

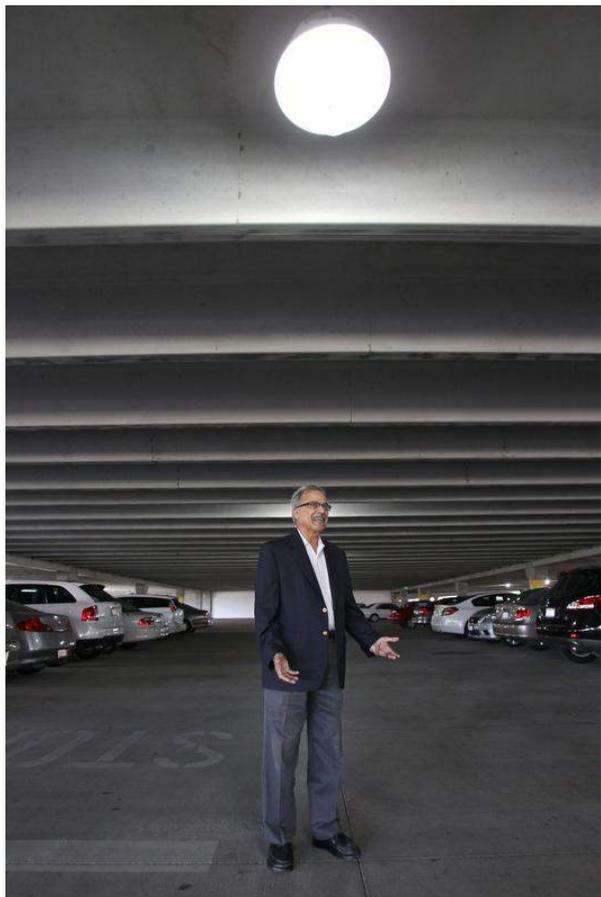
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LEDs at Fantasy Springs casino use less powers, save money

K Kaufmann The Desert Sun

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Pervaiz Lodhie, president of LEDtronics, talks about the company's light-emitting diode illumination has been installed in the Fantasy Springs parking garage. - Jay Calderon, The Desert Sun

INDIO — Pervaiz Lodhie has a passion for two things -- LED lights and solving problems.

"I'm a third-generation engineer. My question always is, how can I take something that is broke and fix it? How can I take something that works OK and make it better, and how can I make something new," the Pakistan native, 69, said, standing in the parking garage at the Fantasy Springs Resort Casino in Indio, which is lit with 211 specially designed LED bulbs from his company LEDtronics.

In the case of Fantasy Springs, the problem was older, high-pressure sodium bulbs -- a kind of bulb used in street lights and for outdoor security -- that gave off a dim, pink-yellowish light.

"It has to do with aesthetics, whether it's clean or dirty-looking. You want your space to be well-lit for safety purposes," said Todd Lockway, the resort's director of engineering. "We weren't happy with the color of the lamps themselves, and we were looking to reduce energy costs."

About a year ago, the casino undertook a major lighting retrofit, replacing the old bulbs with rows of Lodhie's bright, white LEDs. The visual impact is striking. While parking garages are, almost by definition, dim, here the light is clean but

not harsh, without a hint of off-color tones.

A pioneer in the field who has been producing LEDs since the 1980s, Lodhie explained the difference in terms of color spectrum. High-pressure sodium bulbs are a monochrome orange-yellow, versus the full spectrum in LEDs, he said.

"When you have that full-spectrum light shining on an area, any color in that area simply reflects that," he said. "Whether it is the blue lines on the floor, whether it's a red car or a person with various skin tones, if you have sufficient light in the area, you enhance those colors. People feel safe; security is enhanced."

LEDs are one of the quickest, most cost-effective ways for large resorts such as Fantasy Springs to cut energy bills, Lodhie said, not only because they use less power, but they also produce less heat than incandescent bulbs, reducing the load on air conditioning.

"You don't see it, you don't feel it because the air conditioning is hiding that heat problem," he said. "Every time you save one watt, you are actually creating one watt of energy. It's that simple."

In the year since the LEDtronics bulbs were installed, Lockway said he hasn't had to replace one, and the lot's electric use has dropped 60 percent to 70 percent. The retrofit also earned Fantasy Springs a \$31,238 rebate check from the Imperial Irrigation District, he said, making the payback period on the resort's \$100,000 investment for the new lighting about 2½ years.

Maritza Nuñez, public benefits program specialist at IID, agreed that lighting upgrades combine large cost and energy savings, especially for resorts such as Fantasy Springs, which are among its biggest power users. The utility offers commercial lighting rebates of 11 cents for each kilowatt-hour saved per year and worked with the resort on the garage retrofit, she said.

"With the recent (LED) technology, the cost is falling," she said. "With the added incentive IID can provide, it makes sense for everyone."

A recent study from the California Municipal Utilities Association confirms the trend. It found that lighting retrofits accounted for almost half of energy-efficiency program savings at public utilities across the state in the 2011-2012 fiscal year.

Lodhie, who has a mechanical engineering degree from Cal State Los Angeles, saw the potential for light-emitting diode bulbs over traditional incandescents relatively early, in the 1970s, not long after the first bulbs were developed for use in expensive and specialized electronic equipment.

Incandescents had filaments that could break easily versus the solid-state technology of the LEDs, he recalled.

"No moving parts; it was mind-boggling."

He built LEDtronics, started in 1983 in his garage and now based in Torrance, by creating a range of high-performance components that can be assembled as needed for different customers' specific lighting applications. A major part of his business has been designing bulbs for military and defense uses, he said.

"What I created 30 years ago was a beautiful cuisine," he said. "The product is cooked just in time."

Lodhie is also taking his LEDs into isolated villages in his native Pakistan, hooking the bulbs up to small solar panels to provide off-grid lighting for poor families.

"There are 80,000 villages with zero light," he said. "The environmental impact is huge."

LEDs are also poised to take over a substantial part of the U.S. market as incandescent bulbs are phased out, said Terry McGowan, director of engineering for the American Lighting Association, a Dallas-based trade association.

"What's going to happen Jan. 1, 2014, the 40-watt and 60-watt standard bulbs will phase out," he said. "For the first time, they will have LED bulbs at prices between \$10 and \$15 per bulb that will fit into those sockets. What I keep hearing from the lamp manufacturers, this looks like it could be a very dramatic change."

With LEDs proliferating on the market, some not high quality, McGowan cautioned consumers to ensure any bulbs they

buy are Energy Star-rated.

"If something goes wrong, with Energy Star, you can go back for a replacement," he said. "You can't think of a light bulb as a 60-cent purchase; it's like an appliance. You buy it for the long run."

For Lodhie, the next challenge could be convincing customers such as Lockway at Fantasy Springs to try out LEDs in areas where incandescent bulbs are seen as business-critical.

"The biggest challenge we have is color," said Lockway. "For years, the general public has experienced incandescent lighting. We have certain obligations to our guests. If women walk in and they look too pale, they won't come back. It's got to be a win-win."

Lockway has yet to find an LED that can perfectly simulate incandescent color, but Lodhie said he's ready to solve the problem.

"I can make the right color chip and build a product around it," he said. "All these solutions are at hand. Do one small location and get feedback. All the colors are there."

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Valley hotels go green

Fantasy Springs Resort Casino isn't the only Coachella Valley hotel going green. The trend hits a sweet spot between cost savings and smart marketing to guests looking for eco-friendly vacation spots. A few, but by no means all examples of local efforts:

- The Westin Mission Hills Golf Resort & Spa has won a Cool Planet Award for its energy efficiency initiatives, which include an LED lighting retrofit, a heating and air conditioning system upgrade and variable-frequency drives on hot and cold water pumps. The hotel has cut its annual energy use 1.1 million kilowatt hours.

- The Hyatt Regency Spa & Resort in Indian Wells earlier this year received state certification in California's Green Lodging Program. The hotel installed super-efficient cooling towers, which provide cool water for the resort's air conditioning system; sensors in guest rooms dial up temperature a few degrees when the rooms are empty; and the garage has a charging station for electric vehicles.

- Arrive Palm Springs, a 32-room boutique hotel that broke ground Thursday at 1551 N. Palm Canyon Drive, will aim for a LEED gold certification, the third highest of four levels in the U.S. Green Building Council's Leadership in Energy and Environmental Design rating system.



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