LIGHTING UPGRADES 101 Boost Your Property's Energy Efficiency and Cost Savings with Audits and Incentives

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IN TODAY'S CHALLENGING ECONOMY, PROPERTY MANAGERS AND REAL ESTATE PROFESSIONALS ARE ALWAYS LOOKING FOR WAYS TO REDUCE OPERATING COSTS while enhancing the appeal of their properties. Lighting upgrades are a simple way to cut costs, reduce energy, enhance property valuation and support the environment.

Lighting accounts for roughly 22 percent of all the electricity consumed in the United States, according to the Department of Energy. Upgrades involving more energy-efficient lamps, ballasts, lighting controls and other components readily available in the marketplace could potentially reduce that figure by one-third or more.

Depending on the technologies involved, lighting upgrades can routinely deliver 30 to 50 percent returns on investment and two- to three-year (or even faster) paybacks.

CONDUCT AN AUDIT OF YOUR LIGHTING

A lighting audit will help you determine the functionality of your current lighting systems, as well as any potential upgrades.

This audit should evaluate the light source being used in each area, its wattage, quantity and when it was last upgraded. If you don't possess the in-house expertise to conduct a lighting audit on your own, a local electrical distributor, electrical contractor, energy service company, lighting maintenance company or utility professional can give you a low or no-cost (and no-obligation) run-down of the technologies currently installed, as well as an estimate of your property's savings opportunity.

In addition to a formal audit, real estate managers should review their utility bills each month, said Steven Myers, manager of training and education at Philips Lighting Company.

Property managers can calculate the value of one watt of energy saved or spent annually by collecting the following information:

- Kilowatt per hour (kWh) cost—for example, the cost of 1,000 watts burning for one hour
- Number of kilowatts used
- Number of hours the lights are on per day and per week, which can then be annualized to determine the hours per year

Armed with this information, it's easy to determine how much money can be saved by upgrading lamps to more energy efficient models. For example, if you pay $.40 per watt per year and you upgrade to a more efficient lighting alternative that consumes 10 fewer watts than your previous lamp, you would save $4 on energy costs per year per lamp. If this particular lamp was housed in a four-lamp fixture, that would amount to savings of $16 per year, per fixture.

Paul Hafner, energy consultant with New York-based firm, Maintained Illumination, said people often ignore their energy costs, even though doing so can result in wasted energy and money.

"We advise people to regard their electricity usage as much as they would a leaky faucet," he said. "If you had a leak in your plumbing, you would act quickly because you can hear it and see it. The excessive use of electricity is just another type of 'leak,' but one that is often overlooked because it's more hidden from our senses."

KNOW YOUR LIGHTING UPGRADE OPTIONS

Today's broad range of innovative and proven lighting technologies are routinely delivering the benefits of high performance, low maintenance and significant energy savings within residential property settings. For example:

- Sconces in common areas that once housed incandescent bulbs can be easily upgraded with compact fluorescent lamps (CFLs), which use up to 75 percent less energy than incandescent lamps and last seven to 10 times longer. CFLs

COMPACT FLUORESCENT LAMPS (CFLS) DELIVER OUTSTANDING ENERGY EFFICIENCY AND LONG LIFE WITHIN A VARIETY OF INCANDESCENT APPLICATIONS.

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are currently available in both "twister" and "covered" versions, the latter more closely mimicking the look and feel of incandescent bulbs.

• Stairwells in multi-rise properties are frequently lighted with fluorescent lamps, which are often T12 34-watt models driven by magnetic ballasts. Upgrading to higher-efficiency 25-watt T8 fluorescent lamps, driven by electronic ballasts, however, can drive sizable energy savings. A fixture containing two T12 34-watt lamps, running on a standard magnetic ballast 24 hours each day, would consume about 630 kWh annually (72 Watts x 8,760 hours). The cost of operating this fixture at a utility rate of $0.10/kWh would be $63 per year. That same fixture upgraded with two high-efficiency, long life 25-watt T8 fluorescent lamps driven by an electronic ballast would consume 39 watts, or 342 kWh, and cost $34.20 per year to operate—a savings of $28.80 per year, per fixture.

• Outdoor lighting around complex perimeters, and in parking areas and garages is moving toward the white light, high performance and 20,000-30,000-hour lifespan of ceramic metal halide technology. LEDs are also becoming available for outdoor use and offer bright light, high efficiency and a 25,000-50,000-hour lifespan. Depending on the climate, fluorescent lamps can also work well outdoors, delivering 40,000-50,000 hours of life. Induction lamp systems operating from dusk to dawn last the longest at 100,000 hours or 24 years.

INVESTIGATE INCENTIVE OPPORTUNITIES

Not only should you investigate different lighting upgrades, but consider all the financing options as well. Many financing options do not require an up-front cash outlay by the property management team. Energy and utility companies may offer shared savings plans in which they are paid out of the complex' cost savings. Upgrade-related loans and leases are other options.

In addition, many utility companies currently offer rebates on energy-efficient lamps, ballasts and lighting controls; stimulus funds recently made available through the American Recovery and Reinvestment Act may also be earmarked for these types of energy-efficient initiatives.

As such incentives can significantly speed up project payback periods and elevate returns on investment, property managers are encouraged to call their local utility or visit the National Association of State Energy Officials Web site at *www.naseo.org* to explore these opportunities.

For smaller upgrades, check out do-it-yourself (DIY) stores. For larger projects, an accredited local electrical distributor, lighting distributor or energy service company is a sound bet, as they can provide the hands-on expertise, oversight, installation and post-installation monitoring that will help ensure a project's success.

Any energy efficient lighting upgrade—large or small—can reduce energy consumption and costs, minimize maintenance concerns and associated expenses, and support the environment. ■

[INSET] CERAMIC METAL HALIDE LAMPS DELIVER THE BENEFITS OF WHITE LIGHT, LONG LIFE, AND HIGH EFFICIENCY TO A BROAD RANGE OF OUTDOOR APPLICATIONS.

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