

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies and Protocols for Demand Response Load Impact Estimates, Cost-Effectiveness Methodologies, Megawatt Goals and Alignment with California Independent System Operator Market Design Protocols.

FILED
PUBLIC UTILITIES COMMISSION
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SAN FRANCISCO OFFICE
RULEMAKING 07-01-041

ORDER INSTITUTING RULEMAKING**I. Summary**

This order initiates a Rulemaking as part of our continuing effort to develop effective demand response (DR) programs for our investor-owned utilities. This rulemaking will:

- Establish a comprehensive set of protocols for estimating the load impacts of DR programs;
- Establish methodologies to determine the cost-effectiveness of DR programs;
- Set DR goals for 2008 and beyond, and develop rules on goal attainment; and
- Consider modifications to DR programs needed to support the California Independent System Operator's (CAISO) efforts to incorporate DR into market design protocols.

Our consideration of some of the issues in this rulemaking will build on the work begun in Rulemaking (R.) 02-06-001. We will coordinate the work in this

rulemaking with efforts to measure and evaluate energy efficiency programs, forecast load for purposes of assuring resource adequacy, and calculate avoided costs.

II. Background

“Demand response” is defined as changes in electricity consumption by customers in response to signals in the form of electricity prices, incentives, or alerts during periods when the electricity system is vulnerable to extremely high prices or compromises to reliability. We have generally categorized DR programs according to whether their purpose is to address spikes in market prices (day-ahead/economic DR) or to relieve threats to system reliability (day-of/emergency DR).

DR programs are an essential element of California’s resource strategy, as articulated in the State’s Energy Action Plan II (EAP II). EAP II has determined how energy resources should be deployed to meet California’s energy needs and ranks DR programs second in the “loading order” after energy efficiency programs. The EAP II emphasizes the need for DR programs that result in cost-effective savings and the creation of standardized measurement and evaluation mechanisms to ensure verifiable savings. It directs the utilities to subscribe at least 5% of system peak demand to DR programs by 2007.

The Commission undertook a major effort to adopt effective DR programs in a previous rulemaking, R.02-06-001. Since the issuance of R.02-06-001, the Commission has significantly improved the role of DR programs in meeting California’s energy needs. Part of the work in R.02-06-001 included the adoption of a pilot program to determine the demand elasticities of residential and small commercial customers by placing them on time-of-use and critical peak pricing tariffs. Decision (D.) 03-06-032 adopted price-responsive DR programs for large

customers and set annual participation goals for utility DR programs. The rulemaking also initiated the Commission's exploration of advanced metering, "real-time" pricing, default critical peak pricing tariffs and other DR program planning and implementation issues. The utilities have since submitted applications seeking deployment of advanced metering systems for all of their customers.

D.05-11-009 recognized the need for additional work to integrate DR programs into the resource planning process, and evaluate and measure the effect of DR programs. In response to D.05-11-009, the Commission's Energy Division and the California Energy Commission (CEC) staff jointly issued draft protocols for estimating load response from DR programs that identified outstanding issues and listed several types of program and incremental costs that should be tracked.¹ The staff also conducted one scoping workshop on cost-effectiveness issues. Taking into consideration the comments provided by stakeholders at the workshop and those submitted in response to the draft protocols, the staff recommended that the Commission conduct a formal proceeding to develop load impact protocols for DR programs, develop a cost-effectiveness methodology for DR programs and reassess the megawatt (MW) goals for DR programs, including further guidance as to what load reductions count toward achievement of those goals.

¹ The draft load impact protocols, comments on the protocols and the presentations from the cost-effectiveness scoping workshop can be found at:

http://www.cpuc.ca.gov/static/hottopics/1energy/_drce.htm

DR programs have also become a focal point of the CAISO's wholesale market development. On September 21, 2006, the Federal Energy Regulatory Commission (FERC) conditionally approved the CAISO's Market Redesign and Technology Upgrade (MRTU) proposal and directed the CAISO to incorporate price-responsive DR programs in the MRTU. In our comments² to FERC, we indicated our support for this effort and recommended that the CAISO account for existing demand response in a way that does not promote procurement of redundant supply-side resources. We also signaled our support for a stakeholder working group process which could be used to identify how to best align existing utility DR programs with wholesale markets. As the CAISO's efforts in this area progress, we expect that existing utility DR programs may require modification. Such program changes may be considered in this rulemaking.

All of this provides the backdrop for our work in this proceeding.

III. Preliminary Scoping Memo

A. Scope of Issues

The issues that we consider to be within the scope of this proceeding at this time are as follows:

² Comments and Proposal of the California Public Utilities Commission for Incorporation of Demand Response into the CAISO Markets in Accordance with the Commission's September 21, 2006 Order Conditionally Accepting the California Independent System Operator's Electric Tariff Filing to Reflect Market Redesign and Technology Upgrade, dated November 20, 2006.

1. Load Impact Estimation

This rulemaking will use the draft load impact protocols developed by staff (see Background) as a starting point toward the development of a final load impact protocol for DR programs. The protocols will be useful not only as input in measuring program cost-effectiveness, but also will assist in resource planning and long-term forecasting. A sound method of estimating load impacts will also improve the CAISO's implementation of MRTU. For example, the CAISO may be able to more confidently rely on demand response as a "day-ahead" resource if the reliability of that resource is better defined.

Measuring load impacts is not a simple exercise. DR programs motivate different ways of reducing load by different types of customers. Program impacts may differ in their timing and nature, in the extent to which they improve reliability, and in their costs, for example. These and other program characteristics may vary according to the circumstances of the event, such as temperature, day of the week, time of day, location, and type of system emergency. Accordingly, DR programs may be most appropriately dispatched according to the circumstances and the cost-effectiveness may be affected by the circumstances at hand. These matters should be recognized in future protocols.

The load impact of a DR program is defined as the difference between the customer's load (in response to a DR request) and the customer's expected load absent the DR request, which is also called the customer's "baseline". Consequently, estimating the baseline is critical. The CEC's study on customer baseline estimations³ assessed various methods of baseline calculation such as

³ Protocols Development for Demand Response Calculation – Findings and Recommendations, February 2003.

load averaging of recent similar days, using regression analysis or making adjustments to reflect certain factors, like weather. Each method presents advantages and disadvantages, as the CEC's report states. These baseline estimation methods, along with any other viable method, will need to be considered as part of the load impact protocol development. The Commission must also consider whether to estimate program-wide impacts or customer-specific effects.

Currently, dispatchable DR is considered to be a supply-side resource for purposes of calculating resource adequacy requirements, while non-dispatchable DR is considered to be a reduction from load forecasts. R.05-12-013 is exploring improvements to forecasting mechanisms related to DR resources. The load impact protocols we develop here may resolve some of the concerns raised with regard to the measurement of DR effects for purposes of promoting resource adequacy. We expect to incorporate the protocols developed here in our resource adequacy rules and will coordinate our efforts here with the Resource Adequacy proceeding, R.05-012-013.

2. Cost-Effectiveness Methods

In Application (A.) 05-06-006 we approved \$262 million for DR programs for the years 2006-2008 (D.06-03-024). In the same proceeding we recently authorized augmentations and expansions to the DR programs for the purpose of increasing DR as a resource for summer 2007 (D.06-11-049). Some parties to this proceeding expressed concern that DR programs may not be cost-effective,

considering the level of incentives and administrative costs authorized for these programs. It is our intent to adopt methodologies so that the utilities' DR programs are cost-effective.

The California Standard Practice Manual (SPM), which was derived as a cost-effectiveness protocol for energy efficiency programs, appears to be a valid starting point for designing a suitable cost-effectiveness methodology for DR programs. The SPM provides a variety of tools for developing cost-effectiveness methodologies for DR programs as well as identifying cost and benefit components. We encourage stakeholders to provide meaningful input on how to best refine the SPM so that it can more accurately reflect the value of DR programs. We will coordinate this effort with Commission proceedings where the value of avoided costs for DR as well as other resources is being calculated. We focus our efforts here on the costs of DR programs and DR benefits not captured by avoided costs. We also intend to coordinate our work here with the energy efficiency rulemaking and our efforts there to establish measurement and evaluation protocols.

3. Demand Response Participation Goals

D.03-06-032 adopted the following goals for price responsive, day-ahead demand response programs:

Table 1

Year	Pacific Gas and Electric Company (PG&E)	Southern California Edison Company (Edison)	San Diego Gas & Electric Company (SDG&E)
2003	150 MW	150 MW	30 MW
2004	400 MW	400 MW	80 MW
2005	3% of annual system peak demand		

2006	4% of annual system peak demand
2007	5% of annual system peak demand

Currently, there are no similar goals set for reliability programs and participation in those programs does not count toward meeting the goals shown in Table 1.

Parties in A.05-06-006 raised concerns about the existing goals, such as the exclusion of reliability programs in meeting the goals. D.06-11-049 discussed how certain circumstances have changed since the Commission set the goals in 2003 and the need to reassess the goals for 2008 and beyond. We are concerned with realistic participation goals in addition to resolving whether participation in reliability programs should be included in DR goals. We also recognize the need to provide clearer “counting rules” for MW goal attainment so that the utilities can plan more effectively and that we can better monitor their progress.

4. CAISO’s MRTU

We plan to coordinate our efforts here with the CAISO so that DR resources are efficiently incorporated in the CAISO’s wholesale markets. The CAISO plans to implement the day-ahead market of its MRTU during the first quarter of 2008, which could affect or be affected by DR efforts. As stated earlier, we have recommended that the CAISO account for existing demand response in a way that does not promote procurement of redundant supply-side resources. A key to resolving this issue is identifying where there are disconnects or gaps between existing retail DR programs and the CAISO’s operational needs for the wholesale market, both currently and when MRTU is implemented.

The stakeholder process envisioned by the CAISO could result in recommendations to modify the existing DR programs and such recommendations would be considered in this rulemaking. Our Energy Division will participate in the CAISO's DR stakeholder group to assure the agencies are communicating on this work.

B. CEC Collaboration

In the past few years the CEC has participated in some Commission rulemakings in a collaborative fashion rather than as a party. We invite the CEC to join us in this proceeding by continuing the collaborative approach that both agencies pursued in the development of DR policy and programs in R.02-06-001 and in other DR proceedings. The collaborative approach has been an effective tool to ensure that state agencies are able to communicate and effectuate our joint policy goals.

C. Category of Proceeding

Pursuant to Rule 7.1(d) of our Rules of Practice and Procedure (Rules), this rulemaking is preliminarily categorized as "ratesetting" as that term is defined in Rule 1.3(e). Our intention is to conduct this proceeding by written comments from the parties, workshops, and possibly limited evidentiary hearings on technical issues. Objections to the preliminary categorization of this rulemaking as "ratesetting" shall be filed no later than 10 days after the issuance of this rulemaking. (See Rule 7.6(a).)

D. Schedule

This proceeding will initially emphasize issues relating to load impact protocols and cost-effectiveness. Coordination with the CAISO on integrating the DR programs with wholesale energy markets and MRTU will be added to schedule as that process becomes better defined at a later date.

The preliminary schedule for these initial issues is as follows:

Prehearing Conference	March 13, 2007, 10:00 a.m.
Workshops and staff report on Load Protocols and Cost-Effectiveness Methodology	April - June 2007
Workshops on Participation goals	August 2007

On the basis of the discussion at the prehearing conference, the assigned Commissioner may provide a more detailed schedule, and may modify this schedule as necessary to assure the efficient and effective conduct of this rulemaking. The assigned Commissioner or assigned Administrative Law Judge (ALJ) may modify the schedule as necessary. The Commission anticipates that this proceeding will be completed within 18 months, consistent with Pub. Util. Code § 1701.5.

E. Parties and Service List

PG&E, SDG&E, and Edison are named as respondents to this rulemaking. We serve this order on parties to R.02-06-001, R.06-02-013, R.05-12-013, A.05-06-006, A.05-03-015, A.05-06-028, A.06-12-026, R.06-04-010, R.04-04-025 and the informal "DR cost-effectiveness service list" that staff initiated with its draft load protocols.

The official service list will be established at the first prehearing conference. We invite broad participation in this proceeding. Those who seek party status or wish to monitor this proceeding who cannot attend the prehearing conference may do so by informing the Commission's ALJ Process Office (process_office@cpuc.ca.gov) of his or her intent to participate and

providing the following information no later than the date of the first prehearing conference:

1. Name and organization represented, if any
2. Address
3. Telephone number
4. E-mail address
5. Assignment to the appearance, state service, or information only category.

After the service list is established following the first prehearing conference, persons may be added as parties as directed by the assigned ALJ.

All filings in this proceeding may be made electronically according to Resolution ALJ-188 and served consistent with Rule 1.10. Consistent with those rules, a hard copy of all pleadings shall be concurrently served on the assigned ALJ.

F. Public Advisor

Any person or entity interested in participating in this rulemaking who is unfamiliar with the Commission's procedures should contact the Commission's Public Advisor in Los Angeles at (213) 576-7055 or (866) 849-8391, or e-mail public.advisor.la@cpuc.ca.gov; or in San Francisco at (415) 703-2074 or (866) 849-8390 or e-mail public.advisor@cpuc.ca.gov. The TYY number is (866) 836-7825.

G. Ex Parte Communications

Pursuant to Rule 8.4(b), ex parte communications are governed by Rules 8.2(c) and 8.3.

O R D E R

Therefore, **IT IS ORDERED** that:

1. A rulemaking is instituted on the Commission's own motion to establish a set of protocols for estimating the load impacts of demand response programs, establish methodologies to determine the cost-effectiveness of demand response programs, set demand response goals for 2008 and beyond, and develop rules on goal attainment, and consider modifications to demand response programs needed to support the California Independent System Operator's efforts to incorporate demand response into market design protocols as discussed herein.
2. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company are made respondents to this proceeding.
3. The Executive Director shall cause this Order Instituting Rulemaking to be served on the respondents, the Executive Director of the California Energy Commission and on the parties to Rulemaking (R.) 02-06-001, R.06-02-013, R.05-12-013, Application (A.) 05-06-006, A.05-03-015, A.05-06-028, A.06-12-026, R.06-04-010, R.04-04-025 and the informal "demand response cost-effectiveness service list" that staff initiated with its draft load protocols.
4. The category of this rulemaking is preliminarily determined to be "ratesetting" as that term is defined in Rule 1.3(e) of the Commission's Rules of Practice and Procedure. Any person objecting to the preliminary categorization of this rulemaking as "ratesetting" shall file the objection no later than 10 days after the issuance of this rulemaking.
5. The assigned Administrative Law Judge (ALJ), in consultation with the assigned Commissioner, may make any necessary adjustments to the schedule for this proceeding.

6. The Commission hereby schedules a prehearing conference in this proceeding for the purpose of discussing the management of this docket. The prehearing conference will take place at 10:00 a.m. on March 13, 2007 in the Commission Courtroom, State Office Building, 505 Van Ness Avenue, San Francisco, California 94102.

This order is effective today.

Dated January 25, 2007, at San Francisco, California.

MICHAEL R. PEEVEY

President

DIAN M. GRUENEICH

JOHN A. BOHN

RACHELLE B. CHONG

Commissioners