

Decision 08-06-015 June 12, 2008

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Application of Pacific Gas and Electric Company  
(U 39-E) for Approval of Demand Response  
Agreements.

Application 07-02-032  
(Filed February 28, 2007)

Southern California Edison Company's (U 338-E)  
Application for Approval of a Demand Response  
Resource Purchase Agreement for 2007 and 2008.

Application 07-02-033  
(Filed February 28, 2007)

**DECISION MODIFYING DECISION 07-05-029 BY  
APPROVING MODIFICATION OF CONTRACTS  
WITH DEMAND RESPONSE PROVIDERS**

This decision modifies Commission Decision 07-05-029 by approving amendments to three contracts between Pacific Gas and Electric Company and demand response providers. The adopted contract amendments allow the use of a modified methodology for estimating the baseline electricity usage (expected usage in the absence of the demand response program) for the determination of settlement payments to third-party demand response providers and their customers. The amendments provide for the modified settlement baseline to be available only during summer 2008. The intention of these amendments is to test whether the modified settlement baseline methodology is more accurate than the baseline estimation method specified in the initial contracts, and whether the new method leads to increased customer participation and increased demand response. This proceeding is closed.

## **1. Procedural Background**

The Commission encourages California's electric utilities to decrease electricity usage at times of peak system demand through the development of new demand response programs. Customers enrolled in demand response programs receive incentives such as payments or lower electric rates in return for committing to reduce their electricity usage under certain specified circumstances. In Decision (D.) 06-11-049, the Commission directed Southern California Edison Company (SCE) and Pacific Gas and Electric Company (PG&E) to issue Requests for Proposals (RFPs) from third parties that could administer demand response programs and provide megawatts (MW) beyond those available from the electric utilities' own programs. PG&E's RFP resulted in five contracts with third parties that agreed to provide demand response MW to the utility by working with customers to enable them to shed load when necessary, aggregating the resulting demand response potential, and delivering it according to contract provisions. As a result of the RFP process, PG&E filed Application (A.) 07-02-032, requesting Commission approval of five agreements with demand response aggregators, also known as sellers. The Commission approved these contracts, and a similar application for additional contracts filed by SCE, in D.07-05-029, on May 3, 2007. Under the terms of the PG&E contracts, the third-party aggregators are to provide specified amounts of demand response during May through October from 2007-2011. The contract was in place for the 2007 summer season.

On April 1, 2008, PG&E submitted Advice Letter (AL) 3240-E to the Commission's Energy Division. In this advice letter, which PG&E served on the service list for A.05-06-006, PG&E asked for Commission approval to modify the contracts adopted in D.07-05-029. Because the initial contracts were adopted in a

Commission decision in the consolidated proceedings of A.07-02-032/ A.07-02-033, however, changes to these contracts require a petition for modification of that decision to be filed in and served on the service list for that proceeding. To expedite consideration of the proposed contract amendments, which PG&E requests to have in place during summer 2008, the Commission converted AL 3240-E to a petition for modification through a ruling issued on April 29, 2008.<sup>1</sup> That ruling reopened A.07-02-032/ A.07-02-033 to consider the requests made in the advice letter.

The April 29, 2008 ruling was served on the service list for A.07-02-032/ A.07-02-033 to ensure that parties to the proceeding in which the contracts were adopted had an opportunity to review the proposed modifications and file a response. The Commission did not receive any protests to the original advice letter, nor were any comments on the requested modifications filed before the May 9, 2008 deadline set in the April 29, 2008 ruling.

## **2. Requested Modifications**

The five agreements between PG&E and third-party aggregators adopted in D.07-05-029 were with AER, Ancillary Services Coalition, EnergyConnect, Energy Curtailment Specialists, and EnerNOC, Inc. These agreements provide PG&E with 35 - 46 MW of demand response by August 2007, between 107 and 129 MW by August 2008 and between 132 and 149 MW in 2009 through 2011. Each agreement specifies a megawatt commitment level, and each seller receives a capacity payment whether or not the program is called. When the program is

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<sup>1</sup> Chief Administrative Law Judge's Ruling Reopening Proceeding to Consider Modification of Demand Response Contracts, mailed on April 29, 2008.

called, each seller receives an energy payment for demand reductions up to its commitment level.

As in most of the current utility-administered demand response programs, these contracts estimate demand response for settlement payment purposes utilizing a “3 in 10” baseline to estimate what the usage would have been in the absence of the curtailment called under the contracts. The “3 in 10” baseline methodology uses the three highest usage days of the past 10 days similar to the event day to estimate baseline usage. The difference between the baseline usage calculated using this methodology and the actual usage during a curtailment event is the approximate number of kilowatts curtailed for the purposes of calculating settlement payments.

Due to concerns that customers whose load is temperature-sensitive, either because of HVAC<sup>2</sup> load or temperature-sensitive manufacturing processes, may not be most accurately measured by a traditional “3 in 10” baseline methodology, PG&E offered to amend the contracts adopted in D.07-05-032 to test a temperature-sensitive baseline for settlement purposes. The contract amendments would also test the hypothesis that the proposed baseline will allow temperature-sensitive customers who might not otherwise participate in the demand response programs to do so. Three of the five demand response providers (EnergyConnect, Energy Curtailment Specialists, and EnerNOC, Inc.) agreed to contract amendments to test out this new baseline, and this decision approves the requested amendments to those three contracts.

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<sup>2</sup> Heating, ventilation and air conditioning.

The proposed baseline methodology will add a “morning-of” adjustment to the current “3 in 10” baseline methodology; under the proposed amendments, participants may choose to use either the current baseline or an adjusted methodology for calculating settlement baselines. Under the adjusted baseline, which will only be available for summer 2008, participants’ morning electricity usage for four hours before the event is called will be used as a factor to adjust the “3 in 10” baseline in calculating the participants’ baseline usage, and therefore their overall curtailment during an event. Under the amended methodology, any adjustment to the baseline is limited to plus or minus 20% of the existing baseline. The amendments also require the three participating sellers to increase their commitment levels for August and September of 2008 by 15%, resulting in an additional 13 MW of demand response during the critical summer months of August and September 2008.

### **3. Discussion**

#### **3.1. A Baseline Adjustment for Temperature-Sensitive Customers is Supported by Existing Research**

Several studies support revising the “3 in 10” baseline for temperature-sensitive customers to better estimate performance during demand response events. In January 2008, the Demand Response Research Center of Lawrence Berkeley National Laboratory (DRRC Study) issued a report concluding that estimates of load reductions in several demand response programs could be improved if a “morning of” adjustment factor were applied for weather-sensitive

commercial and industrial buildings.<sup>3</sup> Several other previous studies also support the conclusions of the DRRC Study.<sup>4</sup> Currently, the Demand Response Programs administered by transmission operators including PJM, New England Independent System Operator (ISO) and the New York ISO all incorporate the option for a “morning-of” adjustment to their baseline methodologies.<sup>5</sup> Given the conclusions of the studies and the use of the “morning of” adjustment factor in other major markets, it is reasonable to approve these contract amendments for the summer of 2008 in order to test the accuracy and effectiveness in increasing participation of this alternative methodology.

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<sup>3</sup> Estimating Demand Response Load Impacts: Evaluation of Baseline Load Models for Non-Residential Buildings in California, Coughlin, K., M.A. Piette, C. Goldman and S. Kiliccote. Demand Response Center, Lawrence Berkeley National Laboratory. LBNL-63728. January 2008.

<sup>4</sup> See, Buege, A, M. Rufo, M. Ozog, D. Violette, and S. McNicoll 2006 “Prepare for Impact: Measuring Large C/I Customer Response to DR Programs,” 2006 ACEEE Summer Study on Energy Efficiency in Buildings, Monterey, CA, August. See also, *Working Group 2 Demand Response Evaluation – Program Year 2004 Final Report*. Prepared for the Working Group 2 Measurement and Evaluation Committee, by Quantum Consulting Inc. and Summit Blue Consulting, LLC, 2004; *Evaluation of 2005 Statewide Large Nonresidential Day-ahead and Reliability Demand Response Programs*. Prepared for Southern California Edison Company and the Working Group 2 Measurement and Evaluation Committee, by Quantum Consulting Inc. and Summit Blue Consulting, LLC, 2006.

<sup>5</sup> See Order Accepting Tariff Revision Docket No. ER08-538-000, 123 FERC P. 61,021 (April 4, 2008). Revisions to the PJM Open Access Transmission Tariff and PJM Operating Agreement, PJM Interconnection, LLC, ER08-824-000 Filed April 14, 2008.

### **3.2. The Contract Amendments Will Provide Valuable Information on the Effect of Different Baseline Methodologies on Program Participation**

The proposed contract amendments are designed to test a “morning-of” adjusted baseline for temperature-sensitive customers. PG&E plans to study the results of these amendments to determine whether the proposed baseline adjustment leads to more accurate estimates of baseline usage and curtailment amounts, which could inform future program design decisions. It is reasonable and in the public interest to develop information about the operation of different settlement baseline methodologies. PG&E’s study of the proposed amendments will help to determine whether some form of settlement baseline adjustment for temperature-sensitive customers is appropriate for broader use in California demand response programs. The results of PG&E’s study are expected to be made available to the public by April 2009 through the Demand Response Measurement and Evaluation Committee.

### **3.3. The Contract Terms Protect Against Potential “Gaming” of the Baseline Adjustment**

One concern associated with adoption of a “morning-of” adjustment factor is the possibility that individual customers or third-party aggregators could get credit for reduced usage compared to the adjusted baseline without curtailing use in response to a called event. Such a result could be accidental, or could occur as a result of “gaming,” for example by artificially elevating morning usage to inflate the baseline and make the afternoon usage look smaller by comparison. PG&E’s proposal to implement an adjusted baseline includes several features to mitigate potential gaming.

To discourage gaming of the “morning of” adjustment factor, PG&E will use a four-hour morning period to determine the morning adjustment. This discourages customers from increasing usage during a morning period in an attempt to weight the morning adjustment factor: if a customer increased energy usage during the four hours prior to an event, it would significantly increase its energy bill, offsetting the savings and incentive payments from the curtailment itself. PG&E will also apply the “morning of” adjustment to the portion of the sellers’ portfolio enrolled in the adjusted baseline, not to individual participants, ensuring that no individual participant can directly benefit from increasing its load in the four hours before a demand response event. PG&E’s proposed amendments also prohibit the third-party demand response provider (seller of the demand response MW) from encouraging participants to increase demand the “morning of” a demand response event for purposes of increasing the adjustment factor.

In addition, once a customer chooses to be measured by the baseline that includes the “morning of” adjustment factor, that customer is locked into that baseline methodology for the duration of the summer program season. Also, the total baseline adjustment is limited to plus or minus 20% of the unadjusted “3 in 10” baseline, which limits the total amount that the baseline could be increased by changing “morning of” usage. The implementation of these features to mitigate gaming is reasonable and should protect the integrity of the program and the interests of ratepayers.

### **3.4. Other Issues**

In an effort to document the possible value of offering a temperature-sensitive baseline, the contract amendments require the three participating demand response providers to increase their commitment level by at least 15%

for the two most critical months of this year. If the morning adjustment factor attracts more customers to demand response programs, the sellers should be able to enroll more customers to participate in the program. A 15% commitment level increase would result in an additional 13 MW, which will help meet summer demand.

The contracts will remain in effect for the remainder of the contract term, which runs through 2011. The requested amendments apply only to summer 2008. Any future modifications to these or other demand response contracts must be made through a petition for modification of the decision in which the contracts were adopted.

#### **4. Comment Period Waived**

This is an uncontested matter in which the decision grants the relief requested. Accordingly, pursuant to Pub. Util. Code § 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

#### **5. Assignment of Proceeding**

Rachelle B. Chong is the assigned Commissioner and Jessica T. Hecht is the Administrative Law Judge in this proceeding.

#### **Findings of Fact**

1. AL 3240-E submitted by PG&E on April 1, 2008, requests Commission approval to modify demand response contracts adopted in Commission D.07-05-029.
2. No parties protested AL 3240-E.
3. Chief Administrative Law Judge's Ruling Reopening Proceeding to Consider Modification of Demand Response Contracts, mailed on April 29, 2008, converted PG&E AL 3240-E into a petition for modification of D.07-05-029.

4. No responses to the requested modifications were filed before the May 9, 2008, deadline set in the April 29, 2008 ruling.

5. PG&E's request to modify contracts with EnergyConnect, Energy Curtailment Services, and EnerNOC, Inc. is uncontested.

6. Existing research supports revising the "3 in 10" baseline methodology commonly used in calculating the amount of settlement payments to temperature-sensitive customers.

7. The requested contract amendments are designed to test a method of adjusting the "3 in 10" baseline for temperature-sensitive customers.

8. The requested contract amendments are expected to result in increased program participation and demand response.

9. It is reasonable and in the public interest to develop information about the operation of alternative settlement baseline methodologies.

10. Terms of the amended contracts include several features to mitigate the potential for customers or demand response providers to "game" the proposed adjustment process to increase payments without increasing demand response.

### **Conclusions of Law**

1. It is reasonable to treat PG&E's AL 3240-E as a Petition for Modification of D.07-05-029.

2. PG&E's request for modification of its demand response contracts with EnergyConnect, Energy Curtailment Services, and EnerNOC, Inc. is uncontested, and this decision grants the relief requested.

3. It is reasonable and in the public interest to modify PG&E's contracts with EnergyConnect, Energy Curtailment Services, and EnerNOC, Inc. to test the accuracy and effectiveness in increasing demand response of an adjustment to the current "3 in 10" baseline methodology.

4. Any future modifications to these or other demand response contracts must be made through a petition for modification of the decision in which the contracts were adopted.

**O R D E R**

**IT IS ORDERED** that:

1. The contract amendments requested in Pacific Gas and Electric Company's (PG&E) Advice Letter (AL) 3240-E are granted.

2. Commission Decision 07-05-029 is modified to adopt the contract amendments described in AL 3240-E. These amendments allow EnergyConnect, Energy Curtailment Services, and EnerNOC, Inc. to offer their customers an adjusted methodology for estimating baseline usage in the calculation of settlement payments in summer 2008, provide safeguards to mitigate potential for "gaming" of the adjustment process, and commit the demand response providers to increasing the demand response megawatts they will provide in 2008.

3. Application (A.) 07-02-032 and A.07-02-033 are closed.

This order is effective today.

Dated June 12, 2008, at San Francisco, California.

MICHAEL R. PEEVEY

President

DIAN M. GRUENEICH

JOHN A. BOHN

RACHELLE B. CHONG

TIMOTHY ALAN SIMON

Commissioners