by Geoff Griswold

Managing Energy in a Volatile Environment

ENERGY COSTS CONTINUE to be of concern to all hoteliers, from the economy segment to the largest properties in major markets. Costs have escalated in both electricity and natural gas, with gas experiencing a dramatic rise in just the last year. While there are some markets that have remained relatively stable, many other areas have experienced significant spikes.

Deregulation was supposed to instill competition and thus lower the costs of both electricity and gas. However, because of concerns in California, New York and other areas, the move to deregulate has slowed. The collapse of Enron has also had an affect on continuing deregulation, along with other factors.

Costs have actually risen in some deregulated markets. In addition, deregulation has forced hotel personnel to become familiar with a complex buying process, some having to hire consultants or brokers to assist them in sorting out contracts and terminology.

While it is important to negotiate an appropriate contract in a deregulated market, it is equally important to conserve resources and manage energy costs.

While deregulation may never produce the costs reductions some expected, any hotel can benefit from conservation.

Energy Star (www.energystar.gov) is a voluntary government/business partnership that offers energy-efficient solutions to conserve resources and protect the environment. It began as a labeling program to identify and promote energy efficient products. Computers and monitors were the first products to be labeled with the now familiar energy star logo. The program was expanded to include office equipment and residential heating and cooling equipment.

In 1996, the EPA and Department of Energy partnered to include major appliances, lighting and home electronics, to name a few. The label now covers new homes and commercial buildings, including hotels.

The EPA has established a national rating system that allows a hotel to compare it's energy performance with other hotels across the country. Using data provided on the property, a baseline rating of 1 to 100 is established. The EPA provides tools and resources to prioritize goals, invest properly and address important areas. The program is quite extensive and includes areas such as air-source heat pumps, boilers, furnaces, computers and monitors, TVs and many other items. (See www.energystar.gov for more information.)

Once a property has achieved an overall rating of 75 or more, it is awarded the Energy Star.

Hilton Hotel Corp. has enjoyed considerable savings since becoming a partner of Energy Star in 1996. In the year 2000, the company saved $2.5 million in energy costs and was an Energy Star award winner in 2001. Hilton continues a rigorous program today including the use of digital thermostats and a comprehensive property reporting system.

Even without joining Energy Star, hotels have a wide variety of energy management products to choose from. There are several companies offering effective products that will reduce costs and offer a reasonably rapid return on investment. Most energy management products will work as standalone systems. Some suppliers also offer integrated, centralized systems.

The key elements in any energy management product are proper technology and functionality that does not cause discomfort to or disturb the guest.

The following is a sample of some of the leading suppliers of energy management systems in the industry. This sampling is not all-inclusive nor is it an endorsement of any supplier or product.

Energy Eye (Rochester Hills, Mich., www.energy-eye.com) offers stand alone wireless radio frequency devices that, in combination with advanced passive infrared sensors control room heating, ventilation and air conditioning.

The system uses a wireless infrared motion sensor to detect movement in the room. There is also a wireless micro door sensor that senses when the door has been opened. The motion sensor then waits to determine if the room is vacant. This approach eliminates the problem of the system being out of status and shutting back on energy when the room is still occupied. The motion sensor communicates with the HVAC receiver/controller that actually adjusts the power to the HVAC unit as required. Unoccupied guestroom temperatures are pre-determined by the hotel. "We see payback periods on the equipment of well under two years," said Matt Mrowczynski, executive vice president of sales and marketing.

Onity (Norcross, Ga., www.onity.com) offers both stand-alone and online systems. The SensorStat DDS combines digital temperature control with PIR (passive infrared) occupancy sensing, along with HVAC setback capabilities. The SensorStat can be used either as a stand-alone unit or as part of the online system, innPULSE. Onity provides a door switch to determine if the room is occu-

pied along with a humidity sensor that will override the temperature parameter and cool the room if it is humid.

innPULSE is a complete online system that provides features to reduce operation expenses, improve services, and closely monitor rooms. innPulse links with other devices and departments via existing cable TV coax wiring.

Lodging Technology (Roanoke, Va., www.lodgingtechnology.com) offers the GEM System as their primary product. It is an infrared-based, body heat detection system that can accurately detect people in the room versus false motion that can be picked up by some motion sensors. There can be separate inputs for controlling HVAC if a balcony or patio door is opened. The system automatically resets room temperatures to selected levels if guests are out of the room.

Another feature of GEM is the guest in-room indicator. This allows hotel personnel to accurately determine whether guests are present in a room, without disturbing them, by using a small, hand-held GRD scanner. A red light illuminates if a guest is present in the room.

Inncom (Niantic, Conn., www.inncom.com) features a variety of products from stand-alone units to InnControl, a centrally based system. Every Inncom energy management system offers expandability from which such features as minibar access reporting, central lock control and occupancy reported can be added. Each intelligent system component is remotely programmable and failure protection is provided so that the climate in each individual room is maintained even if there is a component failure.

Inncom also features a lighting control for the guestroom using infrared technology. The guest has fully dimming capabilities and the system includes light bulb outage reporting. It can interface with the central energy management system.

Energex Inc. (Richmond, B.C., www.energex-inc.com) has several products for the hospitality market. The RK-410PR in room sensor can either be wired or wireless. Passive infrared (PIR) or ultrasonic is available with dual technology detection. The Neospere K8-85 room sensor is similar in functionality but more decorative in design.

The company provides a line of digital thermostats that offer an easy-to-read display and a seamless interface to any HVAC control. The company's central energy management system has a Web-based room status display as part of real time occupancy reporting. A wireless Palm Pilot can also supply critical room occupancy information.

A handheld room status wand from Fluke Manufacturing can determine if a room is occupied without knocking on the door.

Regardless of which supplier or technology a hotel chooses, energy conservation is becoming an even more important part of hotel operations. The payback on most energy management systems is relatively short and the savings will continue for years to come.

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How a typical hotel's energy costs are broken down (values are approximate)

15% air conditioning
30% heating
30% lighting
25% base load (such as motors and fans)