



## **Energy Efficiency Has Proven that It Can Avert A Major Energy Supply Crisis**

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With the current warnings of natural gas shortages and significant natural gas price increases for the approaching winter of 2003/2004, it is instructive to consider the experience of California during its electricity crisis of 2000/2001. California conclusively demonstrated that an aggressive public information campaign for conservation, coupled with expanded funding for energy efficiency programs, could achieve remarkable reductions in customer energy demand. As a result, further electric system problems were successfully averted.

By almost any measure, the events surrounding the electricity situation in California in the 2000/2001 time period were simply extraordinary. Between the summer of 2000 and the early winter months of 2001, the California Independent System Operator declared over 70 days of system emergencies, and rolling blackouts were actually initiated on several occasions. In January and February 2001, the California Energy Commission (CEC) projected electricity supply and demand for the summer of 2001 under various temperature scenarios, and analyses suggested that the state could face a potential shortfall of 5,000 megawatts (MW) during the months of June through September.

In reaction to this unprecedented crisis, California responded with a series of demand-side policy initiatives that were truly historic. California policymakers and utility regulators established a substantial set of policies and programs that involved significant additional funding for energy efficiency programs and the development of a major public information campaign to promote energy conservation. In all, more than \$1.3 billion in funding was authorized for demand reduction initiatives, representing a 250% increase over the spending in 2000. In particular, the degree of policy emphasis and the amount of funding provided for energy efficiency were without parallel in U.S. history.

By the broadest indicators, the totality of this effort was extremely successful. The synergistic effect of all the California programs and policies was immense. In 2001, California averaged a 10% cut in peak demand during the summer months (with a record reduction of 14% in June), and overall electricity use declined in 2001 by 6.7%, after adjusting for economic growth and weather. These energy efficiency and conservation efforts reduced peak demand by 5,500 MW, more than the entire originally projected shortfall. Perhaps the most meaningful result of all was that California experienced no incidences of rolling blackouts for the entire summer or the rest of 2001. Subsequent detailed evaluation of these efforts also determined that they were very cost-effective, saving electricity at an average cost of 3 cents per kilowatt-hour (less than half the cost of building, fueling, and operating new electric power plants).

The experience in California in 2000/2001 irrefutably demonstrated that an aggressive policy response consisting of a major public information campaign for energy conservation, coupled with expanded funding for the direct implementation of energy efficiency measures, could

achieve significant energy demand reductions at a very cost-effective price. Furthermore, these policies could do so in a very short timeframe, when there was not sufficient time to pursue traditional supply-side capacity expansion. It is not an overstatement to say that energy efficiency and conservation literally “kept the lights on” in California during the electricity crisis of 2000/2001.

Federal and state governments would be wise to apply these lessons to the impending natural gas crisis of 2003/2004. Because of the increasing linkage between electricity generation and natural gas consumption, measures that focus on both electricity and gas savings will be important. In particular, efforts to reduce peak electricity usage this summer will free gas for injection into storage that can be used to meet next winter’s needs.

For more information on the California experience, please refer to:

***Examining California's Energy Efficiency Policy Response to the 2000/2001 Electricity Crisis: Practical Lessons Learned Regarding Policies, Administration, and Implementation***  
by Martin Kushler and Edward Vine (ACEEE 2003).

This report is available online at: <http://aceee.org/pubs/u033full.pdf>.

For more information on the role of efficiency in addressing our natural gas supply issues, please visit: <http://aceee.org/energy/natlgas.htm>.