

Case Study

The Whaler at Kaanapali Beach Resort Reduces Energy Costs 30% with Honeywell Energy Management

July 7, 2016 – Energy cost is the second-largest operating expense for most hotels. In Hawaii, where energy costs are the highest in the nation, energy efficiency and **hotel energy management** is absolutely essential to sustain profitability.

In 2014 The Whaler on Kaanapali Beach Resort on the island of Maui installed Honeywell's INNCOM INNcontrol™ 3 real-time **Hotel Energy Management** System (EMS) and realized a 30.4% energy cost savings in the first eight months of use. Estimated savings for the first year's use of INNCOM at The Whaler at Kaanapali Beach Resort are \$325,405 based on an energy reduction of 611,047 kWh. The ability to deliver **guest comfort in the hotel room** and results like those experienced at The Whaler is why INNCOM is used by nine of the 10 largest hotels in Hawaii and installed in more than 67% of all guest rooms in The Islands.

The 359-room property implemented:

- INNCOM E528 thermostats,
- Humidity detection and abatement
- PIR motion sensors
- Door sensors on entry ways and patios, and
- B574 edge routers.

The entire **hotel energy management** system communicates with the central INNcontrol 3 monitoring system via an INNCOM Deep Mesh Network™.

“The value INNCOM brings is beyond measure,” said Shawn Racoma, property chief engineer-AOAO. “The system lets me control how each guestroom air conditioning unit is used based on occupancy sensors. This is essential since our chiller is a major property energy consumer, and the biggest chiller resource user are the guestrooms.” The INNCOM system communicates with the Resort's property management system and automatically resets temperatures to an optimum energy conservation level in vacant rooms. INNCOM motion detectors and door sensors also reset thermostat settings in occupied rooms if the guest is not present.

“INNCOM gathers a huge amount of useful information from our guestrooms. Occupancy, humidity, temperature, thermostat setting and door status are monitored. Each room’s data is instantly communicated to our INNcontrol 3 processor that controls temperature and fan runtime. This saves us money,” said Racoma. “We have INNcontrol 3 screen monitors that display graphs for all room temperature metrics and occupancy as well as each room’s equipment operational status. We continuously monitor energy use and system health. If a room’s temperature or fan runtime are outside of acceptable parameters, the system alerts us to correct the issue before the guest notices the problem. This equates to greater **guest comfort in the hotel room.**”

INNCOM’s door sensors are particularly valuable for Hawaiian properties and hotels in warm climates. “Many of our rooms have a hall door and a sliding patio door. If either of these doors is left open for a specific period of time, INNcontrol 3 optimizes the thermostat’s temperature so the system is not attempting to cool the island. We reduced fan runtime about 25% when we installed INNCOM,” Racoma said. “An added benefit of our door sensors is increased security. When a guest door is left open for a prolonged period, the INNcontrol 3 monitor displays an alert and we notify property security.”

The resort’s PMS communicates with INNCOM to ensure maximum energy savings and guest comfort. When resort rooms are unrented INNcontrol 3 sets the temperature to approximately 80 degrees. When a guest checks in, the PMS notifies INNCOM to reset the temperature. “The system lowers the room temperature to 73 when a guest registers and room’s PMS status changes to occupied,” Racoma said. “We know that a guest takes seven to 15 minutes to reach their room. Our air condition system has the room at a comfortably cool temperature when they open the door.”

Humidity is a factor in resort operations that INNCOM addresses. “We have many ownership units at The Whaler on Kaanapali Beach Resort. Some of our owners only use their units three times a year. We found that many of them left their air conditioning set at a cool temperature while they were away,” Racoma said. “They were concerned that humidity would contribute to mold in their rooms. This was not an issue after we installed INNcontrol 3. The systems humidity detection and abatement functionality lets us effectively control humidity at higher temperatures.”

The Whaler on Kaanapali Beach Resort has two INNcontrol 3 terminals for administrative control of property environmental and **hotel energy management** strategies. “I

have one INNCOM terminal on my desk and one on my supervisor's. I can also monitor the system remotely from my home," Racoma said. "This makes our work much easier. We can monitor system performance and all other areas of operation."

The INNCOM system regularly takes randomly selected rooms off its EMS control to verify performance and savings from its use. "Energy use is much higher in rooms not benefiting from INNCOM control," Racoma said. "INNcontrol 3 is intelligent. Comparing INNCOM to other systems is like comparing a child in elementary school with a Harvard graduate. It monitors our entire property, it's like having eyes on every important guestroom system."

Racoma said, "I have been at five Hawaiian resorts and installed INNCOM at three of them. The company continues to develop new programs and adapt innovations that save money and make guests more comfortable. I have the utmost confidence in Honeywell's INNCOM technology."