



Case Study

LECS®

Energy Control System

US Grant Hotel Realizes 43% Savings on Fuel on the First Day

# Solution Family - LECS® is an end-to-end energy control solution

## Highlights

- LECS® Targets Hospitality facilities
- Controls Energy Costs the first day
- Provides phone based local and remote control of facility
- Enables enterprise level scheduling and monitoring
- Provides enterprise level maintenance and diagnostics for all your facilities

The current demands on hotels and hospitality facilities require them to look at all costs, including operations, to reduce overall expenditures just to remain competitive. Already at work in facilities around the United States, LECS® is a proven solution for lowering energy consumption and bills while placing the visibility of all your locations in your hands with LECS® Mobile.

The Solution Family LECS® (Learning Energy Control Solution) was specifically designed to meet the energy demands of hotels, retail shops, restaurants, medical offices, and other commercial businesses.

## Challenge

Surviving today in the hospitality sector requires optimal performance from your equipment. The costs associated with replacing your existing equipment are not justifiable. The Hospitality Industry has to work with their existing equipment and find cost savings by optimizing operations without the luxury of replacement.

The surge in water prices and the costs of meeting the demands of guest hot water requirements were overwhelming the management staff of the US Grant Hotel in San Diego, California.

The drought conditions in California are applying pressure to the operational staff at the US Grant Hotel. Unexplained water usage was causing huge variability in costs. Water bills were arriving months after the actual usage. The hotel staff did not have the ability to predict, explain or control water usage. High fuel costs were creating additional expenses in supplying hot water to hotel guests.

**Confirmed data demonstrates that LECS® reduced total fuel consumption by 40% in the first day of operation**

The Hotel Management needed a more reliable method to control energy use throughout his properties. Reasons for water usage left management at a loss. Equipment failures for supplying water were unexplained.

The Property Manager faced the need to control and manage a variety of store locations while both onsite and traveling. He faced constant questions on operational costs that were not explained by hotel usage. Pump failures for upper floor water systems were unexpected because of the existing redundant system that had been deployed.





The usage, operations and failures throughout the facility were a major concern. The property manager was feeling overwhelmed!

#### **Solution**

This Property Manager selected Solution Family to automate his temperature and lighting controls with LECS®. With the ability to address all building systems the capabilities and proven success LECS was an affordable investment that would deliver a fast return on investment. LECS® would also give the property manager the ability to schedule, monitor, and control energy consumption conveniently from anywhere.

LECS®, the Learning Energy Control System, introduces revolutionary control strategies for a variety of facility systems combining the latest learning technologies with traditional building system interfaces. LECS optimizes both energy usage and facility operations providing a total facility solution.

The installation was easy, and took only a few hours without affecting operations. All system monitoring was designed to not affect continuous operations. The LECS® system addressed the main water boiler, upper floor water pumps and main facility water meters. The boiler systems were integrated with strap on pipe sensors, clip on CTs for operational state. The Upper floor water pumps were monitored with clip on CTs and main floor water meters were connected with existing sensor pulse outputs.

#### **Results**

Immediately upon installation, the LECS® system identified a short cycle operation of the Water Boiler system. The Boiler had set-points that were within a single degree and caused the Boiler to cycle every 45 seconds. The short cycle resulted in an increased fuel consumption of 43 percent over traditional control settings. This was immediately eliminated by LECS®

**Immediately upon installation, LECS® identified boiler short cycles, failures in redundant systems and water usage that resulted in 43% reduced fuel costs and increased operational reliability**

The redundant pumps serving the upper floors were monitored by LECS®. After the first 24 hours of monitoring LECS® identified that the redundant control system was not functioning and power cycle resulted in one pump being used exclusively.

LECS® immediately provided the manger, for the first time, a view of live water usage. This data provided management the ability to resolve water usage issues throughout the day.

The property manager now relies on his ability to monitor his LECS® control system while he travels throughout his properties. He has developed confidence that the LECS® solution is working for him to control and diagnose his systems and tapping him on the shoulder only when he needs to get involved.

With immediate savings in fuel costs, increased diagnostics and remote scheduling, this facility manager is introducing LECS® to his entire Starwood® Properties team.



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