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New lighting technologies offer upgrade opportunities, don't wait to capitalize on the benefits for your facility

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Did You Know? A seemingly inconspicuous and often overlooked element within a building's infrastructure, lighting can account for as much as 30-40% of electricity use in the typical commercial facility and is a primary source for significant cost savings. Studies reveal that less than half of the nation's buildings have undertaken upgrades and that the majority still contain outmoded lighting systems that could readily be upgraded to achieve substantial energy and cost savings.

Fortunately, the lighting industry has developed a wide variety of innovative technologies that have revolutionized the end user market, delivering high-performing and energy-efficient lighting products that can reduce lighting costs by as much as 30-50% and total facility energy consumption and costs by up to 20-25%. Following is an overview of several popular lighting upgrade products:

T8 Lamps and Electronic Ballasts

First introduced in the early 1990s, T8 lighting systems involving 32-watt fluorescent lamps driven by electronic ballasts have been rapidly replacing older and less-efficient T12 fluorescent lamps systems driven by magnetic ballasts present in many commercial facilities. This popular commercial upgrade can routinely reduce energy consumption and costs by 30-40%, driving 2-3 year paybacks while significantly improving the quality of light.

In addition to standard T8 lamps and electronic ballasts, a new generation of optimized, "high-efficiency" T8 lamps and electronic ballasts has recently been introduced. Available in a range of energy-saving models, these products can reduce total system wattage by over 45% relative to the use of older T12 fluorescent systems driven by magnetic ballasts, and by as much as 20-30% relative to the use of conventional T8 lamps and electronic ballasts.

Controllable Lighting Systems

Popularized within the last 5-10 years, dimming options are readily available for fluorescent lighting configurations, reducing energy consumption, minimizing maintenance concerns, increasing the degree of personal control over lighting systems, and promoting environmental sustainability.

Compact Fluorescent Lamps

Providing the efficiency and long-life benefits of fluorescent technology for incandescent applications, integrated and non-integrated compact fluorescent lamps last up to 10,000 hours (8-10 times longer than incandescent lamps), are 75% more energy-efficient (e.g., a 23-watt compact fluorescent can replace a 100-watt incandescent), and offer greater design flexibility. Studies show that for each incandescent that is replaced by a compact fluorescent bulb, \$30-60 can be saved on the electric bill over the life of the bulb. Compact fluorescent lamps are ideal in continuously-lit

venues, such as public spaces and directional and orientation applications.

LEDs

Highly efficient and giving off very little heat, LEDs have an average rated life of 25,000-50,000 hours compared to the one-year or shorter life expectancy of many incandescent bulbs. Due to their long-life, energy efficiency, brightness, color consistency, and low maintenance requirements, LEDs are ideal replacements for incandescent and fluorescent lamps in illuminated exit signs and in an emerging variety of general lighting applications.

Ceramic Metal Halide Systems

Compared to older quartz discharge tubes, ceramic metal halide lamps last longer and offer improved color rendering and color stability over lamp life. Highly efficient and cost-effective, ceramic metal halide lighting systems incorporating electronic ballast technology have become popular in a variety of outdoor venues and are an attractive and cost-effective alternative to halogen lighting in a variety of retail and hospitality applications.

Through the above high-performing and energy efficient lighting upgrade options, the enactment of the 2007 Energy Independence & Security Act, and the additional availability of government-sponsored tax deductions on qualifying upgrades through the Energy Policy Act of 2005 (available through at least 2013!), there has never been a better time to reduce your energy and maintenance costs and improve your facility's lighting quality and ambiance. Don't wait to capitalize on the benefits that an energy-efficient lighting upgrade can offer your facility!

Susan Bloom is director of corporate communications for Philips Lighting & Philips Lighting Electronics, Somerset, N.J.

New England Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540