

*Energy Efficiency & Customer Research & Development presents...*

## *Customer Advanced Technologies Program Newsletter*

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### *From the Editor's Desk*

**“Let us not become weary in doing good, for at the proper time we will reap a harvest if we do not give up.”**

Due to growing concerns about the environment, the State of California has established some very aggressive energy efficiency and pollution reduction goals. Experts tell us that meeting these goals are going to require deploying a lot of new technologies and some new approaches to the way we do business.

As much as I still love my job (at least most of the time), there are definitely challenges when working with emerging technologies. Not only do we have to deal with pushy snake oil salesmen, failed prototypes, project cost overruns and scheduling delays, there are considerable hurdles that must be overcome to move a product from the realm of research into the marketplace. Sadly some technologies prove to be technically viable, but simply do not gain any traction with customers.

Every once in awhile, a technology emerges that shows great promise...one that not only saves energy but offers additional benefits as well. After more than four years of research by different entities, LED freezer case lighting systems are starting to gain a foothold in the marketplace. SMUD and other utilities are currently developing rebates to encourage adoption by customers.

Finding and promoting technologies that offer multiple benefits to customers will be key to meeting our goals.

### *Technology Spotlight: LED Freezer Case Lighting*

During 2007, SMUD worked with Raley's Corporation, the California Lighting Technology Center, Hussmann Corporation and ADM Associates to develop and test an LED freezer case lighting system. This innovative new system includes motion sensors and dimming power supplies and is designed to save energy by automatically dimming the lights when no one is near the freezer cases. In addition to monitoring energy savings, the project team tracked sales data and interviewed over 100 shoppers to get their opinions. The new LED system:

- ✓ Reduced lighting energy consumption by an impressive 68% (compared to T8 fluorescent lamps and electronic ballasts).
- ✓ Reduced the low temperature refrigeration system energy consumption by 20%.
- ✓ Was acceptable to the majority of surveyed customers.
- ✓ Had no measurable effect upon product sales.

Although Raley's uses an energy management system to turn off the case lights when the store is closed, the motion sensors still produced dramatic savings – even during peak shopping periods. Our newest technology report focuses on the potential benefits and some valuable lessons learned about using LED lighting for commercial freezer cases.

To learn more about the project, please download the technology evaluation report via the Customer Advanced Technologies program Web page:

<http://www.smud.org/education-safety/cat.html>.

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