



SWEEP 2004 Annual Report

The Southwest Energy Efficiency Project (SWEEP) made progress on many fronts during 2004. Highlights include our contributions to new utility energy efficiency policies and programs in Arizona, Colorado, Nevada, and New Mexico; successful legislative efforts in Arizona and New Mexico; development of a detailed energy efficiency strategy for Nevada; contributions to the adoption of up-to-date building energy codes in Denver and Phoenix; contribution to the Western Governors Association clean energy resolution; preparation of new reports on evaporative cooling and high efficiency windows technologies and policy/program options; initiation of a pilot project for demonstrating comprehensive residential retrofits; and the launch of the Intermountain Combined Heat and Power Regional Application Center.

Utility energy efficiency programs

SWEEP is contributing to the expansion of utility energy efficiency programs in the Southwest. The total funding for utility energy efficiency and load management programs in the region was only about \$21 million in 2001, the year SWEEP got started. Funding has steadily increased to about \$57 million in 2004 and is expected to reach \$80 million in 2005. At the \$80 million funding level, utility DSM programs should reduce peak power demand in the region about 240 MW and save 480 GWh per year, each year.

In Arizona, SWEEP intervened in a rate case filed by Arizona Public Service Company (APS) in 2004. We advocated increased funding for demand-side management (DSM) programs and worked with other parties to make DSM an important issue. As part of a broad settlement in the case, APS agreed to spend \$16 million per year on DSM programs starting in 2005. This is a large increase from APS's minimal DSM budget of only about \$1 million per year during 2003-04. The settlement was approved by the Arizona Corporation Commission in early 2005.

During 2004, SWEEP provided detailed recommendations and feedback on DSM funding and program design to the Salt River Project (SRP), the other large electric utility in Arizona. SRP is expected to launch a set of new DSM programs in 2005. SWEEP also met with and encouraged Southwest Gas Company to expand its energy efficiency programs. In December, Southwest Gas Company proposed spending \$4.4 million per year on a broad set of natural gas energy efficiency programs in its Arizona service area. The gas company also requested approval of a mechanism to decouple its sales level and revenues. In addition, SWEEP was an active participant in a series of workshops organized the Arizona Corporation Commission regarding DSM policy in Arizona during 2004.

In Colorado, SWEEP intervened in a least-cost planning proceeding before the Colorado Public Utilities Commission in order to encourage Xcel Energy to maintain and expand its energy efficiency programs. This intervention was successful. A settlement was reached and approved by the Colorado PUC in December that includes a



commitment to expanded DSM programs by Xcel during 2006-2013. Xcel will spend up to \$196 million (2005 dollars) to save 320 MW of peak demand and 800 GWh of electricity per year by the end of this eight-year effort. This is the largest commitment to DSM ever made in Colorado. SWEEP estimates it will result in nearly \$500 million in net benefits for households and businesses.

SWEEP also assisted the Colorado Springs municipal utility, the second largest electric utility in the state, with the development of new efficiency programs during 2004. In addition, SWEEP advised the Ft. Collins municipal utility and Holy Cross Energy (a rural electric cooperative). Both of these utilities have been expanding their energy efficiency programs.

In Nevada, SWEEP continued to assist Nevada Power Co. and Sierra Pacific Power Co. with their DSM programs. In 2004, SWEEP developed and analyzed proposals for new programs. The utilities proposed implementing two new programs suggested or supported by SWEEP, a commercial building new construction program and a schools retrofit program. In addition, SWEEP co-authored a paper on the rebirth of DSM efforts in Nevada for the 2004 ACEEE Summer Study.

In New Mexico, SWEEP educated policy makers and others about energy efficiency potential and called for expanded utility DSM efforts. Due in part to SWEEP's urging, Governor Richardson convened a Utility Energy Efficiency Task Force. The Task Force met during the latter part of the year and reached consensus on a proposal that should lead to greatly expanded electricity and natural gas DSM programs. The proposal has been introduced in the 2005 legislative session with backing from the Governor. SWEEP was a prominent participant in the Task Force.

In Utah, SWEEP continued to support PacifiCorp as they refined their DSM programs and developed new programs. The utility accepted a number of our recommendations and proposed four new programs for implementation in 2005. In addition, SWEEP provided input to an in-depth natural gas energy conservation potential study that was completed in 2004. We are hopeful this study will lead to the initiation of natural gas DSM programs in Utah.

State energy policy

In Arizona, SWEEP helped to develop and advocated a legislative proposal to remove obstacles to the use of performance contracting by state agencies. The bill passed in the Arizona legislature with minimal opposition and was signed into law by Governor Napolitano. It complements and follows on a bill adopted in 2003 for reducing energy use in state facilities.

In Colorado, SWEEP developed two proposals that were introduced in the Colorado legislature in early 2004. One would have set energy savings standards for utility energy efficiency programs; the other would have reformed utility resource planning requirements in a way that would make them more favorable to energy

efficiency efforts. SWEEP built support for these proposals, but neither proposal advanced out of Committee. In late 2004, SWEEP developed a new proposal to stimulate natural gas DSM programs in the state. In addition, SWEEP developed and is co-leading advocacy of appliance efficiency standards legislation in both Arizona and Colorado.

In Nevada, SWEEP prepared a detailed energy efficiency strategy for the state at the request of the Governor's Energy Advisor. This strategy examined 14 different energy efficiency policy options and recommended that seven be adopted as high priority. We estimated that adopting these seven policies could lead to approximately 20% electricity and natural gas savings by 2020, and provide about \$5 billion in net economic benefits for consumers and businesses in Nevada. Governor Guinn praised the strategy when it was released in January, 2005. We are optimistic it will lead to new energy efficiency policy initiatives in Nevada.

In New Mexico, SWEEP helped the Governor's office and the state energy agency develop two bills that passed the legislature and were signed into law by Gov. Richardson in March 2004. One bill established a grants program and appropriated funding for energy efficiency and renewable energy projects by local governments, community colleges and universities, and tribal entities. The other bill exempts gas/electric hybrid vehicles above a certain fuel economy threshold from the state's excise (sales) tax. SWEEP played a leading role in the advocacy for these bills.

Building Energy Efficiency

SWEEP supports efforts to increase the energy efficiency of new homes and commercial buildings through the adoption of improved building energy codes and encouragement of "beyond code" construction practices. During 2004, SWEEP participated in building code reviews in both Denver and Phoenix. Both cities adopted the 2003 International Energy Conservation Code—the code advocated by SWEEP and other energy efficiency experts. We were especially active in Phoenix, where we presented testimony to a codes commission as well as lobbied the city council.

SWEEP obtained funding for and began work in 2004 on a new project to demonstrate the Home Performance with ENERGY STAR[®] home retrofit concept in Colorado. This pilot project involves training contractors and testing the whole-house, high-quality retrofit approach in Colorado Springs. The project is co-funded by the U.S. EPA and the Colorado Springs municipal utility. Five contractors were trained in late 2004 and are in the process of implementing whole-house retrofits. SWEEP will be monitoring and reporting on the results.

With funding from the U.S. Department of Energy's Building America program, SWEEP is preparing a series of reports on emerging technologies for improving the energy efficiency of homes in the Southwest. For each technology, we are preparing two companion reports—one on technology status and performance, the other on policy and program options for promoting the emerging technology. We completed two sets of reports in 2004—one on evaporative cooling and the other on energy-efficient windows



and other fenestration products. The reports, available on our web site, are being noticed and used by builders, utilities, and state energy agencies in the region. In addition, we began work on a third set of reports on energy-efficient heating and cooling ducts.

Combined Heat and Power

SWEEP, along with two other organizations (the etc Group and Energy Strategies, both based in Salt Lake City), has formed the Intermountain Combined Heat and Power (CHP) Regional Application Center. The Center was launched during the first half of 2004. It is funded primarily by the U.S. Department of Energy. The Center is promoting greater adoption of CHP systems in five states—AZ, CO, NM, UT, and WY. The Center is working on education, removal of regulatory and other barriers to CHP, and technical assistance to potential CHP adopters.

In conjunction with launching the new Center, SWEEP organized a regional CHP workshop in 2004. The workshop was successful for soliciting recommendations for activities and priorities, as well as for recruiting volunteers to help the Center and CHP promotion efforts more broadly. About 75 individuals attended the workshop. In addition, a web site for the Center was developed and launched (www.intermountainCHP.org).

Miscellaneous

The Western Governors Association (WGA) held an Energy Summit in Santa Fe in April, 2004 where a regional clean energy initiative was proposed. The initiative was adopted at the June WGA meeting. Among its goals, it calls on the WGA to examine the feasibility of and actions required to improve energy efficiency 20 percent by 2020. SWEEP played a major role in suggesting this goal, analyzing its feasibility and presenting the rationale for it, and advocating for it in the lead-up to these meetings. SWEEP expects to be actively involved as the WGA implements this initiative.

In October, SWEEP organized a workshop on regional cooperation in energy efficiency program implementation in the Southwest. The workshop was well-attended and led to selection of six high priority topics for follow-up activities. In addition, SWEEP helped organize and was a featured speaker at a workshop on utility energy efficiency policies and programs in the Southwest that took place in September. The paper we prepared for this meeting is available on our web site (see publications list below).

SWEEP made presentations at numerous other international, national, regional, and state conferences and events in 2004, including the ACEEE Summer Study on Energy Efficiency in Buildings, the ACEEE/CEE Market Transformation Symposium, the Affordable Comfort Conference, the annual meeting of the National Association of Regulatory Utility Commissioners, and the “Cooling Buildings in a Warming Climate” conference organized by the International Energy Agency.



SWEEP prepared and conducted a two-day statewide training session for low-income weatherization agencies in Wyoming. The training was very well-received by the 30+ participants. In addition, SWEEP began work on an Energy Efficiency Guide for Utah Businesses, modeled on our on-line guide for Colorado businesses.

Organization Development and Funding

SWEEP obtained approval and funding for a number of new projects during 2004. These include our work on combined heat and power (from the U.S. DOE through the Wyoming energy office and etc Group), the home retrofit pilot project (from the Colorado Springs Utilities), the energy efficiency strategy for Nevada (from the NV state energy office, Nevada Power Co., and Energy Foundation), and the Energy Efficiency Guide for Utah Businesses (from the Utah Energy Office and EPA). In addition, we received a renewal of funding for our utility energy efficiency work, as well as support for appliance efficiency standards work, from the Energy Foundation.

SWEEP added one new staff person in 2004. Christine Brinker was hired as a program associate to work on combined heat and power analysis and promotion. She supports the work of the Intermountain CHP Application Center. In addition, Gail Ryba was hired to be SWEEP's New Mexico representative.

Funding Sources

Energy Foundation/Hewlett Foundation
Alida R. Messinger Charitable Trust
Colorado Springs Utilities (via E-Star Colorado and Boulder Design Alliance)
New Mexico Energy Conservation and Management Division
Nevada Power Company
Nevada State Office of Energy
New-Land Foundation
U.S. Department of Energy/National Renewable Energy Laboratory
U.S. Department of Energy/Combined Heat and Power Office (via etc Group)
U.S. Environmental Protection Agency
Utah Energy Office (via etc Group)
Wyoming State Energy Program

Publications (available on our web site)

Environment Colorado and SWEEP. *The Clean Energy Solution to Xcel's Energy Plans.*

H. Geller, C. Mitchell, and J. Schlegel, *Nevada Energy Efficiency Strategy.*

H. Geller, *Utility Energy Efficiency Policies and Programs in the Southwest*

H. Geller, *Policies and Programs for Expanding the Use of High Efficiency Fenestration Products in Homes in the Southwest.*



L. Kinney, *New Evaporative Cooling Systems: An Emerging Solution for Homes in Hot Dry Climates with Modest Cooling Loads.*

L. Kinney, *Evaporative Cooling Policy and Program Options: Promising Peak Shaving in the Growing Southwest.*

L. Kinney, *Windows and Windows Treatments.*