by Ed Sullivan

Advanced fluorescent lighting zaps costs for hotel parking structures

Hotels that own or operate parking garages and surface lots may be unwittingly burning holes in their pockets with "old tech" lighting systems, including those that are installed in new structures. Parking lots and garages with HID-type (high-density discharge) lighting can save a remarkable 70 percent on energy usage and 50 percent on maintenance costs by converting existing fixtures to more efficient RGB fluorescent lighting systems. Plus these new-tech RGB fluorescent lighting systems burn brighter and whiter.

Throughout the United States, in the process of looking for more energy-efficient lighting for roads and streets, contractors, building operators and state agencies have concluded that the same goals can be realized by installing fluorescent lighting in parking structures. The energy saved will not only save dollars but also reduce significant amounts of pollution associated with avoidable energy usage. Hotels with parking lots and/or garages can realize these very same benefits.

For instance, a retrofit fluorescent system was installed at a large indoor parking structure at a Kaiser Permanente facility in Honolulu, where annual electricity and maintenance costs have been reduced from $39,818 to $9,392 per year - a savings of $30,426 or 76 percent.

New advances in lighting technology

Recent advancements in lamp and ballast technologies have made fluorescent lighting in parking structures not only more cost effective, but also brighter and more true to life than many other light sources. Emitting the same RGB (red-green-blue) light waves as today's advanced televisions and computer displays, the latest fluorescent lights can add a margin of safety to parking lots and structures through more accurate perceptions of objects to human eyes and security cameras.

At the same time, "instant-on" capabilities of advanced fluorescent fixtures enable motion sensors to be used to control lighting in parking facilities that are accessed intermittently at night, saving significant energy. Also, in some regions advanced fluorescent units can use "addressable" ballasts that can be remotely controlled by Internet or cell phone, or switched to control complete facilities by utilities for load management.

Advanced fluorescent lighting fixtures have also been designed to provide for future conversion to LED lighting - when that technology has been proven to meet anticipations in reliability and costs. Magnaray® International, a manufacturer and marketer of advanced lighting systems, offers a fluorescent fixture that will be retrofitable to LED lamps in the future.

"Much of the excitement about LED street lighting is understandable," explains Larry Leetzow, Magnaray president. "Although more expensive than other light sources in initial purchase price, LEDs have a much longer lifespan

Pictured below: Garages with HID-type (high-density discharge lighting) can save a remarkable 70% on energy usage and 50% on maintenance costs by converting existing fixtures to more efficient RGB fluorescent lighting systems.

and consume much less energy than sources such a HID lamps."

Leetzow adds that forward thinking cities are accomplishing significant energy and maintenance savings today by installing advanced RGB fluorescent street lighting units that provide improved light quality at lower overall cost.

Running the numbers

The State of Arizona's Property Management Company, Opus West, wanted to solve a maintenance and lighting problem for some of their parking garages, and called Phoenix lighting distributor Hart Lighting for assistance. Hart president, Mike Donahue, contact-ed Magnaray's local sales agent, Beyond the Horizon for a solution.

Magnaray recommend-ed using their 106-watt parking garage unit, that comprises two 50-watt, twin T5 lamp housings with one remote ballast to replace two 175-watt metal halide units in each six-car parking bay. This system provides superior lighting, with less glare and truer color, plus instant-on capability, which can enable motion sensing to achieve added energy savings.

"The initial costs are relatively the same as HID systems," Leetzow explains. "However, using twin T5 lamps, and 'program start' ballasts, the fluorescent lamps have a much longer life expectancy of 40,000-45,000 hours with 12-24 hour burn cycles. Total consumption for the two-unit assembly is 106 total watts per bay, less than one-third of the 390-watt consumption of metal halides."

Mark Stromgren, Chief Engineer for Opus West, says that while the improved light quality makes people safer and more secure, the big payoff is better light quality, with a 70% savings in energy, and 50% savings in maintenance, which is expected to pay for the HID-to-fluorescent lighting conversion in less than 2 years.

Acknowledging the green benefits associated with more efficient RGB fluorescent lighting systems, the State of Arizona has since mandated the use of this instant-on fluorescent system for all future parking structures. Hotels can now realize these same cost-saving and better-lighting benefits. ✧

(Ed Sullivan is a Hermosa Beach, CA-based writer. Since 1964, Magnaray, a division of the World Institute of Lighting and Development Corporation, has been improving on commercial and industrial safety, security and productivity while lowering maintenance and energy costs as well as greenhouse gases, through advanced outdoor and indoor fluorescent lighting systems. For more information contact Magnaray International of Sarasota, FL at 941-755-2111 or via e-mail: sales@magnaray.com Website: www.magnaray.com.)