

09-IEP-1P

**DOCKET**  
**08-GHG-OII-1**

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June 30<sup>th</sup>, 2009

California Energy Commission  
Dockets Office, MS-4  
Docket No. 09-IEP-1P & 08-GHG-OII-1  
1516 Ninth Street  
Sacramento, CA 95814-5512

Re: 2009 Integrated Energy Policy Report (IEPR)  
Docket No. 09-IEP-1P & 08-GHG-OII-1: Workshop  
Comments on the Framework for Evaluating the GHG  
Implications of NG Power Plants

To Whom It May Concern:

Southern California Edison Company (SCE) appreciates the opportunity to submit the following comments in response to the California Energy Commission (CEC) workshop on evaluating the greenhouse gas (GHG) implications of new natural gas-fired power plants in California held on June 23, 2009.

The underlying question that spawned the GHG Order Instituting Investigation (OII) and the subsequent MRW report<sup>1</sup> (Report) was whether or not the GHG emissions from new gas-fired power plants have a significant net environmental impact for the purposes of California Environmental Quality Act (CEQA) compliance. The Report provided the following key conclusion:

“The authors would expect that the net GHG emissions for the integrated electric system will decline under the following scenarios:

1. The addition of new gas-fired power plants to the extent that is necessary to permit the penetration of renewable generation to the 33 percent target.
2. The addition of new gas-fired power plants that improve the overall efficiency of the electric system.
3. The addition of a new gas-fired power plant or modernization/repowering of existing capacity that serves load growth or capacity needs more efficiently than the existing fleet.”

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<sup>1</sup> Framework for Evaluating Greenhouse Gas Implications of Natural Gas-Fired Power Plants in California, CEC-700-2009-009, May 2009

Put another way, the operation of a new gas-fired resource (combined cycle or simple cycle) will result in a net negative impact on global GHG emissions. This conclusion should satisfy the CEQA compliance needs, but could be supplemented by some generic modeling of a new gas-fired plant.

### **Net Impact of New Gas Fired Generation**

Economic dispatch dictates that a new gas-fired power plant will only operate when its marginal cost is lower than that of the next available resource that would have been on the margin in absence of the new plant. The key driver of the difference in marginal cost between the marginal resource before the new plant and the new gas-fired power plant will be the fuel efficiency differential<sup>2</sup>. As such, when the new plant dispatches, it is more efficient than the marginal unit (or in the case that the proposed plant is the marginal unit, the marginal unit that would have operated in the plant's absence). This difference in efficiency between the new gas-fired power plant and the marginal power plant implies that the marginal energy that was offset would have had a greater GHG intensity<sup>3</sup> than the new plant, regardless of whether the marginal plant is gas or coal.<sup>4</sup> *As a result, the global GHG emissions would be lower when the new gas-fired power plant is a part of the system than it would have been without the new plant.* This conclusion holds regardless of system needs (capacity need, ramping need, regulation need, operating reserve need, etc.) and negates the need for further analysis. A consensus on this point was generally reached at the June 23 workshop panel.

### **Assessment of System Needs as a Part of CEQA Review**

The Report went beyond discussion of the direct impact of a new gas-fired power plant on global GHG emissions, and explained its indirect impact through the enabling of higher levels of intermittent generation. The system needs for accommodating renewable resource integration and its impact on the GHG emissions was also a part of the subsequent panel discussion. While arguments can be made that enabling the integration of new renewable resources would further reduce the net GHG impact of new gas-fired power plants, with respect to CEQA compliance the point is moot because any further reduction in net GHG emissions is above and beyond the reductions from the improved efficiency which would qualify it as CEQA compliant.

SCE appreciates the opportunity to offer these comments for your consideration. If you have any questions or need additional information about these written comments, please contact me at 916-441-2369.

Very truly yours,

/s/Manuel Alvarez

Manuel Alvarez

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<sup>2</sup> Fuel efficiency = MMBTU/MWh

<sup>3</sup> In the case that the marginal resource being offset is coal, any unit offsetting coal dispatch will have a lower GHG intensity (lbs CO<sub>2</sub>/MWh) and will effectively reduce GHG emissions.

<sup>4</sup> The marginal unit would either be gas (instate or import) or coal (import) as the preferred resources are of significantly lower marginal cost.