

Commercial BUILDING PRODUCTS

SERVING ARCHITECTS, CONTRACTORS, AND OWNERS IN COMMERCIAL CONSTRUCTION



- Going Beyond Green
- Reflectors Drive Light
- Rooftop Solar Cuts Costs

Green Construction Issue



Charlie's Long Bar in the Hyatt Regency Hill Country Resort & Spa has a 56-foot-long copper-topped bar. This property and a Hyatt in downtown San Antonio, TX, saved about \$450 a day by participating in a demand-response program offered by the city's electric utility. Photo courtesy Hyatt Hotels.

Demand-response (DR) helps electric utilities and customers improve infrastructure planning and operations with consumption in mind. DR allows customers in retail and wholesale electricity markets to choose whether or not to respond to pricing or other kinds of incentives by reducing or shifting their electricity usage, particularly during peak periods. This differs from simple energy efficiency in that it allows the customer to shed electricity in response to a predefined need, such as a request from a utility or in response to market prices.

CPS Energy, San Antonio, TX, is the largest municipally owned electric utility in the U.S. CPS has employed a DR program as part of its Save for Tomorrow Energy Plan (STEP), which has resolved to reduce the electricity consumption of its customers by 771 MW by 2020. To provide commercial demand-response services within the program, CPS turned to Servidyne, Atlanta, which developed the Fifth Fuel Management program.

CPS and Servidyne began working together in August 2009 to pilot Fifth Fuel

Hotels Shed The Load

Two Hyatt properties save \$4,500 a month in a utility's demand-response pilot program.

Management capabilities, and enlisted the participation of two San Antonio hotel properties: the Hyatt Regency Hill Country Resort & Spa and Hyatt Regency Riverwalk to complete the testing.

Pat Mitchell, director of operations at the Hill Country resort, said the operational challenges were, at first, intimidating. Because of the nature of the hotel business, he was not sure the properties would always be able to participate in the curtailment events.

"For example, we have a tent for special events. If it is in use, I am unable to turn

off the air conditioning in the tent, and not doing so would affect our results. So at first we were not sure if the benefits would outweigh the challenges."

Integrating the software

Fifth Fuel Management is backed by Servidyne's iTendant platform, a Web-based, computerized maintenance management system (CMMS), hosted in a Tier I data center, which provides the reliable two-way, fast and secure communication and tracking platform needed for DR.

Hyatt was already using its own software for curtailment as well as the iTendant Preventive Maintenance and Guest Request software system. As part of the pilot, Fifth Fuel Management provided an additional demand-response module that was installed without an investment in additional hardware.

Before initiating demand-response events (DREs), each property had to be audited to determine the amount of energy, or load, that could be called upon during a DRE. An audit by Servidyne generated a list of proposed demand-response measures (DRMs) capable of delivering a certain amount of curtailable load.

Each accepted DRM was assessed using actual amperage readings (when available) obtained with metering equipment on a real-time basis. Those readings were then converted to estimated peak kW contributions. The audits showed that the Hill Country facility had an estimated 154.9-kW load, and the Riverwalk hotel had 84 kW. Together this totaled 238.9 kW, 19.5% more than the 200-kW minimum required by CPS.

At its conclusion, the pilot efforts resulted in an average 236 kW of demand-response across eight DREs in four weeks. This savings was 99% of the 238.9 kW that CPS identified as available to be curtailed or shifted during that timeframe. Importantly, this result was achieved without additional customer support from CPS, and with minimal activity at each facility.

Hill Country's Mitchell and Jimmy Yarbrough of the Riverwalk hotel said the energy savings amounted to roughly \$450 a day, or \$4,300 to \$4,500 a month. 

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