

Case Study: Universal Studios Hollywood



PHOENIX ENERGY
TECHNOLOGIES

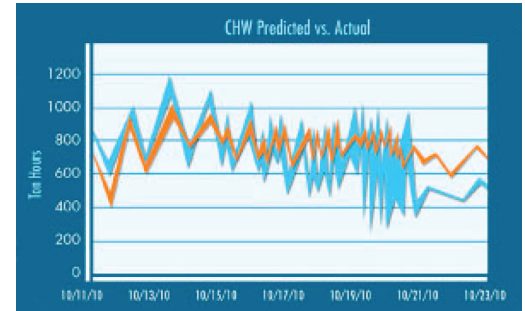
With a commitment to sustainability, Universal Studios Hollywood views enterprise-wide operations through the lens of global citizenship and environmental stewardship. Energy efficiency is no exception. Together with Phoenix Energy Technologies, Universal Studios Hollywood is bringing new transparency to energy consumption and costs across the park to both minimize waste and proactively identify future opportunities for savings.

WHY IT MATTERS

Commercial buildings account for approximately 40 percent of total global energy consumption. And, while electricity itself is relatively safe and clean, its generation and transmission are major polluters. As global demand rises, improving energy efficiency and reducing consumption is of critical importance.

Energy efficiency — obtaining identical services or output with less energy input — is the fastest, least expensive, cleanest way to extend the global energy supply.

With mounting pressures to reduce consumption and the carbon footprint, Universal Studios Hollywood and Phoenix Energy Technologies have part-nered to improve energy efficiency across the park utilizing a unique software and services approach.



USING TECHNOLOGY TO DRIVE ENERGY EFFICIENCY

In 2010, Universal Studios Hollywood and Phoenix Energy Technologies deployed a cutting edge software system, EnterpriseDX®, to bring total visibility to energy consumption and costs across the park.

EnterpriseDX® enables facilities to automate and integrate the collection and commanding of critical data sources. In other words, facilities are able to collect and view all of the data sources that impact energy consumption and costs. At Universal Studios Hollywood, this includes building control data, metering data, outside air temperature, humidity, HVAC set points and controls, occupancy data, billing data, and more.

This data is collected in real time and then pushed out through a user-friendly web portal. Using the EnterpriseDX® portal, key operations personnel can quickly identify anomalies such as lights and HVAC left on when a space is unoccupied, airflow issues, improper controls setup, and much more. In short, EnterpriseDX® provides the information that facilities and operations personnel need to pinpoint problems — things that waste energy — quickly and accurately.

DATA THAT DRIVES VALUE

Discovering the problems is only the first step, because until corrective action has been taken, nothing has been saved. Together with Phoenix Energy Technologies' Advanced Analytics team, Universal Studios Hollywood bridges the gap between data and action to maximize energy efficiency and drive ongoing value. By way of example, the Phoenix Energy Technologies Analytics team recently performed an energy audit on building 5511 and utilizing the data provided by EnterpriseDX®, determined:

- Changing temperature set points in the building during the summer months from 77 degrees to 74 degrees will improve energy efficiency by making it easier to maintain the temperature set point. In other words, by changing the temperature setting, equipment won't have to work as hard and therefore will operate more efficiently.
- The chilled water supply used to cool this building should be set between 45 degrees and 50 degrees to optimize building performance.
- Several pieces of equipment that were pinpointed as problematic.
- Implementing these changes will not only optimize the building performance and increase energy efficiency, but will also ensure comfort is maintained.
- By establishing a baseline that reflects past building performance, then measuring building performance once improvements are implemented, analysts are able to deliver quantifiable results in terms of cost savings and environmental impact.*

Seemingly small adjustments are big on impact when implemented enterprise-wide.

6 STEPS TO A GREENER UNIVERSAL STUDIOS HOLLYWOOD:

- 1 Identify & automate the collection of critical data sources
- 2 Engage analytics resources to identify opportunities for savings
- 3 Review actionable results
- 4 Take action on savings opportunities
- 5 Quantify
- 6 Repeat!



Energy efficiency is a journey. Whenever efficiencies are found, more remain, waiting to be found. Universal Studios Hollywood, together with Phoenix Energy Technologies, is driving change one building at a time. Through a continuous, ongoing approach to energy management, powered by industry-leading software and advanced analytics, Universal Studios Hollywood leverages sustainability challenges into reduced consumption and costs for leaner, greener park operations.

*Corrective action is underway in Building 5511.

However, due to the recent nature of this project, metrics relative to savings are not available at this time.