

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA



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Order Instituting Rulemaking Regarding Policies,  
Procedures and Rules for the California Solar  
Initiative, the Self-Generation Incentive Program  
and Other Distributed Generation Issues.

Rulemaking 10-05-004  
(Filed May 6, 2010)

**THE DIVISION OF RATEPAYER ADVOCATES' COMMENTS  
ON THE PROPOSED DECISION OF PRESIDENT PEEVEY  
REGARDING CALCULATION OF THE NET ENERGY METERING CAP**

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## I. INTRODUCTION

Pursuant to Rule 14.3 of the Commission's Rules of Practice and Procedure, the Division of Ratepayer Advocates (DRA) submits the following comments on the Proposed Decision of President Peevey regarding Calculation of the Net Energy Metering Cap, issued April 11, 2012 (PD). DRA filed reply comments<sup>1</sup> in response to the proposals of Pacific Gas and Electric Company (PG&E),<sup>2</sup> Southern California Edison Company (SCE),<sup>3</sup> Distributed Energy Consumer Advocates (DECA), and filing jointly, the Interstate Renewable Energy Council, the Vote Solar Initiative, Solar Energy Industries Association, and the Sierra Club (IREC et al.).

DRA's reply comments agreed with the recommendation of PG&E and SCE to use transparent, publicly available data to calculate "aggregate customer peak demand" for purposes of determining when utilities such as PG&E and SCE have met their obligation, pursuant to Public Utilities Code Section 2827(c)(1), to offer net energy metering (NEM) to their customers. The PD rejects this recommendation and instead determines that "aggregate customer peak demand" does not mean coincident peak demand, but instead "means the aggregation, or sum, of individual customers' peak demands, i.e., their non-coincident peak demands."<sup>4</sup>

Although the PD did not adopt the recommendation to use transparent, publically available data to calculate "aggregate customer peak demand," DRA recognizes the value of net energy metering for achieving California's ambitious goals of 12,000 megawatts of distributed generation by 2020,<sup>5</sup> and therefore supports the PD. DRA recommends:

- clarifying some of the metrics that will be determined in the PD's proposed workshop to develop a methodology for calculating "aggregate customer peak demand;"
- that the Commission encourage accelerated deployment of distributed generation, particularly in areas of the state that drive greater summer peak demand, and that the Commission maximize benefits of this accelerated deployment by including the

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<sup>1</sup> The Division of Ratepayer Advocates' Comments on the Appropriate Method of Calculating the Net Energy Metering Program Cap, January 27, 2012.

<sup>2</sup> Pacific Gas and Electric Company's Opening Comments on the Appropriate Method of Calculating the Net Energy Metering Program Cap, January 17, 2012, p. 3.

<sup>3</sup> Opening Comments of Southern California Edison Company on Calculation of the Net Metering Cap, January 17, 2012, p. 3.

<sup>4</sup> PD, p. 1.

<sup>5</sup> See e.g. announcement for The Governor's Conference on Local Renewable Energy Resources, a July 25, 2011, forum for determining how to achieve this goal. [http://gov.ca.gov/s\\_energyconference.php](http://gov.ca.gov/s_energyconference.php)

forecasted energy and capacity resulting from the revised total cap amount (MW) by 2020 (or sooner) in standard planning assumptions the Commission adopts in its 2012 Long-Term Procurement Plan proceeding; and

- that the Commission develop a method for tracking the shift of net energy metering customers' costs to non-participating ratepayers so that moving forward, policy makers and parties have a better understanding of the costs of the program.

## II. DISCUSSION

### A. **The Commission should clarify the scope of issues for consideration at the PD's proposed workshop to calculate the NEM cap.**

The PD acknowledges that:

“calculating the non-coincident aggregate customer peak demand poses some difficulty due to the lack of data for many customers who have not yet received smart meters. However, using estimation techniques, such as extrapolating from available smart meter data or using load research data for these customers is a reasonable interim solution.”<sup>6</sup>

The PD therefore directs the Energy Division to

“convene a public workshop with SCE, PG&E, and SDG&E and other interested parties to discuss methods for estimating the individual peak demands of the customers for which the utilities lack demand data and establishing a consistent methodology for calculating non-coincident aggregate customer peak demand.”<sup>7</sup>

DRA recommends that the Commission direct the Energy Division to include discussion of the following issues at the workshop: the definition of customers (retail, wholesale, direct access, Community Choice Aggregation?); the time frame for defining peak demand; in determining the methodology for estimating individual peak demands for customers for which the utilities lack data, the sample size and quality of data to be used for estimating such individual peak demands; and how frequently the methodology should be updated.

Specifying the issues that must be determined at the workshop will provide parties with direction regarding the scope of the workshop and may help the process operate more efficiently.

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<sup>6</sup> PD, p. 11.

<sup>7</sup> PD, p. 11.

**B. The Commission should include the revised total cap amount (MW) in its 2012 LTPP Standard Planning Assumptions with the expectation the total cap will be achieved by 2020 so that ratepayers receive the benefits of NEM.**

Given the significant increase in the total cap amount for NEM that would result from adoption of the PD, the Commission should anticipate and encourage accelerated deployment of distributed generation, particularly in local capacity areas with significant transmission constraints and inland areas of the state that drive greater summer peak demand due to air conditioning use. Accelerated deployment of distributed generation through NEM should reduce the need for additional generation to meet load expected in the 2012 Long Term Procurement Planning (LTPP) horizon. The Commission should recognize the full benefits of this accelerated deployment by including the forecasted energy and capacity resulting from the revised total cap amount (MW) by 2020 (or sooner) in standard planning assumptions the Commission adopts in its 2012 Long-Term Procurement Plan proceeding. If the Commission does not include the forecasted energy and capacity resulting from the revised NEM cap in LTPP planning, the cost of NEM may not produce commensurate benefits for ratepayers.

DRA urges the Commission to include these issues within the workshop that the PD orders, and to proceed expeditiously in order to meet the proceeding timelines of its 2012 LTPP proceeding. In addition to determining the revised total cap amount, these workshops should also develop a tracking report, to be filed by SCE, PG&E and SDG&E via a Tier 2 advice letter annually indicating: (1) the geographic locations where NEM distributed generation has been deployed and the total MW deployed in each geographic location, (2) the percentage deployed in the state's inland areas, (3) the demographic (income) characteristics of participants (simply done by zip code analysis and not by surveys), and (4) a dashboard report showing actual deployment against a performance target that would help measure progress (the workshop can determine the appropriate targets but, at their core, these are not firm or obligatory targets).

**C. The Commission should direct PG&E, SCE and SDG&E to track the costs shifted from NEM customers to non-participating customers and to submit that information via annual advice letter filings.**

Section 2827(a) of the Public Utilities Code acknowledges the potential benefits from net energy metering, including encouraging private investment in renewable energy resources, stimulating in-state economic growth, reducing peak demand for electricity, stabilizing California's energy supply infrastructure, supporting diversification of California's energy resource mix, and promoting efficiency and conservation. These benefits may be hard to quantify, but regardless, the Commission should

attempt to obtain the best information about costs and benefits of net energy metering, including to non-participating ratepayers. As shown in the attached data request response from PG&E,<sup>8</sup> the estimated shift in cost responsibility of net energy metering to PG&E's non participating ratepayers is currently estimated at about \$200 million per year.<sup>2</sup> PG&E forecasts that this amount could grow to nearly \$500 million if the Commission adopts the PD proposed revised definition of "aggregate customer peak demand."

DRA recommends that the Commission require PG&E, SCE and SDG&E to submit information on foregone utility revenues resulting from current participation in the net energy metering program, as well as a forecast of foregone utility revenues for the next four years. This information should be provided annually in a Tier 2 advice letter submission, and considered in Phase 2 of each utility's General Rate Case (beginning in 2014 for PG&E).

### **III. CONCLUSION**

DRA supports the PD's goal to maximize distributed generation. DRA respectfully recommends that the Commission clarify the metrics that will be determined in the PD's proposed workshop to develop a methodology for calculating "aggregate customer peak demand." DRA also recommends that the Commission should recognize the full benefits of increased NEM authorized by the PD by including the forecasted energy and capacity resulting from the revised total cap amount (MW) by 2020 (or sooner) in standard planning assumptions the Commission adopts in its 2012 Long-Term Procurement Plan proceeding. Finally, the Commission should require PG&E, SCE and SDG&E to submit information on foregone utility revenues resulting from current participation in the net energy metering program, as well as a forecast of foregone utility revenues for the next four years so that moving forward, policy makers and parties have a better understanding of the costs of NEM.

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<sup>8</sup> See Appendix B of these comments.

<sup>2</sup> As stated in the attached data request response, this estimate is based on the CPUC's 2011 CSI Cost Effectiveness study, which is in turn based on the 2010 NEM Cost Effectiveness study. While both studies report the cost shift resulting only from bill credits and utility purchases of net surplus electricity, E3 includes an estimate of the cost shift that results from direct offsets to NEM customers' energy use (i.e., when their electric load exceeds generation output). Utilities' foregone utility revenues from NEM customers encompasses both types of cost shifts.

Respectfully submitted,

/s/ DIANA L. LEE

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May 1, 2012

## APPENDIX A

### Proposed Changes to Finding of Fact and Ordering Paragraphs of the PD

#### Findings of Fact

7. In order to recognize and encourage the benefits from increased Net Energy Metering, it is necessary to include anticipated increased energy and capacity from Net Energy Metering in the 2012 Long Term Procurement Planning assumptions.

#### Ordering Paragraphs

2. Within 45 days of the effective date of this decision, the Energy Division shall convene a public workshop with Southern California Edison Company, San Diego Gas & Electric Company, and Pacific Gas and Electric Company, noticed to all parties in this proceeding, to discuss methods for estimating the individual peak demands of the customers for which the utilities lack demand data and establishing a consistent methodology for calculating non-coincident aggregate customer peak demand. The workshop shall consider, at a minimum, the following issues in establishing a consistent methodology for calculating non-coincident aggregate customer peak demand:

- a. the definition of customer, including whether it means, retail, wholesale, direct access, and Community Choice Aggregation customers;
- b. the time frame for defining peak demand;
- c. in determining the methodology for estimating individual peak demands for customers for which the utilities lack data, the sample size and quality of data to be used for estimating such individual peak demands; and
- d. how frequently the methodology should be updated.

The workshop shall also consider how to include anticipated increased energy and capacity from Net Energy Metering in the 2012 Long Term Procurement Planning assumptions

Within 60 days of the effective date of this decision, Energy Division should provide the Administrative Law Judge and assigned Commissioner a recommendation on a methodology for calculating non-coincident aggregate customer peak demand.

Within 45 days of the effective date of this decision, the Energy Division shall convene a public workshop with Southern California Edison Company, San Diego Gas & Electric Company, and Pacific Gas and Electric Company, noticed to all parties in this proceeding, to discuss methods for estimating the individual peak demands of the customers for which the utilities lack demand data and establishing

a consistent methodology for calculating non-coincident aggregate customer peak demand. Within 60 days of the effective date of this decision, Energy Division should provide the Administrative Law Judge and assigned Commissioner a recommendation on a methodology for calculating non-coincident aggregate customer peak demand.

2a. Southern California Edison Company, San Diego Gas & Electric Company, and Pacific Gas and Electric Company shall prepare yearly estimates of the costs of Net Energy Metering Customers that are shifted to non-participating customers. Such estimates shall be prepared for the next five years and shall be submitted annually to the Commission via Tier 2 advice letters and served on the serving list for this proceeding or its successor proceeding. The information will be considered in each Phase 2 of each utility's General Rate Case, beginning with Pacific Gas and Electric Company in 2014.

2b. Southern California Edison Company, San Diego Gas & Electric Company, and Pacific Gas and Electric Company shall submit a Tier 2 advice letter annually indicating: (1) the geographic locations where NEM distributed generation has been deployed and the total MW deployed in each geographic location, (2) the percentage deployed in the state's inland areas, (3) the demographic (income) characteristics of participants by zip code analysis, and (4) a dashboard report showing actual deployment against a performance target that would help measure progress.

## APPENDIX B

### PACIFIC GAS AND ELECTRIC COMPANY Dist Gen - Dist Energy Res – IV Rulemaking 10-05-004 Data Response

PG&E Data Request No.:	ED_017		
PG&E File Name:	DistGen-DistEnergyRes-IV_DR_ED_017-Q01-02		
Request Date:	March 16, 2012	Requester DR No.:	(3/16/12 E-Mail)
Date Sent:	March 23, 2012	Requesting Party:	Energy Division
PG&E Witness:	Andrew Yip	Requester:	Ehren Seybert Melicia Charles

The purpose of this data request is to evaluate methods for calculating the net metering program cap as established in Public Utilities Code § 2827(c)(1). Please note that this is a revision to Energy Division's previous data request on non-coincident peak NEM calculations, dated March 5, 2012.

#### Non-Coincident Customer Peak Demand

##### QUESTION 1

By **COB March 20, 2012**, please provide your best estimate of the aggregate, or sum, of individual non-coincident peak demand using available load research data. This should be a single number which incorporates every customer's individual peak demand.

- For PG&E and SCE, please provide your three-year average using load research data for each year between 2008-2010.
- For SDG&E, please provide your three-year average using load research data for each year between 2006-2008.

##### ANSWER 1

Below is PG&E's average individual non-coincident peak demand for 2008-2010, using available load research data.

Year	Annual Non-Coincident Load (kW)
2008	48,455,418
2009	47,845,227
2010	48,567,216
<b>AVERAGE</b>	<b>48,289,287</b>

## QUESTION 2

In addition, by **COB March 23, 2012**, please clearly site the sources and methodologies used in the above calculations. Please also discuss any other issues that may have impacted the final calculations.

## ANSWER 2

PG&E produces estimated hourly load profiles by customer class where the estimation is a statistical estimation based on load research samples (ClassKW system), and where the samples have interval data.

For a given year, the estimated hourly profiles are used as follows in the calculation of annual total non-coincident peak for all customers:

1. For a given customer, use the profile from its respective customer class.
2. Multiply customer's monthly usage by the customer's estimated hourly load profile for that month.
3. Find the maximum hourly demand for that month.
4. Repeat steps 2 and 3 for all months in the year.
5. For a given year, the annual maximum demand for a given customer is the highest value of the customer's monthly maximum demands in that year.
6. Repeat steps 1-5 for all customers, and add their respective annual maximum demands from step 5 to calculate the total non-coincident demand for a given year.

PG&E would like to note two additional issues associated with this calculation.

First, PG&E uses the term “maximum” demand as opposed to “peak” demand when referring to any individual customer’s highest demand, or to the sum of individual customers’ highest demands. This is consistent with the way that the customer’s highest demand is defined in PG&E’s tariffs where a demand charge is applied to the highest recorded demand during a given month. See, for example, “Applicability” under Schedule E-19, which specifically defines “maximum” demand as the highest demand during the month, and “maximum-peak-period” demand as the highest demand during the peak period. This is consistent with PG&E’s belief that “aggregate customer peak demand” as used in PU Code Section 2827(c)(1), refers to the system peak demand.

Second, based on the results provided in response to Question 1, the amount of customer rooftop solar that would be able to participate in full retail Net Energy Metering would increase to roughly 2.3 times the current level (48,289 MWs divided by 20,800 MWs, which is PG&E’s highest recorded aggregate customer peak demand). Given the shift in cost responsibility from solar to non-solar customers, the increase in projects enabled by a change in definition from the current “aggregate customer peak demand” to “aggregate customer non-coincident demand” (as contemplated by this data request), would increase the cost-shift from roughly \$200 million per year to close to \$500 million per year. These estimates are derived using information from the E3 CSI Cost-Effectiveness Evaluation, dated April 2011, Table 60 (page A-30), which shows a 2017 Ratepayer Impact Measure (RIM) associated with rooftop solar of \$0.12/kwh (this does not include the financial incentives provided under the CSI). The 5% cap using PG&E’s peak demand of 20,800 MWs multiplied times a typical system capacity

factor of 19% is \$208 million/year. This grows to \$482 million using a total non-coincident maximum demand of 48,289 MWs.