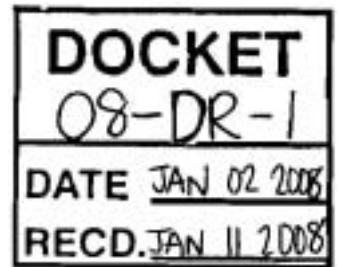


STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION



Informational and Rulemaking
Proceeding on Demand Response
Rates, Equipment, and Protocols

) Docket Number 08-DR-01
)
) Order Number 08-0102-10

ORDER INSTITUTING INFORMATIONAL AND RULEMAKING PROCEEDING

The Energy Commission's load management standards authority can serve as a valuable tool to bridge the gap between the current level of demand response (DR) in California and its full cost-effective potential. The **2007 Integrated Energy Policy Report (2007 IEPR)** recognized the importance of load management standards and recommends that the Energy Commission institute a formal process to pursue the adoption of load management standards in 2008. The **IEPR** illustrates a few areas where load management standards may be particularly effective:

- implementing default dynamic tariffs to reflect the higher costs of using electricity during critical peak hours, and
- adopting automated technologies for residential and non-residential customers that enable customers to respond to the opportunities created by dynamic pricing tariffs.

With this order, the Energy Commission institutes an informational and rulemaking proceeding to:

- (1) assess which rates, tariffs, equipment, software, protocols, and other measures would be most effective in achieving demand response, and
- (2) adopt regulations and take other appropriate actions to achieve a price-responsive electricity market.

Recognizing the importance of work being done at the California Public Utilities Commission (CPUC) and the California Independent System Operator (CAISO) on demand response in California, we will coordinate this proceeding very closely with these entities.

We institute this proceeding pursuant to Public Resources Code sections 25210, 25213, 25216, 25216.5(c)-(d), 25218(d)-(e), 25224, 25402(a)-(b), 25402(c), 25403, and 25403.5, and 20 California Code of Regulations sections 1220 – 1225. All subsequent section references are to the Public Resources Code unless otherwise noted.

Summary & Background

The Legislature has declared that "electrical energy is essential to the health, safety and welfare of the people of this state." (Public Resources Code section 25001) The Legislature has also found that "Californians can significantly increase the reliability of the electricity system and reduce the level of wholesale electricity prices by reducing electricity usage at peak times through a variety of measures designed to reduce electricity consumption during those periods" and expressed its intent "...to promote energy conservation and demand reduction. (Public Utilities Code section 454.5) Since 2003, California has relied on the "loading order" adopted in the state's Energy Action Plan to meet its growing electricity needs, first with energy efficiency and demand response; second, with renewable energy and distributed generation; and third, with clean fossil-fueled sources.

In 2002, the California Public Utilities Commission opened proceedings focused on demand response "to enhance electric system reliability, reduce power purchase and individual consumer costs, and protect the environment." (R. 02-06-001, Order Instituting Rulemaking, June 6, 2002 (CPUC OIR), p. 1.)

Working in collaboration with the Energy Commission in that and subsequent proceedings and pursuant to section 454.4 of the Public Utilities Code, the CPUC has:

- approved a series of voluntary demand response programs proposed by the investor-owned utilities (IOUs),
- directed the IOUs to conduct a statewide pricing study that established the potential impacts of dynamic electricity pricing to residential and small commercial customers,
- approved a deployment plan for an advanced metering infrastructure (AMI) that will include interval metering and dynamic pricing capability for all customers served by Pacific Gas & Electric Company and
- incorporated demand response in procurement planning.

Current CPUC proceedings include the development of demand response measurement and evaluation protocols, revision and refinement of the demand response goals (currently 5 percent of annual system peak demand), review of AMI applications from SDG&E and SCE, and development of dynamic rates for large customers. At the same time, the Energy Commission has developed a new standard for Programmable Communicating Thermostats (PCT) that could require new air conditioning systems be capable of automated load reductions during critical periods and facilitating customer response to time-varying rates, and expects to adopt this standard in January, 2008.

Despite these ongoing proceedings and estimates that suggest that demand response could achieve 25 percent of California's peak demand, participation in the state's price-responsive demand response programs has grown to just 2.2 percent of peak demand by 2006.

Authority and Actions on Demand Response

The Energy Commission has implemented a number of demand response programs throughout its history. Shortly after it was created, the Energy Commission adopted one of the first load management programs in the country by establishing cycling programs for residential air conditioners, water heaters, and pool pumps, and by recommending a set of time-of-use (TOU) rates for the largest commercial and industrial customers. All of these recommendations were approved and implemented by the CPUC.

More recently, in response to the 2000 – 2001 electricity crisis, the Energy Commission implemented an emergency program that provided over 1,000 California businesses with metering and control systems that enabled them to reduce their cumulative loads by over 150 megawatts within 15 minutes of receiving an emergency signal. In addition, the Energy Commission directed the implementation of Assembly Bill 29x of 2001, which provided \$35 million to install 23,000 real-time meters for customers with loads above 200 kilowatts – customers whose loads comprise 30 percent of California's peak electricity demand.

These programs, reflect the broad authority that the Commission has to address demand response. The Legislature has given the Energy Commission the power to:

- set energy standards for buildings (sections 25402(a)-(b), 25402.1 - 25402.5);
- establish and enforce efficiency standards for new appliances (section 25402(c)) ;
- establish and enforce load management standards for utilities (section 25403.5);
- recommend consideration by the CPUC and publicly-owned electric utilities of rates and other price-related practices (sections 25216.5(c), 25403, and 25403.5); and
- fund a wide variety of energy efficiency and research & development programs (e.g., sections 25410–25449.4, 25601–25602, 25620–25620.9, 25630–25650).

When the Energy Commission adopted its first load management standards, most time-responsive meters were so expensive that they were economic only for the largest commercial and industrial customers. Moreover, load control devices such as "smart thermostats" (pre-programmed to adjust air conditioning temperatures in response to price and emergency signals) and customer-utility communication equipment either did not exist or were, like interval meters, very expensive.

Now, advanced metering is anticipated to be in place for all IOU customers within the next five years and many publicly-owned utilities are considering AMI for the operational savings and service improvement potential, in addition to the potential for demand response such systems provide. Rapid improvements in communications technologies and order of magnitude cost reductions in "smart grid" technologies foreshadow substantial potential for developing a flexible, efficient, reliable and lower-cost electricity system by facilitating and encouraging energy efficiency and load management.

The Scope of This Proceeding

We intend to conduct this proceeding as both a mechanism for assessing the viability and potential effectiveness of our load management standards options and a process for developing the best of those options into cost-effective load management standards. The scope of this process will include, but is not limited to:

- developing and adopting load management standards, as appropriate;
- developing a draft implementation schedule for implementation of the load management strategies recommended/ordered by the Energy Commission;
- analyzing the level of demand response needed to achieve reliable operation of the electricity system in a more cost-effective manner than relying on generation alone;
- assessing the potential long-term conservation and efficiency impacts of dynamic tariffs and automated load reduction technologies;
- assessing the demand response potential of the rates, tariffs, and meters for publicly-owned utilities, as well as investor-owned utilities;
- assessing the feasibility and cost-effectiveness of equipment, hardware, communications protocols, and software for existing and new buildings and appliances;
- examining the requirements and opportunities for loads to qualify as emergency and operating reserves in programs established by control area operators such as the CAISO;
- developing consumer education materials intended to allow consumers to make intelligent choices about programs and tariffs and to modify their electricity consumption in response to the price signals that such programs and tariffs should provide;
- examining the feasibility and effectiveness of facilitating assistance services to customers in developing demand response strategies;
- developing and adopting compliant building and appliance standards.

Closing Docket Number 02-DR-01

- The Commission hereby closes the existing proceeding Docket Number 02-DR-01. Order Number 02-0717-01.

Delegation of Authority to Efficiency Committee

The Energy Commission's Efficiency Committee (Chairman Pfannenstiel, presiding member, and, Commissioner Rosenfeld, associate member), shall preside over this proceeding and carry out the activities described above. The Efficiency Committee shall take all actions reasonably necessary to comply with all applicable legal requirements, such as the requirements of the Warren-Alquist Act, the Administrative Procedure Act, and the California Environmental Quality Act. The actions shall include but are not limited to the submittal, on behalf of the Energy Commission, of all required documents to the Office of Administrative Law and the California Building Standards Commission.

Designation of Participants

Section 1222(b) of our regulations states that in informational proceedings the Commission shall "require the presence and participation of such persons as the commission may direct, consistent with the nature and purpose of the proceedings." In this proceeding, we initially require all investor-owned and all publicly-owned electric utilities in California to participate. We invite the CPUC and the CAISO to collaborate with us in this proceeding. Smaller utilities may be represented by appropriate associations such as Northern California Power Authority (NCPA) and Southern California Public Power Authority (SCCPA). In addition, we also encourage participation by other stakeholders including customer advocates, environmental advocacy groups, industry associations, energy service providers, load aggregators, technology vendors, local government agencies and academic institutions. The Efficiency Committee may require or request the participation of other persons.

Public Participation

The Energy Commission encourages full and free public participation. Petitions to intervene are not necessary. Although written comments are preferable, at any hearing, workshop, or other public event all persons shall be afforded a reasonable opportunity to make oral comments on the subject matter of the event. All written comments shall be addressed to:

Docket No. 08-DR-1
California Energy Commission
1516 Ninth Street, Mail Station 4
Sacramento, California 95814-5512

Nine copies of all written materials shall be provided unless it would impose an undue hardship. The Efficiency Committee shall establish deadlines for comments.

The Executive Director, in conjunction with the Public Adviser, shall ensure that this order, and notice of the time and place for all hearings and workshops, are distributed to all interested persons. The Executive Director shall also ensure that drafts of proposed regulations are made available to interested persons and the Public Adviser sufficiently in

advance of consideration or adoption by the Energy Commission to allow timely public participation.

The Energy Commission's Public Adviser is available to help any person who wants to participate in this proceeding. Please call (916) 654-4489 or toll-free in California at (800) 822-6288, or e-mail pao@energy.state.ca.us, for assistance.

January 2, 2008

ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION


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