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ELECTRONIC DELIVERY

California Energy Commission
Dockets Unit
Attn: Dockets 04-IEP-1E, 04-DIST-GEN-1
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Re: Pacific Gas and Electric Company's Comments – Committee Workshop On Combined Heat and Power and Distributed Generation Policy

Pacific Gas and Electric Company (PG&E) respectfully submits the following comments related to the CEC's April 28, 2005 workshop on Combined Heat and Power and Distributed Generation.

PG&E also appeared and spoke at the CEC Workshop on April 29, but has no additional comments on those workshop topics at this time.

Thank you for considering our comments. Please feel free to call me at (415) 973-6463 if you have any questions about this matter.

Sincerely,

Les Guliasi

LGG:lg

Enclosure

Pacific Gas and Electric Company's Comments – Committee Workshop On Combined Heat and Power and Distributed Generation Policy

I. Introduction

PG&E appreciates this opportunity to comment on the workshop held by the California Energy Commission (CEC) to review and discuss California's market potential for Combined Heat and Power (CHP) and Distributed Generation (DG). PG&E attended the workshop held April 28, 2005, and found it informative and constructive. These comments consist of three sections in addition to this Introduction. Section II includes PG&E's policy recommendations to the CEC. We hope the CEC will consider this discussion in any recommendations it may make to the California Public Utilities Commission (CPUC) or to the Legislature regarding CHP specifically, or DG generally. Section III briefly discusses the CEC Report "Assessment of California CHP Market and Policy Options for Increased Penetration." Finally, Section IV addresses some of the remarks made by participants at the workshop that PG&E believes deserve clarification.

II. Policy Suggestions

PG&E supports the rights of our customers to make choices to meet their energy needs, including energy efficiency, distributed generation, or other demand side options. PG&E believes that all distributed generation; especially renewable customer generation and CHP, can make a contribution to meet California's future energy needs. PG&E has supported a variety of legislative proposals designed to increase the amount of renewable customer generation in the California energy mix. It has also provided a variety of incentives and subsidies to CHP projects, and buys power from a number of cogeneration projects (including some that sell under old Qualifying Facility contracts, and some that sell under modern merchant generation contracts). Nonetheless, PG&E believes that policymakers must be careful before recommending new subsidies for DG, particularly if they are large. PG&E will continue to work with the legislature, the CPUC, the CEC, and other stakeholders to ensure that the optimal outcome is achieved for California's energy future.

One of the critical considerations that should be addressed in legislative and regulatory proceedings is the impact of new subsidies on our customers who either do not desire to, or are not in a position to, choose self generation to meet their own energy needs -- but whose rates may nevertheless increase as a result of ratepayer-subsidized choices made by others. Current rates are relatively high in California. PG&E believes that political and regulatory decisions that result in increased rates need to be thoughtfully and carefully considered. PG&E recommends the following considerations

be included in any political or regulatory decision, and we ask that the CEC recognize the importance of these considerations as well.

A. *Before Supporting New Subsidies For CHP or DG, The Commission Should Identify The Goals It Is Trying To Advance*

Vendors and potential purchasers of DG and CHP seek new subsidies in multiple forums, and frequently ask this Commission to support such subsidies. These advocates make sweeping claims that there is a need for additional incentives to bring more DG and CHP on line. However, many of these arguments make no effort to identify what specific goal such subsidies are intended to advance. There can be no reasonable dispute that some DG and CHP projects are far less efficient, and pollute more, than available alternatives for generating electricity. In particular, there are many small generators available in the market which burn gasoline, diesel fuel, or natural gas, are highly inefficient, and highly polluting. These projects do not lessen reliance on fossil fuels, and providing subsidies to them merely because they are "distributed" or "small" generators does not advance any identified state policy goal.

Moreover, the long experience of this state with Qualifying Facilities makes clear that other ratepayers should not hand subsidies to a generator simply because it claims to be a "cogenerator" or CHP. Some cogeneration projects (particularly many oil company projects) are truly efficient and useful. However, many of these projects will be built without any need for subsidies. To hand these projects, which would be built regardless, new subsidies paid for by other ratepayers simply transfers wealth from small customers to oil companies, and advances no policy goal.

Other projects which have claimed to be "cogenerators" have in fact not had any real useful thermal purpose other than generating electricity. Some alleged "cogenerators" have vented steam into the atmosphere, and others sent steam into the ground for no useful reason. Some have used heat to distill water which was then poured down the drain. Others have dried "brine" which was then dumped into trash cans and sent heat to greenhouses in the Central Valley in the summer. The mere fact that something claims to be a "cogenerator" does not mean it deserves a subsidy from other ratepayers.

Thus, the first question to be asked when a DG or CHP advocate seeks a subsidy is "What goal is that subsidy intended to advance?" Handing out tens or hundreds of millions of dollars to oil companies and others simply because they want a new "CHP" project does not necessarily do anything for electric customers that cannot afford such projects, and do not want to generate power themselves.

B. *Before Supporting New Subsidies For CHP or DG, The Commission Should Ensure That A Benefit/Cost Analysis Is Conducted.*

PG&E recommends that any political or regulatory decision concerning new subsidies be based on a thorough benefit-cost analysis. There are two important benefit-cost tests that should be included, but there are several others that can provide information as well. PG&E proposes that any benefit-cost analysis include both the Total Resource Cost (TRC) test and the Ratepayer Impact Measure (RIM, or Nonparticipating Customer, Test). The first test typically serves as a threshold measure of whether a proposed action is even a good idea. The second one indicates the impact of the action on non-participating customers. Hearings on how to conduct such an analysis of DG projects, and their effects on other customers, are scheduled to begin next week at the CPUC in the Distributed Generation Rulemaking, R.04-03-017.

Absent such an analysis, the Commission does not know whether it is supporting a prudent investment of other customers' monies.

C. Before Supporting New Subsidies For CHP or DG, The Commission Should Evaluate Alternative Means Of Addressing Those Policy Objectives

Any political or regulatory decision concerning new subsidies should be made in the context of what else could be done to address policy objectives. For example, the Energy Commission workshop posed the question of how the CEC could promote customer- and utility-owned distributed generation. Any proposed solution should be considered in light of its impact on all customers. If a program involves ratepayer funding, then the CEC, CPUC or Legislature should consider what else could be done with those ratepayer dollars (besides the proposed "solution" of simply throwing more money into incentives) to further policy goals. What is the problem that customer- or utility-owned generation is supposed to solve, and is increasing the amount of distributed generation the best or most cost-effective way to solve that problem?

If a DG-related proposal is cost-effective, minimizes rate impacts for other customers, is the best choice for the next ratepayer dollar, and matches the utility's needs, then the decision to pursue DG still needs to address how best to achieve the goals. For example, the workshop focused on increasing customer- and utility-owned distributed generation. Most parties suggested that some form of rebate or set-aside, or other increased compensation, for customers installing CHP would accomplish the goal of increasing the penetration of DG. Workshop participants identified three major market "barriers": (1) the requirement for a payback of less than two years; (2) the fact that electricity generation is not part of a customers' core business; and, (3) the requirements imposed by the ISO tariff. It may be that none of these market barriers will yield easily to simply increasing the financial attractiveness for participating customers. Increasing the financial attractiveness for customers, in fact, may turn out to be the worst choice to accomplish the policy goal. PG&E suggests that there may be other means that would be more cost-effective and less expensive than merely increasing financial incentives.

Consider the payback barrier first. As several people reported, if a payback period exceeds two years, more than half of all customers lose interest in CHP. What this means is that they require a return on investment of at least 50 percent. Perhaps a better solution (one more cost-effective than simply throwing more money at participating customers with very high perceived discount rates) would be to create marketing strategies that would help change companies' perceptions of CHP as an investment, so a lower rate of return and longer payback period is still viewed positively.

The second market barrier raised at the workshop was the fact that for customers contemplating installation of CHP, electricity generation is typically not part of their core business. A customer such as a food processor, while interested in lowering its electricity bill, may not be interested in acquiring the knowledge necessary to own and maintain a CHP unit. In order to overcome this market barrier, a turnkey approach might work better than simply increasing incentives for participating customers.

Finally, the advantages of CHP may already be sufficiently attractive for some customers who are instead delaying implementation because of the complexities of ISO requirements. Simply increasing incentives will not overcome this barrier; other solutions are needed. The CEC may wish to review the ISO's tariffs and requirements and work with interested parties to see if there are modifications that can be made to make CHP a more attractive option for customers without compromising the integrity of the ISO's operations

D. The Proposed Action Must Be Considered in the Light of the Procurement Process

In addition to evaluating the cost-effectiveness of any proposal to increase the amount of DG in California, and in addition to determining whether increasing DG is the best alternative, policy-makers must also address whether DG will have a positive or negative affect on utility procurement. Will a proposal result in a match for the least-cost/best-fit requirements that utilities have? Is the proposal a good match for the utility's generation needs? Is it needed this year?

III. Discussion of the CEC Report, "Assessment of the California CHP Market and Policy Options for Increased Penetration"

PG&E has a few general comments on the CEC report, "Assessment of California CHP Market and Policy Options for Increased Penetration." First, due to time constraints, PG&E was unable to perform a careful comparison of the Participant, Utility/Non-Participant, and Societal benefit cost analyses shown in the report. Nonetheless, PG&E notes that the analysis of the micro turbine (page 4-21) -- while not identical to the benefit-cost analysis example included in PG&E's DG OIR testimony -- is consistent with PG&E's results. In neither case does the micro-turbine DG unit pass the TRC test. PG&E is unable to evaluate the other results shown in the report, and

would direct the CEC to PG&E's testimony in the DG OIR for a description of what the TRC and Non-Participant tests should include.

Second, as the title implies, the CEC report was designed to develop policy options for increased penetration of CHP, not to develop policy options for the deployment of CHP that best meets California's energy needs. PG&E suggests that the policy recommendations in the report need to first consider the issues described in the first section of these comments, rather than assume at the outset that increased incentives for one specific resource out of many possible choices will benefit customers in general.

Third, the scenarios that include facilitation of wholesale export use $0.065 as the "value" of the exports to the utility. There was no attempt to address the least cost/best fit criteria that the CPUC has determined utilities should use in procurement planning. The analysis assumed that all exports would be within the utility's net short position, that there would be no requirements to firm the exports, and that unscheduled exports are as valuable as scheduled exports. None of these conditions may be met. In the OIR to implement the California Renewables Portfolio Standard Program (RPS), the Assigned Commissioner issued a Market Price Referent (MPR) for baseload power of $0.0605/kWh. This is intended to represent the value of 20-year, fixed-price, conventional power. Thus, the $0.065 figure is too high.

Fourth, although PG&E believes the report summarized in Mr. Price's presentation offers a thoughtful examination of the impacts of various policy proposals on stakeholders, we note that some of conclusions in the presentation are not entirely clear.

- The slide on Page 5 of the presentation suggests that eliminating "exit fees" will reduce a potential customer-generator's capital cost. While elimination of otherwise applicable non-bypassable charges – if that is what is meant by the term "exit fees" -- would reduce a customer-generator's operating costs, it is not clear how this could also serve to reduce a customer-generator's capital costs. Moreover, those costs would not go away – they would simply be shifted to other customers.
- On slide 17, there is not a separate column describing the perspective of the DG/CHP Vendor, although it is apparent from public forums such as the one on April 28 that there are some subtle differences between the perspectives of the customers and those of the vendors. For instance, customers are interested in optimizing the benefits of CHP for their operations, but are not necessarily interested in the aspects of power generation that are not core to their businesses. While vendors are sensitive to the concerns of their customers, they also have a vested interest in increasing market penetration of CHP.
- As was noted in the workshop, the tables on slides 18 through 20 may generally overstate the utility perspective of, and support for, the various policy portfolios listed. These tables don't offer a perspective analysis per se for non-participating customers, even though the perspectives of utilities and non-participating customers are linked in slide 17. Because (as demonstrated in slides 10 through 16) the non-participants' costs always outweigh their

benefits – regardless of the policy or technology being examined – it is probably more appropriate to show the utility/non-participating customer perspective as "N" in most cases where the slides currently show "M".

IV. Comments from Other Workshop Participants

A. QFs Should Not Receive A Set-Aside

Mr. Michael Alcantar, speaking on behalf of CAC/EPUC, recommended a 20 percent set-aside in utility procurement for qualifying facilities ("QFs"). A set-aside could be inherently uneconomic and crowd out renewable energy purchases or purchases of more efficient resources on the wholesale electric market. There is no lawful basis or sound policy for requiring a set-aside.

CAC/EPUC's request essentially is an end-run around current CPUC proceedings where future policy for utility purchases from QFs are being considered, including QFs' requests for a set-aside. (*Order Instituting Rulemaking to Promote Policy and Program Coordination and Integration In Electric Utility Resource Planning*, R.04-04-003.). The CPUC will consider the parties' testimony and conduct hearings on these issues this Summer. CAC/EPUC's request also is inconsistent with the CPUC's stated policy objectives in D.04-12-048, including a requirement that the utilities conduct solicitations and select winning bidders based on least-cost best-fit criteria and that the utilities procure the maximum amount of renewable generation resources via all-source requests for offers. A set-aside would also violate the Public Utility Regulatory Policies Act of 1978 which requires the utilities to pay no more than their avoided costs for QF power purchases t o the extent the utilities can procure less expensive resources on the open market. PG&E requests that the CEC reject CAC/EPUC's request for a set-aside and allow the CPUC to determine this important policy issue in the current QF proceedings.

B. CHP Should Not Receive Net Metering

Ed Yates, speaking on behalf of the California League of Food Processors, suggested that the low load factor that makes CHP unprofitable for food processors could be overcome by providing net metering for CHP. Net metering is a subsidy that allows a customer to use the utility grid as a battery for its generator, with other ratepayers bearing the costs of this expense. The legislature has only allowed net metering in very narrow circumstances where it concluded that the public interest in supporting a zero emissions renewable technology (in the case of solar and wind) or addressing an environmental concern (in the case of biogas digesters) justifies the increase in rates for other customers. Improving the economics for a customer whose load profile does not match CHP technology is a poor reason to expand net metering from its current very narrow base, and would shift costs to other customers. The CEC should not endorse proposals to give net metering to CHP.

C. Efficiency Requirements for CHP Should Remain

Kevin Best of Real Energy, which markets cogeneration and other equipment, spoke of an operating efficiency "bogey" required of cogenerators, and suggested that removing this requirement would remove a barrier to DG development. But this "bogey" is the requirement, under California state law that DG units must meet in order to qualify as a "cogenerator." Such qualified cogenerators currently receive a wide variety of incentives in the form of reduced interconnection costs, substantially reduced gas transportation rates, exemptions from some non-bypassable charges, and waivers of standby charges. In contrast, a DG unit that operates and vent all of its heat may still interconnect and operate in parallel with the grid, but it does not qualify to receive all the benefits currently provided to bona fide cogenerators. There are real questions about whether the efficiencies gained from capturing the heat of a CHP generator provide benefits sufficient to justify the current level of ratepayer-funded subsidies, but at least the subsidies have some stated basis (i.e., the encouragement of more efficient forms of generation). Mr. Best's proposal to eliminate even this requirement should be rejected outright.

V. Conclusion

PG&E appreciates this opportunity to address these issues.

Dated: May 6, 2005

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The attachment Word document contains Pacific Gas and Electric Company's comments related to the CEC's April 28, 2005 workshop on Combined Heat and Power and Distributed Generation.

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