

Energy Efficiency & Customer Research & Development presents...

Customer Advanced Technologies Program Newsletter

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From the Editor's Desk

This summer promises to be very busy for the Customer Advanced Technologies program. We'll be working with our partners to test a variety of innovative cooling technologies including:

❑ **FREUS:** a water-cooled, air-conditioning system that shows great promise for the residential and small commercial sector. Based upon recent laboratory test results, the FREUS may be nearly twice as energy efficient as conventional air-cooled systems on hot summer days. SMUD is working cooperatively with the manufacturer, local HVAC contractors and customers to implement design changes that will enhance system performance and reliability. To learn more, download the technology brief at www.smud.org/education/cat/index.html

❑ **Coolerado Cooler:** an innovative indirect evaporative cooling system. According to the manufacturer, Idalex, this compressor-less cooling system offers the same comfort levels as traditional air-conditioning systems at a fraction of the operating costs. A technology brief is available at www.smud.org/education/cat/index.html

❑ **Turbocor Compressors:** The California State Railroad Museum replaced its old cooling system with new chillers that use Turbocor oil-free compressors. These compressors combine magnetic bearings, variable-speed centrifugal compression and digital electronic controls to provide significant energy and electrical demand savings. To learn more, download the technology brief at www.smud.org/education/cat/index.html

❑ **OASys:** Although indirect-direct evaporative cooling (IDEC) systems use only a fraction of the energy required by conventional air conditioning systems, past efforts to develop this technology have been hampered by reliability issues. SMUD is partnering with the Davis Energy Group

and the Speakman Company to develop and test a 'new generation' of IDECs. The main goal of this project is to develop more reliable IDEC systems by applying lessons learned from previous experiences. SMUD sponsored deployment and testing of five systems for customers who have experienced chronic problems with their existing IDEC systems.

❑ **ACER:** The Sacramento Natural Foods Co-op installed an evaporative pre-cooler known as the ACER on a 50-ton rooftop package unit. The Co-op is scheduled to open its brand new Elk Grove facility within the next few months.

Customer Spotlight: Laguna West Lakes

Just ask any of the residents of Laguna West Lakes and they will tell you how much they enjoy their lake. Whether fishing, boating or simply just taking an evening stroll along the shoreline, the lake has been a source of enjoyment for all ages.

However, a few years ago the lake began to experience problems with fish-kills, blue algae blooms and foul-smelling, stagnant water.

After trying several different and moderately successful approaches to control the problems, the Association decided to test a SolarBee pond circulator, thus adding another tool to the lake management plan. To learn more about this project, download the SolarBee Technology Brief that is available online at www.smud.org/education/cat/index.html



The Customer Advanced Technologies Program

SMUD's Customer Advanced Technologies (C.A.T.) 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>