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Posted On: 8/10/2008

Green Hotels

George Koroneos

Open a magazine or turn on the television and chances are good someone is talking about "Going Green." The United States may be going through an ecological renaissance ever since Al Gore revealed his inconvenient truth, but the real fact remains: greening up your IT systems can save you money in the long run while boosting your karma at the same time.

Gartner (one of the industry's largest IT research firms) predicts that by next year, more than one third of all IT organizations will place environmental concerns within their top six buying criteria. By 2010, Gartner says, three-quarters of companies will use carbon-footprint considerations with their hardware-buying strategy and by 2011 large enterprises will develop policies requiring their suppliers to prove their green credentials through an auditing process.



"As a management company, you live and die by your numbers," says Lee Weeks, CEO of Coral Hospitality (www.coralhospitality.com), manager of 35 properties. "We look at every type of technology that is good for business, and if it has a solid ROI, then it's easier to be environmentally conscious and do the right thing. You just have to know that you are going to be there for a while, because some of the payoffs are as far out as ten years."

Some technology, however, can affect the bottom line right now. By incorporating tools such as motion-detecting thermostats and solar panels, and replacing worn computers with thin client PCs, hotels can reduce their carbon footprint while saving cash at the same time.

In-Room climate control

The first place to start greening things up is the guest room. How much time do guests stay in their hotel rooms when they're on vacation? Most often, it's only a few hours or when they sleep. Think about all the energy that is spent on air conditioning when they aren't in their rooms. The cost is staggering.

According to the American Hotel & Lodging Association's (AH&LA) Green Assessment Survey, nearly half (43.4 percent) of responding properties have programmable on/off timers or sensors used for lighting in low traffic and low occupancy common areas of the hotel. By contrast, only 16 percent use occupancy sensor control for guestroom thermostats.

Incomm (www.incomm.com) offers a thermostat that can sense when a guest is in the guestroom. If there is no movement in the room for a certain amount of time, the air conditioner will shut off or decrease to save energy. When the guest re-enters the room, a hidden infrared motion detection device turns the AC back on. The thermostat can be installed over an existing temperature control unit and be tethered to the central network for more energy control.

Coral Hospitality's Sandpearl Resort (www.sandpearl.com) in Florida has taken the system one step further by installing automatic AC shut-off switches in the patio doors so that energy isn't wasted when the guest steps out for fresh air.

"The downside is that guests some times come back and find their room to be warmer when they get back, but it doesn't take that long to cool down a 400 square foot hotel room," Weeks says. "As long as your system can recover quickly, this is the right system to include."

Another option is to install a hotel card switch, such as those provided by Hamilton Litestat (www.hamilton-litestat.com) and EnOcean (www.enocean.com). When a guest enters the guestroom, they insert the keycard into a self-powered docking station to activate power in the hotel room. After the key card is inserted, a radio signal is transmitted to a controller that subsequently "powers up" the hotel room. When the key card is removed from its dock, another signal is sent that disables or reduces power-consuming amenities (lights, HVAC, etc.). The card switch can be connected to most wiring schematics and, in some cases, can be controlled remotely by the front desk.

Server size: thin is in

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Another huge energy drain comes from the computers that run everything from the front desk to the financial applications. One option is switching to a virtual desktop using thin-client computers. These small footprint hybrid PC/LCD monitors connect to virtual applications (everything from MS Office to Adobe Photoshop) hosted at an off-site data center.

According to an exhaustive study of thin clients vs. PCs by the Fraunhofer Institute for Environmental, Safety and Energy Technology, "if a desktop PC is replaced by a thin client and terminal server, the CO2 emissions of the workstation are reduced by more than 54 percent. In terms of a complete system with LCD monitor the saving potential is 44 percent."

Operators are also looking at energy cost savings between 15 and 25 percent, although those numbers depend on the type of system installed. In addition, thin-client computers require less upgrading and maintenance (they have few if any moving parts) and when they need to be recycled, the smaller form factor means less e-waste to put in the landfill.

The Sun is a mass of incandescent gas

While saving energy is always a plus, creating energy is the holy grail of green living.

Solar panels, such as those manufactured by British Petroleum (www.bp.com), Evergreen Solar (www.evergreensolar.com), and Solar World (www.solarworld-usa.com), are best used in conjunction with existing energy sources. Using panels to run the building during sunny days allows property owners to save a bundle. When the sun drops, simply switch over to traditional power.

"There is no question that larger hotel chains can use solar," says Stuart Marcus, owner of the Shambhala Ranch Retreat Center and Country Inn (www.shambhalaranch.com), a bed and breakfast that is completely off the grid. "Solar electric energy is going to be a major source of energy in the future. Imagine a panel that lasts upwards of 25 to 40 years and produces energy without any combustion what so ever. Not to mention, we have hotels everywhere with flat roofs that are ideal locations for solar panels."

Here's even better news: In some states, properties that generate more solar energy than they use can sell that power back to the local energy company.

"The power companies don't want to deal with the smaller operators, which they classify as a residential customer," explains Tim Thresh, owner of the Melitta Station Inn & Spa (www.melittastationinn.com). "However, if you are a big hotel with a lot of roofing, you can put in a generating solar plant and become a commercial operation providing even more energy to the power company."

In peak production (bright summers days) when a solar-equipped hotel is not running its air conditioning, it still generates power that goes into the public energy grid. Some power companies offer credit equivalent to the cost if the hotel were drawing the power from the public energy pool.

"To put a bank of solar panels on the roof of a Hilton is totally appropriate," Marcus says. "There's a lot of room up there; as long as they can get around the air conditioners it's a perfect fit."

How can you see how much solar energy is collected and expended? That's where your IT department comes in. Most solar panel integrators provide a solution to manage energy consumption and give a gauge of how much solar power is being generated.

The Carlton Hotel (www.jdvhotels.com) in San Francisco is using Fat Spaniel Technologies' (www.fatspaniel.com) diagnostic and maintenance software to monitor the 105 solar panels on its roof. The hotel operator or system's integrator can log onto the application, which runs remotely on the Internet, and view how much power is being generated, how much was generated, and the amount of greenhouse gases were avoided. A more detailed dashboard offers graphs and numbers pertaining to the AC output, voltage, and other consumption information.

Recycling

A huge area of environmental concern, particularly in properties that run a lot of different technologies, is e-waste or electronic waste. With hotels upgrading everything from televisions to computers by the hundreds every year, the amount of technological garbage is reaching mindboggling proportions. Worse yet, old big box or CRT monitors are filled with nasty chemicals that could further endanger the environment; and thanks to the recent migration towards flat-panel televisions, a growing number of these potentially hazardous units are finding their ways into garbage bins.

"It's good to err on the side of being more conservative with your resources than not," Weeks explains. "Things like recycling materials and negotiating with companies to pick up your refuse if you are not in an area that does that automatically; I think that's worthwhile."

Luckily, most of the major computer manufacturers and retailers, from Dell to Apple, have some form of recycling program. HP (www.hp.com), for instance, will haul away HP and non-HP used hardware, up to 150 pounds per box. The cost is between \$13 and \$34, but they claim to offer unlimited removal. Dell provides free removal of all its branded equipment. Just make sure you erase all your data before shipping it off.

LEED: Green's Gold Standard

While including a few eco initiatives into your property is a good thing, there are some hospitality providers that have taken green to the next level by building their hotels to meet one of the most stringent rating systems in the world: The Leadership in Energy and Environmental

Design (LEED) certification, given out by the U.S. Green Building Council. Having green IT is part of the equation, but so is establishing eco-friendly buildings and grounds strategies and thinking green from the ground up.

Wen Chang, creator of the gold LEED-certified Gaia Napa Valley Hotel & Spa (www.gaianapavalleyhotel.com), is something of a green hospitality guru, traveling across the country speaking about eco-friendly initiatives. Listening to him chat passionately about nature is much like hearing a Tibetan monk preach about peace.

"I try to use a lot of new technology, but at the same time, it is important to use our technology to shift peoples' consciousness about how they build hotels," Chang speaks to his peers. "That is even more important than technology. Once peoples' mindsets is right then everything else is much easier.

"We don't need Arnold Schwarzenegger to tell us to go green," Chang says. "It is the collective consciousness of the whole human race that has to make people aware that this is important."

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