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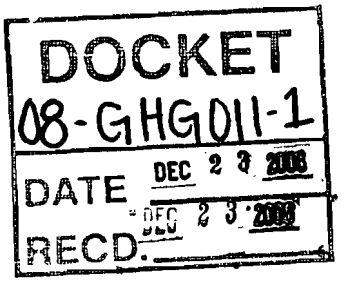

December 23, 2008

Ms. Angela Hockaday
California Energy Commission
Docket Unit
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Subject:

PACIFIC GAS & ELECTRIC COMPANY (PG&E), SAN DIEGO GAS & ELECTRIC (SDG&E) AND SOUTHERN CALIFORNIA EDISON (SCE) ADDITIONAL COMMENTS IN RESPONSE TO THE CEC ORDER INSTITUTING INFORMATIONAL PROCEEDING ON METHODS FOR SATISFACTION OF CEQA REQUIREMENTS RELATING TO GHG EMISSION IMPACTS OF POWER PLANTS DOCKET NO. 08-GHG OII-1

Dear Ms. Hockaday:

Enclosed for filing with the California Energy Commission are one (1) original and five (5) copies of **PACIFIC GAS & ELECTRIC COMPANY (PG&E), SAN DIEGO GAS & ELECTRIC (SDG&E) AND SOUTHERN CALIFORNIA EDISON (SCE) ADDITIONAL COMMENTS IN RESPONSE TO THE CEC ORDER INSTITUTING INFORMATIONAL PROCEEDING ON METHODS FOR SATISFACTION OF CEQA REQUIREMENTS RELATING TO GHG EMISSION IMPACTS OF POWER PLANTS**, for the Greenhouse Gas Emission Impacts of Power Plants (08-GHG OII-1).

Sincerely,

Scott A. Galati

December 23, 2008 TM and MJM plus TM 2:19 12 22 08

Docket No. 08-GHG OII-1
California Energy Commission
1516 Ninth Street, Mail Station 4
Sacramento, California 95814-5512

Pacific Gas & Electric Company (PG&E), San Diego Gas & Electric (SDG&E), and Southern California Edison (SCE) (the "IOUs") jointly submit these comments in response to the California Energy Commission (CEC) Order Instituting Informational Proceeding on Methods for Satisfaction of California Environmental Quality Act (CEQA) Requirements Relating to Greenhouse Gas Emission (GHG) Impacts of Power Plants (OII). We appreciate the opportunity to provide input to assist the Siting Committee in developing uniform guidance that appropriately satisfies the CEC's CEQA obligations without creating conflicting or duplicative regulatory requirements for power plant developers.

This second set of comments is intended to address specific issues raised at the November 19, 2008 Committee Workshop. In the Appendix we provide a suggested work plan for further analysis, should it be deemed necessary. We believe that the workshop was productive and have the following recommendations for Committee strategy.

1. A zero baseline approach should be rejected.
2. A system-wide approach is essential to adequately define the relationship of new generation to displaced generation
3. A system-wide study can be incorporated into individual siting cases as evidentiary support for project analysis, if necessary.
4. CEQA was designed to examine and analyze the affects of a project and was not intended as the forum for broad state or world-wide policy analysis and implementation.

ZERO BASELINE APPROACH SHOULD BE REJECTED

A "zero-baseline" approach should be rejected by the Committee. First, it assumes that every molecule of GHG is cumulatively considerable. This is inconsistent with the scientific evidence and this approach has been specifically rejected by CEQA case law. Such an approach completely ignores the effects of a project on the electrical system and other activities, such as energy efficiency and renewable portfolio standard requirements, which affect the system. As discussed in depth at the workshop, the electrical system is unique. Every new generation resource has an effect on the electrical system. A new generation resource is called to operate when it would displace a more costly and less efficient resource that has higher GHG emissions, so the net effect on the electrical system from the new resource will be an overall reduction in GHG. A zero baseline approach would ignore this fact and would impose requirements to mitigate GHG emitted from the new resource when, in the absence of the new resource, more GHGs would be emitted. The zero baseline approach ignores the single most important component of the CEQA analysis: causation. To fully inform decision makers and the public, it is critical for the analyses to accurately depict what effects on the environment are ***caused by the project*** in combination with other similar projects. While a zero baseline approach should be rejected, we do not suggest that an analyses cannot be performed, but rather recommend an electrical system wide approach be employed.

SYSTEM-WIDE APPROACH

The electrical system is unique from other industries. Electricity cannot be meaningfully stored, so the powerplants connected to a grid collectively change output continually to meet the changing real-time demand for electricity on that grid. For any given level of demand, increasing the output of one powerplant forces reduced output at others. The strong interrelation between different powerplants means that a system-wide approach is essential to assess the GHG impacts of a new power plant. As noted by CEC staff in recent project staff assessments and in the Commission's 2007 Integrated Energy Policy Report, newer natural gas-fueled electricity generation technologies are likely to replace older less efficient plants (CEC 2007 IEPR, page 184), and emission rates of GHG per MWhr consumed in California have declined since 1990.

In electric system operation, some powerplants operate under must-take contracts, regardless of their operating costs. However for the vast majority of powerplants, the ongoing choice over which powerplants to operate for the next time period, and which to idle for the next time period, is based on "economic dispatch". Specifically, the plants with the lowest operating costs are first to be "dispatched" to serve electricity demand, and the plants with the highest operating costs are last to be dispatched.

The prices of fuels and their associated GHG emissions, in conjunction with economic dispatch, yield the result that any new gas-fired powerplant reduces overall GHG emissions.] Must-run power plants run to the extent that they are available. Among the remaining powerplants, the ones that have zero GHG emissions, such as hydroelectric

and solar plants and wind turbines, happen to have low operating costs and zero GHG emissions. They and the must-run plants are dispatched ahead of gas-fired plants. Their hours of operation, and GHG emissions, are unaffected by the addition of a gas-fired plant.

Next in the dispatch order are coal plants, which have higher GHG emissions but lower operating costs than gas plants. Their hours of operation, and GHG emissions, are also unaffected by the addition of a gas-fired plant. Last in the dispatch order are other gas-fired plants. Some of them do change their hours of operation and GHG emissions when a new gas plant is added. Specifically, the new gas plant displaces operation of the gas plant with the highest operating cost. Because GHG emissions are proportional to fuel burned, the gas plant with the highest operating cost generally also has the highest GHG emissions of any gas plant. Displacing it by operating a new gas plant reduces overall GHG emissions.

This least-cost approach is followed by virtually all utilities as they seek to provide electrical service to their customers at lowest feasible cost. It is the approach followed by the California Independent System Operator. In view of these realties, PG&E, SDG&E, and SCE do not believe that further analysis is needed: In an electrical system, electricity generated by a new power plant will displace generation from less-efficient power plants with higher emissions, thereby causing a decrease in system-wide emissions. This statement was supported by many parties at the November 19, 2008 workshop, including Mr. Ellison of IEP and Mr. Vidaver of the CEC staff (transcript, pp. 192-198). However, if a study were to be undertaken to further confirm system responses to new gas fired generation, the IOUs have provided a suggested study methodology in the attached Appendix.

PURPOSE AND OBJECTIVES OF CEQA

During the workshop it was clear that there is a difference of opinion on what are the purpose and objectives of CEQA. The environmental impact analysis is the heart of CEQA. The analysis must be presented in an environmental impact report or, in the case of the CEC, a functionally-equivalent set of documents. Public Resources Code Section 21002.1 (a) specifically provides:

> "The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."

The proponents of the zero threshold approach contend that the purpose of CEQA is broader and should be used to develop the policy of avoiding commitments to a particular envisioned long term carbon future. While that goal is important, it is not consistent with evaluating the effects of a project. The broad policy goal of envisioning

the path to a new carbon future is being achieved through the policies of the Legislature in AB 32 and the lengthy proceedings undertaken by Air Resources Board, this Commission and the California Public Utilities Commission during the past two years. The Scoping Plan recently adopted by CARB for implementation of AB 32 was accompanied by a CEQA analysis to evaluate the effects of the plan on the environment at a programmatic level.

RECOMMENDED OVERALL STRATEGY

As discussed in our first round of comments and at the recent workshop, we recommend a three step implementation strategy.

Step 1: For projects currently being processed[1] by the CEC until an electrical system-wide study can be performed:

(a) Continue to evaluate additional projects in the manner currently being followed by staff.
(b) Ensure that projects subject to SB 1368 demonstrate GHG emissions consistent with the SB 1368 Performance Standard
(c) Incorporate Best Management Practices during construction to reduce GHG emissions to the extent practical from construction equipment; (i.e. reduced idle times, use of clean fuels, etc.)
(d) For plant operations, explore the ability to use materials that have reduced GHGs (chemical storage areas, leak containment systems, etc.)

Step 2: If determined to be necessary, an electrical system-wide study of the effects of adding new gas-fired electric generation can be performed for projects processed by the CEC up until implementation of AB 32. The results of the study can be used as evidentiary basis for analysis in individual cases It should be possible to eliminate the need for an analysis in each siting case by examining the cumulative impact of all the new plants expected to be operating in the next few years.

Step 3: For projects processed by the CEC following full implementation of AB 32, on and after January 1, 2012, determine consistency of project with AB 32.

We believe that this three step approach satisfies CEQA's legal obligations and will produce the most accurate analyses for the public and the Siting Committees to make decisions.

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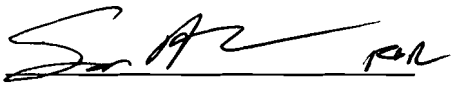
[1] This policy would be applied to projects for which Final Staff Assessments have not been completed.

Respectfully submitted,



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APPENDIX: SUGGESTED WORK PLAN FOR A SYSTEM-WIDE ANALYSIS

If the Commissioners decide that a system-wide study is needed, ideally the study would be done by the CEC's own in-house modeling staff, to the extent that time allows. It is our understanding that this may be problematic, given the expected workload for the 2009 Integrated Energy Policy Report.

If an outside consultant is needed, we offer the following thoughts on a possible work plan:

In the interest of time, the Commission may choose to use a Technical Support Contract, rather than a standard bidding process.

The Commission should publish a broad scope of work, and hold a workshop at which modelers can offer their proposed approaches for public comment. Any generally accepted production-simulation model and database can be used: The results will not be particularly sensitive to the choice of model or input assumptions. (Simplified approaches, e.g., spreadsheet-based models, are not generally used in the WECC because they cannot handle the complexity of hour to hour dispatch.)

The proposed approach should include selection of a production-simulation model and a database for that model, as well as the bid itself. The modelers could use a public database, e.g., the public datasets developed by Western Electricity Coordinating Council's (WECC) Transmission Expansion Planning Policy Committee (TEPPC), or the database for the Aurora model developed by the Northwest Power Planning Council or the CEC Staff's database for the Ventyx model, or a private data base. What is important that the data include all the necessary unit operating characteristics, such as the heat rate at multiple loading points, ramp rates, minimum up and down times, etc.

Subject to modifications ordered by the Commission, the selected modeler should then run the production-simulation model to forecast the total base-case GHG emissions from powerplants in the WECC, for the years 2009, 2010, and 2011 (i.e., the years before the start of a cap-and-trade system under AB32). The modeler should then run a new-plant case. Since the purpose of the modeling is to determine the displacement that occurs when new gas fired units are added, a single set of assumptions regarding load, such as the CEC's last adopted load forecast , and renewable power plants should be used in both the base case and the new-plant case.

To eliminate the need for a separate study in each siting case, and to capture the total impact of the addition of multiple units, we offer two suggestions for the new-plant case:

- Include all the new powerplants likely to come on-line through 2011, so that the new-plant case is a cumulative-impact analysis.
- Add a predefined amount of new plants such as multiple combined cycle plants and a set number of peaking plants. It will likely be necessary to add multiple units since the impact of adding a single small unit to the grid would get lost in the level of accuracy of the modeling.

Present the results at a public workshop, and re-run the model in the unlikely event that any errors are detected. (The bid for this step should be itemized in the overall bid.) As a reminder, the goal of the study is to determine the change in GHG between the two runs, and not to forecast total GHG levels in each year.