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SWEEPing Changes in Efficient Lighting Programs

The Southwest Energy Efficient Project (SWEEP) released a technical brief in October for energy efficiency policy makers and program managers in the southwest region. Titled, "Policies and Programs for Increasing the Adoption of High-Efficiency Lighting in Homes in the Southwest," this paper is one in a series of briefs prepared in support of the U.S. Department of Energy's Building America Program. The brief is a review of programs promoting compact fluorescent lights (CFLs) and energy-efficient light fixtures in the residential sector.

CFLs used in the residential sector "offer more achievable energy savings potential than any other efficiency measure considered," according to the report. The Northwest Power and Conservation Council (NPCC) found that CFLs can provide energy savings at the levelized cost of 1.7 cents per KWh.

New Energy Star specifications took effect Oct. 1. They address ceiling fans, including motors, blades, as well as units with integral and attached lighting.

The adoption of products meeting these new Energy Star requirements will be helped along by the fact that many utility and third party programs offering rebates or other incentives for CFL and CFL-based light fixture purchases specify Energy Star equipment to qualify for their programs.

Coordination with retailers and manufacturers help such programs be more successful, but it can increase the complexity and cost of the programs due to the additional needed support.

The report noted that since consumers prefer instant rebates to mail-in ones, some programs offer their incentives to the manufacturers themselves, to reduce wholesale and retail costs, though this also can lead to higher program costs.

The report noted that the California investor owned utilities statewide program had the highest cost-benefit ratio of successful residential lighting programs, with a net energy savings of 163 GWh per year, at a program cost of $9.4 million, while paying out $7.4 million in incentives during 2002. Other successful programs have been run in the states of Nevada, Utah, Washington, and Arizona. Seattle City Light's 2001 program wound up with a levelized cost of only 1.8 cents per KWh, about a quarter of electricity cost at that time. Utah Power's 2001 program saved an estimated 61.1 GWh per year, which would be even more now with higher natural gas costs.

California's Title 24 energy standards codes took effect in October, and state that new residential construction must use efficient lighting in specific amounts in different areas of a home. The national Energy Star new homes program will require homes built starting in 2006 to have certain amounts of efficient lighting.

The report's conclusions seem proven: incentive programs that include instant rebates, or rebates to manufacturers or retailers, efficient lighting education programs and weatherization programs, and up to date building codes can save energy measured in gigawatts, and can continue to do so after the incentive programs end.

- Timothy McClanahan