



Energy Efficiency & Customer Research & Development presents...

Customer Advanced Technologies Program Newsletter

Volume 6, Number 3, December 29, 2008

From the Editor's Desk

"Hey! Wanna buy an LED?"

A few years ago, I encountered a man who wanted to sell me a Rolex watch for \$20. He said he had made a "special purchase" that allowed him to sell genuine Rolex watches at ridiculously low prices. Obviously, these watches were just cheap imitations and not the real deal.

It seems that whenever a new technology emerges, there are always opportunities for "creative sales tactics." During 2008, literally hundreds of new LED products appeared in the marketplace. The problem is that not all products are created equal. Frankly speaking, there is some real junk out there.

Since LEDs are relatively new to the lighting scene, many of the performance and reliability standards are still under development or are very new. The good news is that the U.S. Dept. of Energy (DOE) and the Environmental Protection Agency (EPA) recently expanded the Energy Star program to include some solid state lighting (SSL) applications. During 2008 industry standards for testing and labeling SSL products were adopted and are gaining momentum. However, until these standards become more established, be careful about what you buy and from whom. In the meantime, a great resource for information is DOE's Commercially Available LED Product Evaluation and Reporting program. For more information, please visit DOE's Website at: http://www.netl.doe.gov/ssl/comm_testing.htm.

p.s. Does anybody want to buy a watch?

Technology Spotlight: LR6 LED Downlights

According to the U.S. Department of Energy, there are currently over 500 million recessed downlights currently installed in U.S. homes.

Although recessed downlights provide a clean look and good optical control, most of them waste a lot of energy.

During 2008 SMUD conducted a research project with thirteen residential customers to test Cree's LR6 – an LED downlight module. The LR6 is designed to be an easy retrofit for recessed downlights with incandescent lamps and delivers a warm, pleasant-looking white light. Tests conducted by DOE show that the LR6 delivers light at 54 lumens per watt - more than twice the efficacy of incandescent lamps. Objectives of our research project included:



Cree's LR6 LED module

- ✓ Calculate potential energy and cost savings.
- ✓ Find out why customers wanted to replace their original lighting systems.
- ✓ Determine whether or not customers were able to install the LR6 without hiring an electrical contractor.
- ✓ Assess customer satisfaction levels.
- ✓ Determine how much customers were willing to pay for the LED downlights.
- ✓ Obtain pre and post retrofit illumination measurements.

Overall, the project was a success and SMUD is currently developing rebate programs for certain LED applications. To learn more about the project, please download the technology evaluation report via SMUD's Customer Advanced Technologies program Web page: <http://www.smud.org/en/education-safety/Pages/cat.aspx>.

The information in this report is provided by SMUD as a service to our customers. SMUD does not endorse products or manufacturers. Mention of any particular product or manufacturer in this report should not be construed as an implied endorsement.

® A registered trademark of the Sacramento Municipal Utility District