

Energy Efficiency & Customer Research & Development presents...

Customer Advanced Technologies Program Newsletter

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From the Editor's Desk

It has been a good year for the Customer Advanced Technologies program. We've tested several new technologies, and some projects have been featured on prime time TV news, two local radio talk shows, local newspapers and a building industry magazine. I must admit, however, that this year has also been a bit like taking a drink from a fire hose! Here is a peek at some of the projects we're planning for 2006:

- Coolerado Coolers (five more sites)
- SunCache (passive solar water heaters)
- LED lighting (refrigerated cases)
- LED lighting (retail applications)
- Domestic hot water distribution systems
- Solar hybrid lighting
- OASys (additional testing)
- Zero Energy Home technologies

Complete technology reports for:

- LED bathroom vanity lighting system
- FREUS (water cooled air conditioners)
- CoolTrol (refrigeration system management)
- TurboCor compressors

Of course, this list doesn't include "other opportunities" that will come up. So hang on tight because it is going to be another very busy year for the CAT program. Merry Christmas and Happy New Year to all!

Technology Spotlight: *The OASys*

The Davis Energy Group is partnering with the Speakman Company to develop and test a 'new generation' of indirect-direct evaporative cooling

systems (IDECs) known as the OASys. The main goal of this project is to develop more reliable IDEC systems by applying the lessons learned from previous experiences.

During 2004-2005, SMUD sponsored deployment and testing of five OASys units for customers who have experienced chronic problems with their existing IDEC systems. A technology report covering the basics of evaporative cooling systems and the results of our local OASys demonstration project is now available via the CAT program web page. Please visit www.smud.org/education/cat/index.html.



The OASys

Technology Spotlight: *MicroPlanet EVR*

MicroPlanet Ltd.'s Enterprise Voltage Regulator (EVR) device is designed to buck (reduce) or boost incoming voltage levels within a range of $\pm 8.33\%$ of line voltage from the grid. In addition to the ability to regulate voltages, the EVR may also improve power factor.

Since the majority of SMUD's summer peak electrical demand is due to residential air conditioning systems, we were interested in assessing claims that residential vapor-compression air conditioning systems could operate more efficiently at lower voltages. SMUD obtained a grant from the American Public Power Association's Demonstration of Energy-Efficient Developments (DEED) program to evaluate the EVR's effect upon air conditioner performance. The project includes both laboratory and field-testing. A technology brief for this project is also now available via the CAT program web page.

The Customer Advanced Technologies Program

SMUD's CAT program works with customers to encourage the use and evaluation of new or underutilized technologies. The program provides research grants to customers for eligible technologies in exchange for monitoring rights. For more program information, please visit: <http://www.smud.org/education/cat/index.html>