

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on policies and practices for advanced metering, demand response, and dynamic pricing.

Rulemaking 02-06-001

**ADMINISTRATIVE LAW JUDGE'S RULING
FOLLOWING THE FIRST MEETING OF WORKING GROUP 1**

1. Summary

This ruling summarizes the key points considered and discussed at the first meeting¹ of Working Group 1, the interagency policymaking group which is comprised of commissioners and staff from the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and the California Consumer Power and Conservation Financing Authority (CPA). At its initial meeting this working group addressed four broad topics: 1) Policy Group Goal Setting; 2) Demand Response Goal Setting; 3) Principles for Tariff and Program Design; and 4) Remaining Proceeding Scope Issues.² These matters are addressed sequentially, followed by a discussion of the next steps contemplated by the policy group, which meets again on September 16, 2002. We also include

¹ The first meeting of Working Group 1 was held on August 26, 2002 in San Francisco.

² The Agenda for the August 26, 2002 meeting, which was published on the CPUC website prior to the meeting, is attached to this Ruling as Item 1. All written materials distributed at the meeting by staff members who are supporting Working Group 1 are identified by sequential item numbers and are attached to this ruling for the use of the parties who plan to file written comments.

preliminary guidance to Working Groups 2 and 3 in this ruling. The policy group invites written comments on this ruling from the parties to this proceeding; such comments are not mandatory, but, if filed, are due on September 12, 2002.³ These comments will enhance the public debate of these issues and will necessarily assist the policy group in providing additional guidance to Working Groups 2 and 3.⁴

We understand that, aside from the brief time available during the August 26th meeting, this comment opportunity is the first occasion many parties will take to share their detailed views with us. In large measure this is due to the fact that we are following an unusual record building approach in this Order Instituting Rulemaking (OIR). First and foremost, this is an interagency effort which requires the CPA, CEC and CPUC to work together to build a common understanding of the nature and scope of the issues to be decided. However, the approach is also somewhat more complex. At least initially in our policy setting exercise, we wish to take an active approach and frame the issues from a broad statewide perspective. This accounts for our decision to ask interagency staff to frame the basic issues at the outset, for we did not want to be in the position of reacting initially to proposals submitted to us by respondent IOUs and other interested parties. We have instead attempted to set a statewide context to assist

³ In addition to the written materials appended to this ruling, parties preparing comments are free to rely on the 100-page Reporter's Transcript of this working group meeting, designated as WS-1 RT.

⁴ Working Group 2 will focus on large customer (>200 kilowatts (kW) in average monthly demand) issues, and Working Group 3 will focus on small commercial/residential customer issues (see, generally, Ruling Following Prehearing Conference, pp. 4-7; and Assigned Commissioner's Ruling and Scoping Memo, pp. 3-5)

the respondents and interested parties who must now work to develop programs that are consistent with the policies and goals we articulate for use as guiding tools during the course of the proceeding. We do need the parties' reactions to our efforts in order to ensure that the direction we take will lead to a sound decision. In that vein, we anticipate, and will reflect seriously on, the written comments that will be filed.

2. Policy Group Goal Setting

This rulemaking was initiated in order to address, comprehensively, policies designed to develop demand flexibility as a resource to enhance electric system reliability, reduce power purchase and individual consumer costs, and protect the environment (OIR 02-06-001, mimeo., p. 1). At the outset there is clear consensus that these three goals are our guiding principles. While each agency has its own set of responsibilities,⁵ each policy decision or program developed in this proceeding must further these goals.

During this discussion a question arose as to whether we should pursue demand response programs designed simply to achieve more price responsiveness, or whether policy makers should also seek some direct load control options. This is an issue that was initially resolved in the assigned commissioner's August 16 Ruling and Scoping Memo by eliminating consideration of "emergency" strategies such as those being addressed in the CPUC's interruptibles docket Investigation (I.) 00-10-002) and directing the scope of our efforts towards "Flexible/Dispatchable" strategies (see, OIR, mimeo., p. 3).

⁵ Item 2, "Mutual Agency Goals" prepared by CPUC Energy Division staff, is attached to this ruling.

However the assigned commissioner's office may be open to considering a broader approach (WS-1 RT 15:17-24), recognizing that direct load control can encompass more than mere emergency response (e.g., economic dispatch issues). Commissioner Rosenfeld encourages such broadening, opining that we should consider both elements in the interests of designing a rational overall system (WS-1RT 15:25-27). Commissioner Rosenfeld would like to explore at least three different forms of dynamic tariffs in each customer working group (time-of-use, critical-peak and real-time pricing tariffs) (WS-1 RT 23-25). The CPA also proposes that demand response programs be considered in an integrated way (WS-1 RT 16:6-16).

One of the policy making themes that pervades the August 26th discussion is the notion of preserving options and not foreclosing good choices that will further our three key policy goals. Naturally that must be balanced by a realistic dose of decisiveness if we are to make progress. And as a result, we will look broadly at the available options as we proceed, and parties should feel free to explore demand response options that simultaneously address both response to emergencies as well as provide a price response to market costs and a targeted contribution to resources. This expanded view is in no way designed to undercut or modify any decision of the CPUC issued in R.00-10-002. That outcome is not our intent and we do not intend to modify existing interruptible programs here. We simply wish to provide the creative thinkers who will be developing program and tariff options in later stages of this proceeding the flexibility necessary to think broadly and comprehensively. Again, we encourage parties to comment on this permutation to the assigned commissioner's August 16th ruling and scoping memo.

3. Demand Response Goal Setting

This section of the August 26th meeting focused on steps required in order to set goals, both quantitative and qualitative, for achieving demand response. Staff from all three agencies presented options⁶ for consideration, including a comparison of “resource planning” and “price-it-right” approaches to setting quantitative goals. While the “resource planning” approach would rely on setting objective targets at the outset and then designing programs and tariffs to meet those targets, the “price-it-right” approach would focus on setting electricity prices accurately and allowing demand response to emerge naturally at whatever level is economic for customers.

Staff also identified a set of primarily qualitative policy objectives. Those objectives include the following:

- Lowering overall electricity costs while maintaining reliability
- Giving customers accurate price signals that reflect underlying costs of electricity delivery
- Increasing customer options for managing bills
- Reducing billing and metering costs
- Reducing probability and duration of wholesale price spikes
- Mitigating potential market power
- Increasing statewide consistency

⁶ See, Item 3, “Goal Setting” prepared by CPUC. Item 4 was prepared by the CPA, and Item 5 by the CEC.

- Increasing environmental quality
- Increasing reliability overall
- Diversifying portfolio of contracts to manage price risk

The primary consensus agreements reached during this portion of the agenda include the following:

- Preference for a blended and iterative approach to setting quantitative goals, combining resource planning and “price-it-right” elements
- Recognition that 10% of peak demand levels occur during 2-2.5% of the hours
- The need for staff to compile more information about what is known about tariff and program designs, demand elasticity, and general experience by customer class
- Recognition that setting quantitative demand response targets will be necessary to ensure actions taken in this proceeding are consistent with other goals set in:
 - The CPUC’s procurement proceeding
 - The CPA’s reserves rulemaking (initial proposal of 5-10% of peak demand desirable through demand response)
 - The CPA’s investment plan (1900 megawatt (MW) target in 5 years)
 - The CPUC’s interruptible proceeding (established a 2500 MW target)
 - The FERC Standard Market Design Rulemaking

In order to move forward to set more concrete quantitative goals at the next policy group meeting, staff supporting Working Group 1 will compile research, analysis and recommendations relating to this topic. This research will include at least the following sources:

- CEC's March 15, 2002 demand response workshop materials
- Filings from August 9, 2002 on existing/planned programs and tariffs in California
- Abstracts volunteered by the California Consumer Empowerment Alliance (CCEA) at the August 26 meeting
- Information presented at the September 9 and 10 experiential workshops in this proceeding
- Specific information about goals and targets included in adopted policy documents of the three agencies, including the CPUC's D.02-04-060, the CEC's Energy Outlook 2002-2012, and the CPA's Energy Resource Investment Plan.

This information will be compiled by October 1, 2002 for public distribution.

In the interim we expect the Working Groups (2 &3) to develop estimates of the range of demand response (in MW) that could be achieved by customer class in 2003 and by 2005 as a result of implementing their proposed approaches. We expect these estimates to be produced **after** the working groups have developed an initial set of options for analysis. These estimates could be produced using historic price elasticities, estimates of projected customer participation for a given tariff and the expected price change seen by customers (for the current rate to the proposed tariff, as appropriate).

Working Group 1 will use these estimates to develop at least rough Demand Response goals (in MW) later in this proceeding after receiving input from the parties, and following further deliberation.

Taking this approach to setting quantitative goals necessarily implies a top-down analysis informed by experience from other jurisdictions, as well as some from California. In addition, we will need to refine our goals periodically as we gain more experience about customer reaction through pilot programs and tariffs developed in the first phase of this proceeding.

Overall demand response goals set by this policy-working group will be developed in parallel with the activities of Working Groups 2 and 3. To the extent possible, those working groups should design tariff and program implementation plans that are flexible enough to accommodate a range of numeric goals that will be set later by the policy group.

To assist in this goal-setting process, if parties have other recommendations for information sources to use as the basis for setting goals, we would appreciate hearing about them in comments on this ruling. In addition, parties should feel free to comment on the overall approach and suggest any improvements or alternatives.

Finally, during the course of this proceeding, Working Group 1 will work to provide a longer-term perspective on California's demand response efforts. This multi-year review will provide a context for evaluating when particular pilots and programs should be phased in. This will also make it much easier to evaluate the appropriateness of specific tariffs (or pilots) proposed for adoption during Phase 1. To that end, the staff supporting Working Group 1 should begin drafting a vision of the future role, look, and multi-year evolution of demand

response in California, which can be released for comment by parties and thereafter incorporated in our decisionmaking process.

4. Principles for Tariff and Program Design

This portion of the working group agenda involved three different levels of discussion:

1. CEC recommendations⁷ on development of “default” tariff options for various customer classes, such as:
 - For large (>200 kW) customers: time of use, critical peak, and real-time pricing
 - For small customers: flat rate, time of use, and critical peak pricing
2. Recommendations⁸ from all three agencies on basic rate design principles, including:
 - Administrative simplicity
 - Producing real peak demand reduction
 - Protecting consumers

⁷ We concur with the CEC that the types of dynamic tariffs listed above should be discussed and analyzed by the working groups but believe it is premature to specify which tariff forms should be considered the default tariff for any specific customer class. We expect the working groups to make recommendations on both the form, specific tariff values and default status of all tariffs recommended in their report.

⁸ Item 6 is entitled “Design Principles for a Demand Responsive Electric Grid” and was prepared by CEC staff. Item 7, prepared by CPUC staff, describes “Past CPUC Principles Regarding Real Time Pricing Programs.” Item 8, a discussion of “DR Programs that Enhance Reliability...” was prepared by CPA staff.

- Considering whether installing the infrastructure to support dynamic tariffs is likely to be more cost effective in new rather than existing buildings
- Developing customer control strategies that are less draconian or primitive than the current use of 100% load drops during rotating outages
- Allowing for customer access to usage and price information
- Providing customers choice in rate structures to manage bills (rates as “tools” not “weapons”)

Finally, staff presented principles related to achieving revenue neutrality and ensuring that the new tariffs reflect the costs of serving customer classes. These are listed below.

- Dynamic tariffs should reflect the underlying costs of serving customers in different classes
- Tariffs should result in equitable cost allocation between classes

During the working group meeting, there was also significant discussion on the issue of how any given rate design could achieve revenue neutrality. There is general consensus that the current rate designs for particular customer classes do not reflect the underlying costs of serving those customers, because a substantial portion of rates is collecting revenues designed to repay historic utility procurement costs or Department of Water Resources emergency purchase costs incurred during 2000 and 2001. Thus, in order to achieve revenue neutrality by customer class and minimize cross-subsidization, a significant question exists as to whether any new rate options should be designed by utilizing existing total revenue requirements or whether new component-based revenue requirements should be developed that distinguish between current generation procurement costs and historic sunk costs of procurement incurred by

utilities and the Department of Water Resources. We invite parties' (especially the utilities') comments in response to this ruling on the "pros and cons" of the two approaches.

Following discussion of these general principles, consensus emerged that could logically lead to the conclusion that the reports generated by Working Groups 2 and 3 should address the following issues:

- A summary of the tariff forms recommended and their expected load impacts
- A summary of nontariff program options designed to achieve similar demand reduction objectives
- Design principles used to construct the tariffs or programs.
- Metering and communication requirements to support the tariffs
- Need for additional building controls and or intelligent systems to enhance customer response
- Information sources/systems for customers needed to support the tariffs or programs, including program/tariff marketing efforts required to recruit customers
- Potential need to upgrade utility billing system capabilities to support the tariffs or programs
- How these options support customer preferences or customer choice

Though formal assignments for Working Groups 2 and 3 were not discussed at the policy group meeting, Working Group 1 suggests that the following deliverables for those groups could also flow logically from the

matters discussed. We seek parties' written comments on the proposed assignments detailed further below.

Specific Guidance to Working Group 2 (Large Customers)

1. Design at least one dynamic tariff (beyond time of use) ready for implementation after issuance of a PUC decision at the end of Phase I. This would represent our best bet for a "quick win" suggested by several parties. This plan should include all of the following:
 - A complete proposed tariff design, including source or proxy for dynamic prices
 - An implementation plan, including schedule, for rollout to customers with ABx1 29 meters already installed, including any needed utility marketing efforts and customer education programs
 - A recommendation as to whether the tariff should be voluntary or mandatory
 - An indication of any necessary coordination with other entities, such as the CAISO
 - A plan for deployment of any additional infrastructure required, including utility back office systems
 - An estimate of administrative costs
 - A complete benefit-cost analysis
 - A plan for evaluating the results of tariff deployment
2. An analysis of how any existing pilot efforts could be improved to provide more information for further program or tariff development. This activity should include:
 - Specific changes suggested to existing efforts
 - Implementation plan for achieving those changes

- Any other relevant information on the benefits and costs of the changes
3. Recommended next steps for large customers, to be addressed in Phase II of this proceeding

Specific Guidance to Working Group 3 (Small Customers)

1. Identification of where significant information gaps exist in knowledge of small customer response to demand response programs or dynamic tariffs and a recommendation for how to fill these gaps through either pilot programs or other approaches.
2. Design of pilot programs or tariffs to fill in information gaps identified during the working group process. These pilot(s) should achieve the policy goals and design principles adopted by Working Group 1.

Recommended pilot activities should include:

- A complete program or tariff design
 - An estimate of the expected change in peak reduction and energy savings
 - An implementation plan, including schedule, for rollout to customers, including any needed utility marketing efforts and customer education programs
 - A plan for deployment of additional utility infrastructure required and a proposal to recover these costs
 - An estimate of administrative costs
 - A complete benefit-cost analysis for each program or tariff recommended
 - A plan for evaluating results of each recommended pilot
3. An analysis of how any existing pilot efforts could be improved to provide more information for further program or tariff development. This activity should include:
 - Specific changes suggested to existing efforts

- Implementation plan for achieving those changes
 - Any other relevant information on the benefits and costs of the changes
4. Recommended next steps for developing more demand responsiveness in the small customer sector, to be addressed in Phase II of this proceeding

5. Remaining Scoping Issues

Certain parties request that this proceeding be expanded to include gas metering infrastructure issues. PG&E favors this expansion on the basis that advanced metering is more likely to be cost effective when deployment is structured to capture customer, societal, and utility savings benefits. PG&E believes that reductions in overall electricity and natural gas metering reading costs cannot occur unless both electric and natural cost meters are read remotely. CCE agrees with PG&E. SDG&E initially expressed concern about including this issue in a proceeding whose schedule is already ambitious, but does agree that there are savings from avoiding reading gas meters if some sort of advanced meter reading capability is already in place (WS-1RT 89:1-9).⁹ Thus the initial divergence of opinion on whether to include gas metering infrastructure issues no longer exists and no other party has expressed opposition to expanding the proceeding in this limited way. CUE notes that displacing manual meter reading may require alternative methods for routine inspection of the distribution system to spot trouble.

⁹ The staff supporting the policy working group prepared and presented a list of “Pros and Cons” relative to the issue of installing meters with dual fuel reading capabilities. This document is attached to this ruling as Item 9.

In the interests of preserving options, not foreclosing them, we believe that Working Groups 2 and 3 should analyze the issue of installation of metering systems with dual-fuel reading capabilities, and should also quantify the potential costs/benefits of including metering systems capable of reading and communicating both electricity and natural gas usage to the distribution utility compared to electric-only metering systems. This effort is confined to the dual-fuel respondent utilities, and is limited as stated above. We do not intend to develop dynamic gas tariffs, nor delve into any broad-ranging review of the natural gas market in this proceeding. (See, WS-1 RT 92:18-18.) We invite comment from any party who disagrees with this outcome.

A second scoping issue relates to the inclusion of direct access customer issues in this proceeding. Direct access customers, who are equipped with interval meters, currently constitute 14% of total IOU load, and 36% of the IOU industrial class (greater than 500 kW). As such they are a significant potential source of demand response resources.¹⁰

However direct access customer inclusion presents many complexities for policymakers. For example, these customers' energy charge is set by an Energy Service Provider (ESP), not by the CPUC, raising the specter of melding disparate billing and pricing mechanisms. Some suggest that ESPs could develop their own demand response programs, or participate in IOUs' demand response programs if billing and pricing issues are resolved. Major contract negotiation may be one possible outcome (WS-1 RT 97:15-98:12). The questions are many and multi-faceted, and the answers remain elusive at this point, but the

¹⁰ See Item 10, "Direct Access and Demand Response OIR. Working Group Meeting – August 26, 2002."

opportunities appear to be great. Balancing these factors, the staff supporting the policy group favors including direct access customers in the demand response rulemaking.¹¹ This will require that we consider whether direct access customers have the same metering and communication infrastructure as bundled customers, as well as their ability to participate in demand reduction programs where permissible under ESP contracts. WG2 and WG3 should consider how direct access customers would be affected by the development of bundled service dynamic tariffs, and whether we should consider the interaction of dynamic tariff or emergency requirements on ESP product offerings.

6. Sharing of Data.

As Working Groups 2 and 3 begin to develop new tariffs/programs, they will need to review, discuss and consider information from existing demand response efforts. The Commission expects that respondents will freely share data, including that related to costs, customer acceptance and load shifts, associated with these efforts with members of the working group and parties, subject to any necessary protections or nondisclosure agreements. Separate from the parties' discovery efforts, from time to time the ALJ may submit specific data requests ("ALJ Data Requests") to the respondents in order to obtain information needed by the commissioners and staff members supporting Working Group 1. As the proceeding progresses, if parties require the establishment of discovery timelines or assistance with the resolution of discovery disputes, they should inform the ALJ.

¹¹ See CPUC Energy Division staff recommendation, Item 10. CPA staff also believes that inclusion of these customers is the best way to ensure a statewide solution (WS-1 RT 100:2- 5).

IT IS RULED that:

1. Parties who wish to address the issues outlined in this ruling and/or discussed during the August 26th working group meeting shall file and serve their written comments on or before September 12, 2002.

Dated September 5, 2002, at San Francisco, California.

/s/ LYNN T. CAREW

Lynn T. Carew
Administrative Law Judge

CERTIFICATE OF SERVICE

I certify that I have by mail and by electronic mail this day served a true copy of the original attached Administrative Law Judge's Ruling Following The First Meeting Of Working Group 1 on all parties of record in this proceeding or their attorneys of record.

Dated September 5, 2002, at San Francisco, California.

/s/ JANET V. ALVIAR

Janet V. Alviar

N O T I C E

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