



INTELLI-HOOD®

KEY SAVINGS

Overview

The Royal Atlantis Resort in Dubai, a pinnacle of luxury and innovation, sought to enhance its operational efficiency and environmental sustainability in its expansive kitchen facilities. The management recognized the need for cutting-edge technology to address energy consumption and environmental impact. The installation of Intelli-Hood's Demand-Controlled Kitchen Ventilation (DCKV) controls emerged as the solution to revolutionize the kitchen experience while achieving significant cost and energy savings.

Implementation

The success of this project relied on a meticulously planned installation process, emphasizing minimal disruption to daily operations. Implementing a well-coordinated phased approach, the installation strategically minimized downtime and ensured swift and accurate completion at each stage; making sure to install outside of peak operating hours. A key element in this success was Intelli-Hood's smart technology, utilizing dual sensing to modulate kitchen fan speeds based on real-time cooking demands. Recognizing the paramount

- Total Energy Savings**
 770,712 AED/Year
- Carbon Dioxide**
 812,998 kg/Year
- Simple Payback Period**
 1.5 Years
- Operating Expense Reduction**
 54%

importance of a seamless transition, the project also included extensive staff training, specifically focused on the new DCKV controls. This comprehensive training empowered the kitchen staff to not only understand but also effectively utilize the system. As a result, optimal performance was achieved, and substantial energy savings were realized, showcasing the efficiency and effectiveness of the Intelli-Hood system.

Annual Kitchen Hood Utility Costs (AED)

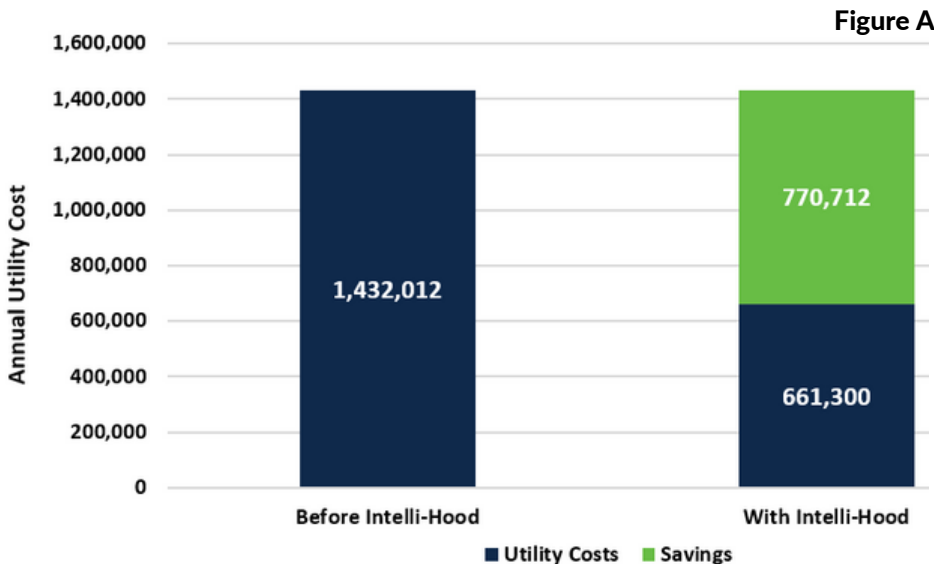


Figure B depicts the fan speed variations throughout a single day. The variations in fan speed are a result of changing cooking demand in the commercial kitchen.

Performance Results

The tangible benefits of the Intelli-Hood installation were evident in the post-implementation results:

Utility Cost Reduction: The annual utility cost experienced by Royal Atlantis's kitchen decreased from 1,432,012 AED to 661,300 AED (Figure A), demonstrating a remarkable 54% reduction. This substantial cost savings directly contributed to the resort's bottom line.

CO2 Emissions Savings: The kitchen's environmental impact was significantly reduced, with a yearly saving of 812,998 kg of CO2 emissions. This aligns with the Royal Atlantis Resort's commitment to corporate social responsibility and sustainability. The reduction in carbon dioxide emissions also helped to improve the air quality for guest & staff.

Quick Payback Period: The project exhibited a simple payback period of 1.5 years, showcasing the efficiency of the investment. This rapid return on investment positions the Intelli-Hood system as a cost-effective solution for commercial kitchens.

Optimized Fan Speed: Post-installation, the average fan speed operated at an efficient

59% (Figure B), highlighting the system's ability to dynamically adjust ventilation rates based on cooking activities. This not only contributed to energy savings but also extended the lifespan of the kitchen exhaust system.

Conclusion

The installation of Intelli-Hood's DCKV controls at the Royal Atlantis Resort in Dubai serves as a benchmark for integrating cutting-edge technology to enhance kitchen operations. The project's success lies in the seamless installation process, minimal disruptions, and the tangible benefits realized in terms of cost savings, environmental impact, and operational efficiency. The Royal Atlantis Resort's commitment to sustainability and innovation positions them as industry leaders in the hospitality sector.



Royal Atlantis kitchen with Intelli-Hood optic sensors.

Royal Atlantis - Average Fan Speed Profile in 11 Kitchens

Figure B

