



Energy Efficiency & Customer Research & Development presents...

Customer Advanced Technologies Program Newsletter

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Last year was the busiest year on record for the Customer Advanced Technologies (CAT) program. Yet, despite the present economic recession, there seems to be no slow down in the parade of promising emerging technologies. The main areas of focus for 2009 will be solid-state lighting systems (e.g. LEDs) and evaporative pre-cooling systems. Below is a list of our current CAT program research projects.

LED Projects: SMUD will be working with our commercial customers to test and evaluate the following LED lighting technologies:

- ✓ MR16 replacement lamps
- ✓ PAR20 replacement lamps
- ✓ PAR30 replacement lamps
- ✓ PAR38 replacement lamps
- ✓ Wall packs
- ✓ Bi-level parking garage fixtures
- ✓ Canopy lights
- ✓ Parking lot / street lights
- ✓ T8 replacement lamps (lab study)

We will also be developing rebate programs for Energy-Star approved LED products for certain applications such as recessed LED downlights and under cabinet lights.

Lighting Projects: three sites have been selected to test HID Lab's Smart Pod – a metal-halide lighting system with dimming, digital network and demand response capabilities.

HVAC Projects:

- ✓ AquaChill (formerly called AquaCool): a residential, water-cooled air conditioning system (30 units; 2nd year).
- ✓ TurboCor HVAC compressors (2nd year). For more information, please refer to the technology brief on the CAT program web page.

- ✓ Micro-Cool: a high pressure evaporative fogger designed for large air-cooled chiller applications (2nd year).
- ✓ Heliomist: an evaporative pre-cooler designed for 3-5 ton residential air conditioners (10 systems).
- ✓ Evapercool: a low pressure evaporative pre-cooler designed for large air-cooled chiller or rooftop package unit applications.
- ✓ FlashCool: evaporative pre-cooler.
- ✓ Coolerado Cooler: a totally indirect evaporative cooling system designed for residential and small commercial applications (5th year).
- ✓ OASys hybrid: a combination of indirect/direct evaporative cooling and conventional vapor-compression based cooling (2nd year).

Other Projects:

- ✓ Professional wet cleaning: due to environmental regulations, Dry Cleaners in California must find an alternative to using traditional perchloroethylene-based cleaning systems. SMUD has hired Occidental College's Pollution Prevention Center to help evaluate professional wet-cleaning as an option. Two test sites are currently under evaluation.

Technical reports for these projects will be posted to the Customer Advanced Technologies web page www.smud.org/en/education-safety/Pages/cat.aspx and announced via this newsletter.

I told you we were busy ☺