



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

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Order Instituting Rulemaking to
Examine the Commission's Post-2008
Energy Efficiency Policies, Programs,
Evaluation, Measurement, and
Verification, and Related Issues

Rulemaking 09-11-014
(Filed November 20, 2009)

**OPENING COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY
(U 39-E) ON ADMINISTRATIVE LAW JUDGE'S RULING ON UPDATES
AND ADJUSTMENTS TO ENERGY EFFICIENCY AVOIDED COSTS
INPUTS AND METHODOLOGY**

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Dated: October 27, 2011

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OF THE STATE OF CALIFORNIA**

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Pacific Gas and Electric Company (PG&E) files these Opening Comments in Response to the *Administrative Law Judge's Ruling on Updates and Adjustments to Energy Efficiency Avoided Cost Inputs and Methodology* (ALJ Ruling), dated October 5, 2011. By e-mail dated October 13, 2011, Administrative Law Judge Darwin Farrar extended the last day for Opening Comments to October 27, 2011 and reply comments to November 7, 2011.

I. GENERAL COMMENTS

PG&E is generally supportive of Energy Division's proposal in Attachment A to the ALJ Ruling to update the cost effectiveness methodology for energy efficiency proceedings at this time. In its responses to the questions posed in the ALJ Ruling, PG&E suggests additional changes that also should be made to the avoided cost calculator in order to improve the accuracy of the cost-effectiveness analysis. These additional changes are discussed below.

II. RESPONSES TO QUESTIONS

1. In principle, is it reasonable to make the EE avoided cost methodology consistent with the methodology for other demand-side programs?

Moving toward a consistent set of demand side management (DSM) product avoided cost inputs is both reasonable and desirable. The use of consistent avoided cost inputs should result in a more efficient allocation of resources among DSM alternatives to maximize customer

benefits. However, we must be mindful that each of the DSM products --Energy Efficiency (EE), Demand Response (DR), and Distributed Generation (DG) -- is unique and requires that the consistent set of avoided cost inputs be applied via the cost effectiveness methodology in a manner that appropriately values the timing, location and operating characteristics of the resource.

2. Are the proposed data input updates reasonable? If not, why not?

The proposed data input updates which extend avoided cost methodologies already approved by the Commission in Demand Response proceedings (D.10-12-024) and Distributed Generation proceedings (D.09-08-026) for the purpose of estimating EE avoided costs appear reasonable. PG&E does not have any preferred alternative source of data inputs for the proposed avoided costs updates at this time. PG&E recommends that going forward, the Commission and the Energy Division should consider how best to ensure that stakeholders are actively engaged early in the process of developing avoided cost updates.

3. If not, what would be a more accurate source of data inputs for the update?

Please see response to question 2, above.

4. Do the proposed methods for avoided costs calculation accurately capture the avoided cost of EE for each of the components below? If not, why not? What would be a more accurate method and/or data source to account for these avoided costs?

PG&E is encouraged by the Energy Division's proposals and believes that the use of the proposed methodology for avoided costs will result in a more accurate evaluation of EE measures relative to both supply-side and other demand-side alternatives.

a. Avoided cost of energy

PG&E agrees in principle with the proposed methods for modeling the avoided cost of energy given the Commission's preference for public and transparent data. PG&E believes it is reasonable to assume that, in the long run, annual energy prices plus capacity payments will be sufficient to recover both the fixed and variable costs of a combined-cycle gas turbine (CCGT).

b. Avoided cost of generation capacity

PG&E agrees in principle with the proposed methods for modeling the avoided cost of capacity, given the Commission's preference for public and transparent data. PG&E supports the use of a resource balance year in determining the avoided cost of generation capacity. It is important to note that the calculation of the resource balance year for EE must be calculated "net of" the impacts of EE measures which have deferred the need for supply-side resources.

PG&E supports the incorporation of a gross margin adjustment in the calculation of the avoided cost of capacity. It is important to include a gross margin adjustment in the calculation of the generation capacity value in order to avoid overvaluing generation capacity.

c. Avoided cost of transmission and distribution capacity

PG&E does not believe that system-wide transmission and distribution (T&D) marginal costs are a good indicator of the T&D investment costs that are avoided by EE measures. While PG&E acknowledges that EE measures may reduce or delay the need for some amount of T&D investment, the localized and time dependent nature of most T&D investment casts doubt upon the accuracy of avoided cost estimates, such as those proposed by the Energy Division, which rely on system-wide and/or climate-zone-wide data. Nevertheless, PG&E supports the proposed update to T&D avoided costs as a place holder in the avoided cost calculator for the purpose of estimating EE avoided costs until better locational and time dependent EE related T&D avoided cost estimates can be developed.

d. Avoided cost of ancillary services procurement

PG&E believes that it is reasonable to include the avoided cost of ancillary services procurement. The approach suggested by the Energy Division is an acceptable placeholder in the avoided cost calculator until better estimates can be developed. PG&E suggests that, at the earliest opportunity, the Commission should incorporate into the avoided cost estimates the results of studies which assess the impact of renewables integration on ancillary services procurement costs.

e. Avoided cost of renewable procurement

PG&E agrees that reducing load through energy efficiency also reduces the need for renewable generation to meet the 33% Renewables Portfolio Standard (RPS) requirement. PG&E supports the proposed calculation of the renewable premium as a placeholder in the avoided cost calculator until better estimates can be developed. PG&E recommends that the renewable procurement adder be phased in consistent with the SB2X interim goals of 20% RPS compliance in 2013, 25% RPS compliance in 2016 and 33% RPS compliance in 2020.^{1/} PG&E's understanding is that currently the SB2X interim goals will be included in the calculation in a "step function" manner. PG&E suggests that a linear interpolation rather than a step function would better reflect the realities of RPS procurement.

5. Does the proposed change to the discount rate best represent the net present value of costs borne by ratepayer for EE activities? Is there an alternative discount rate which better reflects the cost to ratepayers of EE?

PG&E supports Energy Division's proposal to move to the after-tax weighted average cost of capital (WACC) as the discount rate for cost effectiveness tests not only because it is consistent with the discount rate used in the DR and DG calculators but also because it more accurately represents the net present value of utility avoided costs of EE activities than the pre-tax WACC.

6. Are the proposed changes to the avoided costs methodology an accurate representation of the total avoided costs for EE savings? Specify any additional inputs necessary to accurately account for the total avoided costs?

PG&E believes that the list of avoided costs contained in the Energy Division's proposed updates represents the vast majority of the utility costs which are avoided through investments in energy efficiency. There are two areas where PG&E suggests additional avoided cost inputs are warranted.

- PG&E recommends that the E3 calculator include an expanded menu of updated DEER load shapes. Currently, there are only 9 DEER load shapes for residential

^{1/} Senate Bill 2 (1X) (Simitian), stats. 2011, ch. 1. (effective December 10, 2011).

measures and only 6 DEER load shapes for non-residential measures within the E3 calculator. The absence of a sufficiently robust set of DEER load shapes in the E3 calculator may produce cost effectiveness values that systematically underestimate the value of measures that address peak load reduction.

- PG&E feels that, particularly in California where water usage is a critical economic and political issue, not including avoided costs associated with embedded energy in water consumption is an oversight that should be corrected at the earliest opportunity.^{2/}

III. CONCLUSION

PG&E appreciates the opportunity to comment on the Energy Division's proposed revisions to the energy efficiency avoided cost methodology.

Respectfully Submitted,
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^{2/} “Embedded energy in water” refers to the amount of energy that is used to collect, convey, treat, and distribute a unit of water to end-users, and the amount of energy that is used to collect and transport used water for treatment prior to safe discharge of the effluent in accordance with regulatory rules. In D.07-12-050 issued December 20, 2007, the California Public Utilities Commission (CPUC) authorized water-energy pilot projects and three studies designed to (a) validate claims that saving water can save energy, and (b) explore whether embedded energy savings associated with water use efficiency are measurable and verifiable. These completed studies are now available at http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/EM+and+V/Embedded+Energy+in+Water+Studies1_and_2.htm and http://www.cpuc.ca.gov/NR/rdonlyres/51BF9A0B-42C9-4104-9E71-A993E84FEBC8/0/EmbeddedEnergyinWaterPilotEMVReport_Final.pdf.