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Commissioner Karen Douglas  
Commissioner Jeffrey D. Byron  
Commissioner James D. Boyd  
Dockets Office  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

**RE: Comments Concerning Framework for  
Evaluating Greenhouse Gas Implications of Natural Gas-Fired Power Plants;  
Workshop, June 23, 2009; Docket No. 08-GHG OII-1 and 09-IEP-1P**

Dear Commissioners:

Sempra Energy submits these comments concerning the Framework for Evaluating Greenhouse Gas (“GHG”) Implications of Natural Gas-Fired Power Plants in California, by MRW & Associates (“the MRW Framework Report”) and the discussion at the Joint Committee Workshop held June 23, 2009. Responses to the Committee’s 10 questions discussed at the workshop by San Diego Gas & Electric (“SDG&E”) are attached.

The workshop notice states that the “MRW report was initiated under the Greenhouse Gas Order Instituting Investigation Proceeding and the workshops held in late October and November 2008. The June 23, 2009 Joint IEPR and Siting Committee workshop responds to the October 8, 2008 Commission Order Instituting Informational Proceeding on Methods for Satisfaction of California Environmental Quality Act Requirements Relating to Greenhouse Gas Emission Impacts of Power Plants (Order No. 08-1008-11)[“GHG OII”].”

The MRW Framework Report states that:

This report explores how much, what type, and where in California new natural gas-fired generation may be needed to cut GHG emissions, expand renewable energy, and to continue protecting the state’s environment. The answer must take into account the policy framework that energy regulators and other stakeholders are pursuing for the electricity sector, the characteristics and operational requirements of the state’s integrated electric system and some understanding of historical GHG emissions from the electricity sector. This report provides a first step toward answering the question by developing a qualitative framework that considers that multi-faceted context. More detailed, quantitative modeling is required to provide more definitive assessments of how much, what type, and where in California new natural gas-fired generation may be needed in the future. (MRW Framework Report, page 2).

The MRW report further states that: “The overarching objective of this report is to provide an assessment of GHG emissions attributable to the state’s electric system under several future scenarios and in the context of the state’s integrated electric system.” (Page 10).

Overall the MRW Framework Report does a very good job of analyzing the part gas-fired generation plays in the California electrical system in the context of achieving greenhouse gas reduction policies including increased energy efficiency and a 33 percent renewable portfolio standard. It correctly concludes that individual generation projects must be analyzed in the context of the overall electricity system (Framework Report, e.g., page 3). Sempra Energy believes, however, that there is no need for further quantitative studies for the Commission to adequately address its obligations under the California Environmental Quality Act (“CEQA”) to analyze GHG emissions of new generation facilities subject to Commission licensing. In short, CEQA does not require a determination by the Commission, as stated by the MRW report, of “how much, what type, and where in California new natural gas-fired generation may be needed. This effectively would reinstate the “need” test formerly required in Commission licensing cases and eliminated by legislation in 1999.

The Committee Guidance on Fulfilling CEQA Responsibilities for GHG Impacts in individual siting cases acknowledges that GHG emissions must be analyzed as a cumulative impact (CEC-700-2009-004; March 2009). The CEQA significance standard for cumulative impacts is whether the emissions are “cumulatively considerable.” Applying this qualitative standard necessarily requires application of discretionary judgment based on the facts of a particular project subject to CEQA. By its nature this test requires consideration of the context of a project. However, as noted in the CEQA Guidelines,” the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.” CEQA Guidelines Sec. 15064(h)(4). Further, the lead agency is not required to take a myopic view and may weigh the significance of an impact by looking at the overall effect considering both increases and decreases in impacts that may balance one another. See, Kostka & Zitckke, Practice Under the California Environmental Quality Act, Sec. 6.45.

Similar to the modeling undertaken in 2008 for the CPUC by E3 Consultants, the MRW Framework Report’s summary of previous CEC scenario analyses shows that even under current policy (termed the “frozen policy” case) GHG emissions will remain level or decline slightly by 2020 (i.e., electricity sector emissions would meet the AB32 goal of achieving 1990 emissions). An increased renewables case (though still not meeting the 33% mandate) shows a 20% reduction in GHG emissions by 2020 (Framework Report, page 81). For reference, a graphic representation of a similar projection GHG reductions from the Commission/CPUC Final Recommendations on Greenhouse Gas Regulatory Strategies (CEC- 100-2008-007-F; (page 112) is attached. Note that these analyses do NOT include additional reductions attributable to cap and trade.

The MRW report focuses on issues relating to reduction in overall emissions through substitution or support of renewables by new gas-fired generation. While this is likely to be true in virtually all cases, particularly in the near term, this causation element does not need to be satisfied for the CEC to conclude that new gas-fired emissions are not cumulatively considerable under CEQA. The strong conclusions of the MRW report and previous modeling that emissions are going to be flat or will substantially decline by 2020 because of energy efficiency and RPS compliance, as

well as through substitution, are enough by themselves. Therefore, while it is quite likely that most new gas fired generation will reduce emissions overall, it is not necessary to rely solely on that substitution effect to conclude that a new plant will not add "cumulatively considerable" emissions. For this reason, a further quantitative assessment is not necessary to support a conclusion as to whether a new project is "cumulatively considerable".

It should be borne in mind that the issue of whether GHG emissions from new generation are significant is being addressed now primarily because AB 32 regulations are not yet in fully in effect. Once they are in effect, then the AB 32 program would either support a finding of insignificance or mitigate any perceived significant effect, particularly within the electricity sector which is providing disproportionate reductions (40% of the reductions for a sector contributing 25% of the emissions). However, in reality there may not a gap to fill. Notably, the 33% RPS requirement called for by the Scoping Plan appears close to being legislated and will likely be in effect independent of ARB action. More importantly -- as Dr. Ryan, Deputy Director of the CPUC, pointed out at the June 23 workshop -- the AB 32 Scoping Plan requirements for the electricity sector are themselves based upon the CPUC Loading Order, which is already being applied in the Long Term Procurement Plan required for each Investor Owned Utility under existing legislation. Individual new generation facilities are reviewed by the CPUC for consistency with this plan. In the case of the plan approved by the CPUC for San Diego Gas & Electric, the plan projects a decrease in GHG emissions resulting from energy efficiency, demand response, and renewables of about 1.5 million tons of GHG (CO<sub>2</sub>E) annually by 2016. Thus, for investor owned utilities the AB 32 plan is already in effect and there is no short term gap to fill.

Lastly, the point must be made that the costs of GHG reduction are being borne by ratepayers through required energy efficiency and Renewable Portfolio Standard programs. As noted above, these programs are enough by themselves to bring electricity sector emissions well below the 1990 goal. Should GHG offsets be required for new generation on top of these costs, ratepayers will in effect be paying twice for the same thing. To the extent allowances in a cap and trade system are auctioned and revenues not returned to utility customers, then they will pay three times.

Thank you for considering these comments. Sempra Energy appreciates the opportunity to participate in this proceeding.

Sincerely yours,



c: Commissioner Levin  
Commissioner Rosenthal  
Dr. Mike Jaske  
Dick Ratliff, Esq.

## QUESTIONS TO GUIDE DISCUSSION AND COMMENT

JUNE 23, 2009

### JOINT SITING AND IEPR COMMITTEE WORKSHOP:

Framework for Evaluating Greenhouse Gas Implications of Natural Gas-Fired Power Plants;  
Workshop Held June 23, 2009; Docket No. 08-GHG OII-1 and 09-IEP-1P

### RESPONSES FROM: San Diego Gas & Electric (“SDG&E”)

Questions for discussion and comment on Consultant Report to the Energy Commission: *Framework for Evaluating Greenhouse Gas Implications of Natural Gas-Fired Power Plants in California* (GHG Framework Report).

- 1) Chapter 7 of the GHG Framework Report identifies five roles new gas-fired power plants may fill given the state’s current environmental and energy goals. Three of these are related to local reliability or operating characteristics needed by the electric system in increasing amounts as greater levels of reliance upon renewable generation takes place.
  - a) Do the system operators agree that these are roles that gas-fired power plants will fill in the near and medium term?
  - b) Are there other roles that are not described in Chapter 7 that should be added?
  - c) Should standardized definitions of plant attributes be developed? What agency or source should be relied upon for determining standardized definitions? Chapter 7 provides definitions that are drawn for CAISO’s tariff. Are these definitions sufficient?
  - d) What is the relative importance of the five roles?

Response:

- b) – d) The roles defined in Chapter 7 capture the major roles that natural gas units play. It is important to note that each unit needs to be looked at individually as to what role it needs to play. SDG&E does not see any value in the CEC attempting to develop a standard definition or working further on these. As far as relative importance, they are all important and a unit which fills one role versus another unit which fills another role should not be seen as being more or less important than the other. SDG&E would note that fast start-up capability is often used to describe units that start in 10 minutes, not just units that start within 2 hours.

- 2) Are there characteristics of plants using fuels other than natural gas (e.g. biomass) that should be considered in terms of their impact on GHG emissions?

Response:

The utilities turn to natural gas fired plants since these plants offer the most flexibility. They fill the gaps between the must take power from nuclear, QF and renewable

sources and load. There are no other resources currently available to carry out this critical role to maintain reliability. SDG&E would note that biofuels may provide an option for filling this role in the future. Currently biofuels are used at or near the source to generate more base loaded or must take power. SDG&E and SoCalGas are investigating the ability and desirability to clean up biogas to pipeline quality and inject it into the pipeline system. Thus biofuel can become another fuel for the load following resources.

- 3) Do the Policy-Driven Futures identified in Chapter 6 of the GHG Framework Report adequately describe the likely range of resource development trajectories over the next 12 years, and if so do they correctly capture the GHG emission implications of those futures?

Response:

SDG&E believes that these represent a good range; they may not be capturing all possible futures but they are reasonable. Electrification by others could result in a future that is not addressed in the ones referenced in Chapter 6. All these scenarios suggest that new gas fired plants will mainly be for peaking and quick start units. SDG&E is supportive of the general conclusions that natural gas plants are what is needed to integrate renewables and will replace less efficient gas plants. Thus adding new units is consistent with the state policy of reducing GHG emissions.

- 4) Are the identified Policy-Driven Futures an appropriate range of possible future alternatives?

Response:

SDG&E believes that enough studies have been done that broadly look at the overall trends and for the most part they all produce results that are consistent. SDG&E believes doing additional studies in this area will not provide different results and thus are not needed. It would be better to spend our limited resources on studying and developing solutions dealing with integration issues, such as the CAISO current 33% implementation studies and addressing issues dealing with licensing both renewable power plants and transmission.

- 5) The GHG Framework Report suggests extensive modeling would be necessary to understand precisely how the net GHG emissions of the electric system would change under various specified future conditions. However, the report authors expect that net GHG emissions will decline under the following futures:
- a) The addition of new gas-fired power plants to the extent necessary to permit the penetration of renewable generation to the 33 percent target.
  - b) The addition of new gas-fired power plants improving the overall efficiency of the electric system.
  - c) The addition of a new gas-fired power plant or modernization/repowering of existing capacity serving load growth or capacity needs more efficiently than the existing fleet. Is this a reasonable conclusion?

Response:

SDG&E fully supports the conclusions in paragraphs a), b), and c) and see little value in doing additional studies as discussed above. SDG&E would also object to requiring a unit by unit modeling analysis as part of the licensing process. Such studies will produce results that would be within the noise of model results and could be misleading. Further, the Long Term Procurement Process required by the CPUC already provides a means of evaluating the need and functions of new generation within the context of the Loading Order requiring conservation and renewables as preferred resources.

- 6) Assuming that the roles identified in Chapter 7 of the GHG Framework Report are valid, how are utilities and others responsible for long-term resource additions going to assure that generating resources with such qualities are developed?

Response:

For the IOU's there is a two step process. First, in the IOU's Long term procurement planning process, the IOU's identifies the type of plants needed in its plan to integrate higher levels of renewables and meet the remaining needs of its customers applying the priorities of the Loading Order. This need is reviewed and approved by the CPUC. In the second step, the IOU's then issue Requests For Offers (RFOs) that state the specific types of resources that are needed based on its approved plan. The selected resources are submitted to the CPUC for approve. In that process the IOU must show that the resources selected meet the previous approved needs.

- 7) How has the CPUC directed IOUs to evaluate the GHG emissions of power plant contracts in its LTPP decisions, or through other means, in constructing RFOs or in evaluating bids submitted into RFOs?

Response:

As part of the evaluation of offers received in an RFO, SDG&E evaluates the total change in the GHG emission of its portfolio given resource additions. This is consistent with the studies referenced in the CEC report which also addresses GHG impacts on a portfolio basis. SDG&E's current Long Term Procurement Plan approved by the CPUC projects a reduction in overall SDG&E system reductions of GHG emissions of 1.5 Million CO<sub>2</sub>E/year with the average emission rate of the portfolio dropping by one-third.

- 8) To what extent are expected GHG emissions taken in account in procurement or project development processes?
- a) From the project developer perspective?
  - b) From the IOU perspective, following CPUC procurement guidance?

- c) From the POU perspective, satisfying its own GHG emission policies or applicable mandates from the State of California?
- d) From the electric service provider perspective?

Response:

See response to questions 5, 6, and 7.

- 9) The GHG Framework Report suggests that the role of a power plant applying for a license at the Energy Commission be considered in assessing its likely GHG emissions, but how the expected role(s) that might be played by a given power plant with a specified technology would be determined is unclear:
  - a) What evidence should be presented in an individual power plant licensing case to confirm that a proposed power plant intends, or can be expected, to fulfill one or more roles?
  - b) To what extent would long-term contract(s) with load serving entities help to establish that a power plant is intended to play one or more roles?
  - c) Assuming typical long-term contracts between merchant power plants and investor-owned utilities extend 10 years, how would one or more roles be identified for the proposed power plant after an initial contract was completed?

Response:

SDG&E does not believe that the role of an individual power needs to be identified with certainty in a CEC siting proceeding in order for GHG emissions to be adequately addressed. The principal purpose of the plant would be described in the ordinary course of a proceeding. However, SDG&E does not believe that system modeling of an individual plant is either necessary or would likely provide useful results.

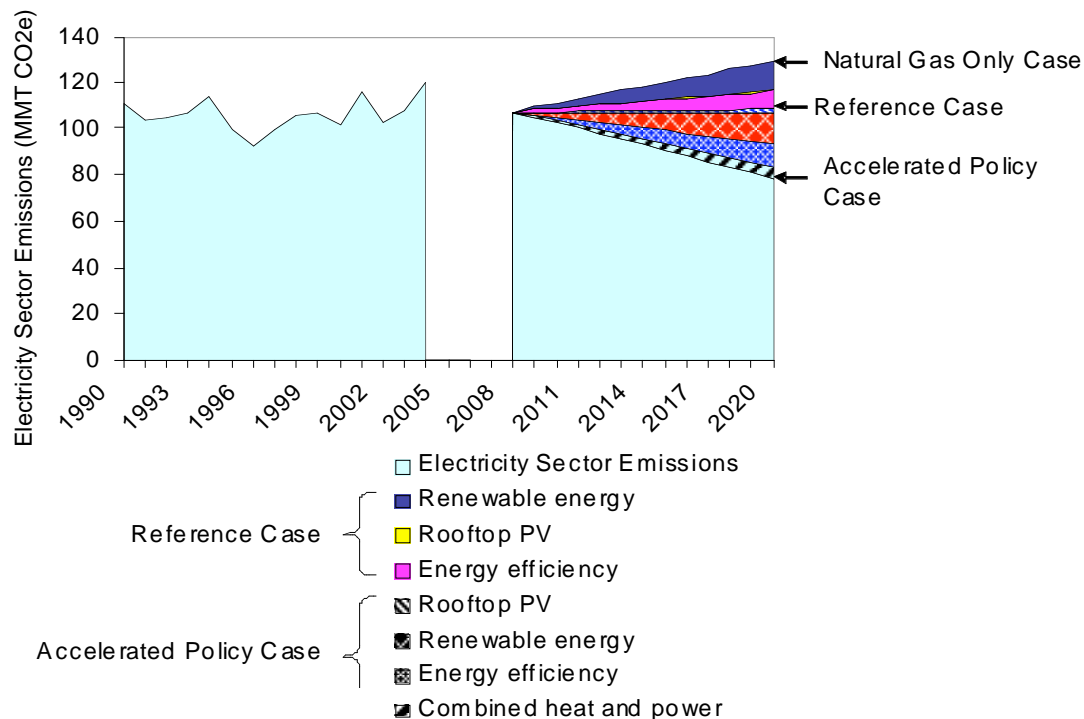
- 10) From a GHG emissions perspective, the GHG Framework Report appears to reinforce the Energy Commission Siting Committee report (CEC-700-2009-004, March 2009) that power plants should be examined as elements of the overall electricity system and not as stand-alone facilities that can be examined separately.
  - a) Does the CAISO interconnection process for major projects also analyze a specific facility in the context of its impact on the system?
  - b) Do the procurement rules established by the CPUC for IOUs in determining “net short” positions forward in time examine specific project output in the context of a portfolio of project satisfying total requirements?
  - c) How do specific contracts submitted for approval by the CPUC satisfy overall IOU resource needs to serve end-user energy demand reliably?

Response:

Questions b) and c) are covered in Responses to Questions 5, 6, and 7 above.



**Figure 4-1**  
**Electricity Sector Emissions Reduction Potential**  
**Compared to Historical Electricity Sector Emissions**



As discussed above, we are committed to the policies and GHG emission reductions contained in the Reference Case and the Accelerated Policy Case. We recognize that these policies may result in slightly more or slightly less emissions reductions, depending on actual progress during the 2020 timeframe. All of the emissions reductions shown above result from assumed levels of direct or programmatic approaches and mandates and not from a cap-and-trade system. As described in Section 3.3.1 above, these emissions reduction measures, before consideration of a cap-and-trade program, would result in 2020 emissions in the electricity sector of approximately 79 MMT, about 27% below its 1990 emissions level. This projected 2020 emissions level under the Accelerated Policy Case would be approximately 38% lower than the 129 MMT estimate resulting from