial performance and environmental sustainability. The project's significant CO2 savings, underscores the value of adopting smart solutions like Intelli-Hood for commercial kitchens. This successful project serves as a model for other hotels in the region, demonstrating how integrating cutting-edge technologies can drive long-term financial and environmental benefits.

Annual Kitchen Hood Utility Costs (AED)

Figure B

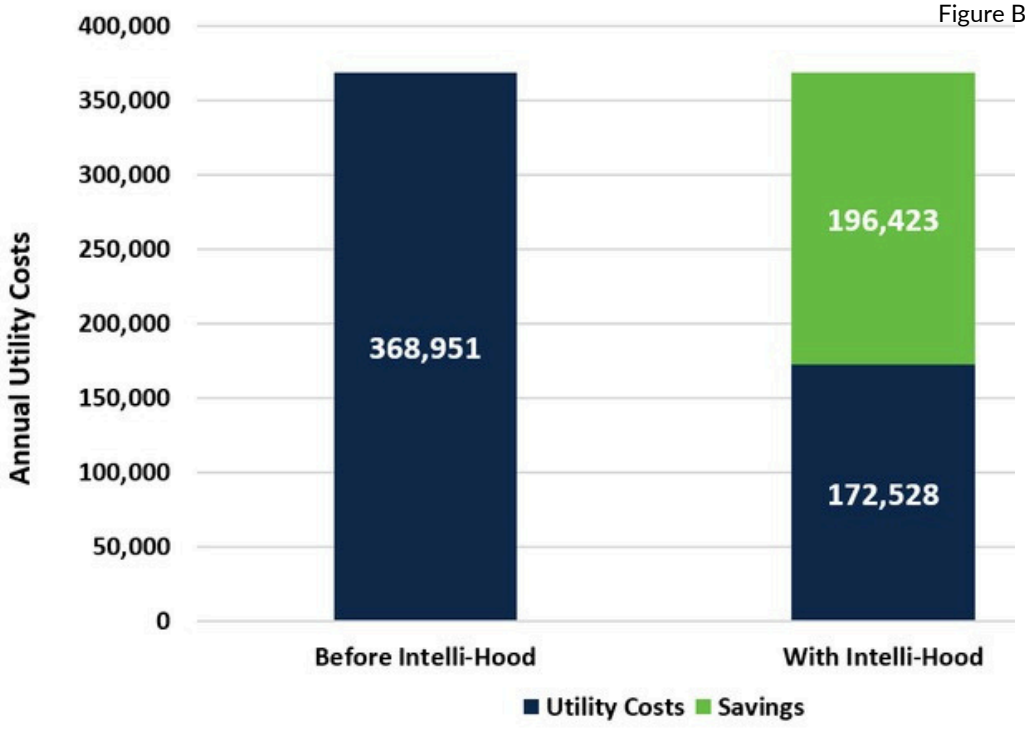

Figure B compares the annual utility costs prior to Intelli-Hood's installation vs. after. The graph highlights the savings achieved by Intelli-Hood's DCKV installation.