Pacific Gas and Electric Company

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September 28, 2012

VIA EMAIL (docket@energy.ca.gov)

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 12-OIR-1
1516 Ninth Street
Sacramento, CA 95814-5512

Re: 2012 Rulemaking to Consider Modification of Regulations Establishing a Greenhouse Gases Emission Performance Standard For Baseload Generation of Local Publicly Owned Electric Utilities – Comments of Pacific Gas and Electric Company

I. INTRODUCTION

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide comments on the California Energy Commission's (CEC) Rulemaking on possible changes to the Greenhouse Gas Emission Performance Standard (EPS) for publicly-owned utilities (POUs).

While PG&E is not a POU, Senate Bill 1368 (which established the EPS) requires that the CEC and the California Public Utilities Commission (CPUC) consult with each other in setting the EPS for publicly-owned and privately-owned providers of electricity service, respectively. As a result, PG&E believes the CEC should work in consultation with the CPUC in an open process to more thoroughly address this issue.

At this time, it is not clear to PG&E that a reduction in the EPS is warranted. PG&E is concerned about how a reduction to the EPS could affect system reliability, along with potentially inadvertent impacts on many operationally-flexible and fast-ramping natural gas resources that can be used for reliability as a baseload resource and are also capable of supporting integration of intermittent renewables. Furthermore, it is not clear how a reduction in the EPS would interact with the once-through cooling requirements, air emission requirements, other greenhouse gas (GHG) emission reduction requirements, and California's ability to import energy from neighboring states. Finally, any review of the EPS should include an examination of how the EPS is calculated for other resources, including combined heat and power.

A careful balancing of all of these requirements is needed to ensure safe and reliable electricity at an affordable cost for customers.

II. PG&E's CLEAN ENERGY PORTFOLIO

PG&E's energy portfolio has one of the lowest carbon dioxide (CO_2) emissions rates in the country. In accordance with the Energy Action Plan, PG&E first pursues energy efficiency, demand response, renewables and distributed generation, and then clean conventional generation. Energy storage alternatives are also being piloted.

For more than 30 years, PG&E has championed energy efficiency programs and PG&E's programs have avoided the release of more than 180 million metric tons of CO_2 into the atmosphere, based on cumulative lifecycle gross energy savings. Most recently, PG&E exceeded the CPUC's energy savings goals for 2011, achieving savings of 1,032 GWh, 234 MW and 16.2 million therms. These results helped save customers more than $262 million on their energy bills and avoided the emission of nearly 840,000 metric tons of CO_2 and 245 tons of nitrogen oxide (NO_X). The success of these programs has been crucial in reducing the need to build new power plants in California.

For the electricity PG&E delivers to its customers, an ever-increasing portion of the portfolio is renewable or carbon-free. As outlined in its 2011 Corporate Responsibility Report,[i] nearly 60% of PG&E's 2011 electricity deliveries were from renewable or carbon-free resources. PG&E continues to work to increase that figure by adding more renewables to meet the Renewable Portfolio Standard (RPS) and by adding new, state-of-the art natural gas-fired plants with low GHG emission rates. These natural gas resources are essential to provide the operational flexibility to integrate intermittent renewable resources and maintain system reliability.

Since 2009, PG&E has safely commissioned three substantial, new natural gas generating facilities that are subject to the EPS: 1) the Humboldt Bay Generating Station; 2) the Colusa Generating Station; and 3) the Gateway Generating station.

Humboldt Bay Generating Station is a 163 MW natural gas plant that is 30 percent more efficient than the older fossil-fueled plant it replaced. It employs technology that produces significantly less SO_2, NO_X and CO_2 emissions than the previous facility. Its design uses reciprocating engines that are air-cooled, reducing water use by eliminating the need for once-through cooling from Humboldt Bay. Humboldt provides essential reliability support to a transmission constrained area in PG&E's service territory.

Colusa Generating Station is a 657 MW combined cycle natural gas plant featuring cleaner burning turbines that allow the plant to use less fuel and emit significantly less CO_2 than older plants. "Dry cooling" technology allows the facility to use 97 percent less water than plants with conventional "once-through" water cooling systems. The plant uses a zero liquid discharge system that recycles waste water and further reduces the amount of water needed by the facility.

The plant is designed to quickly increase and decrease output to accommodate intermittent renewable generation and support reliable electric operations generally.

The Gateway Generating Station is a 580 MW combined cycle natural gas plant that emits less CO_2 for every megawatt-hour of power produced compared to older fossil-fueled plants. Gateway also uses dry cooling technology, which allows the plant to use 97 percent less water than older plants with once-through cooling water systems. Gateway does not have the same degree of operating flexibility as Colusa, but it can support intermittent renewables and reliable electric operations.

Historic emissions for these facilities (in metric tonnes) and emissions rates (in lbs/MWh) are shown below.

	2009	**2010**	**2011**
Total CO_2 Emissions (metric tonnes)	1,401,487	1,545,892	2,024,206
Humboldt Bay Power Plant	390,339	276,811	N/A
Humboldt Bay Generating Station	N/A	59,111	216,417
Gateway Generating Station	1,011,147	1,209,970	1,042,896
Colusa Generating Station	N/A	N/A	764,894
CO_2 Emissions Rates (lbs/MWh)			
Humboldt Bay Power Plant	1,558	1,591	N/A
Humboldt Bay Generating Station	N/A	1,004	1,022
Gateway Generating Station	895	861	868
Colusa Generating Station	N/A	N/A	851
All PG&E Fossil Plants	1,016	943	875
All PG&E Plants	110	106	126

III. THE EPS CANNOT BE VIEWED IN ISOLATION FROM OTHER SYSTEM CONSIDERATIONS

The CEC's August 31, 2012 "Requests for Reply Comments" poses several questions for publicly-owned utilities. However, only one question affects both public and private utilities, namely, whether to reduce the EPS for baseload generation from its current level of 1,100 pounds of carbon dioxide (CO2) per net MWh.

At this time, PG&E does not support a reduction in the EPS. PG&E is concerned about how a reduction to the EPS could inadvertently affect system reliability, particularly when many operationally-flexible and fast-ramping natural gas resources, when used to integrate intermittent

renewables, may be operated in less efficient modes than they would be for normal operations. Paradoxically, this flexibility enables the electric system as a whole to operate more efficiently. Currently, the EPS is set at a level that provides enough flexibility in operations to accommodate the increased emissions associated with integrating renewables. A reduction in the EPS would likely require a closer examination of how each unit is operated and become more complex to administer and could potentially result in units not being available in times they are most needed because of the different emissions profiles while cycling to integrate renewables versus supporting reliable electric operations.

Furthermore, it is not clear how a reduction in the EPS would interact with the once-through cooling requirements, air emissions requirements and a host of other GHG emission reduction programs. A careful exploration of these issues and the impacts on system reliability is needed prior to any action so that any unintended consequences can be avoided.

Competition in the marketplace could also be reduced and result in higher prices to customers. For example, if the EPS is set at a level that would effectively require procurement from only one or two vendors, a sellers' market will be created and California utilities will likely have to pay a premium for new generation.

Finally, the EPS rules should be carefully crafted to accommodate different technologies and desired operating profiles. For example, with respect to combined heat and power (CHP), the CEC's EPS calculation for combined heat and power effectively assumes that heat can be converted into electricity at 100% efficiency, which is not possible. Consequently, the CEC's EPS for combined heat and power is substantially less stringent than the PURPA standard or the double-benchmark in the CPUC-approved QF/CHP Settlement. Any review of the EPS should include a discussion aligning CHP efficiency and emissions with the otherwise applicable EPS.

IV. PG&E RECOMMENDATIONS

PG&E recommends the CEC carefully evaluate the implications of any reduction to the EPS and whether such a reduction is warranted before taking action on Sierra Club and NRDC's petition. PG&E does not support these changes in their currently proposed form. These issues should be discussed through a series of public workshops, given the potentially significant impacts on electric system reliability and customer cost. The CEC should also continue its collaboration with the CPUC on this issue to ensure that all potentially affected stakeholders have received appropriate notice of the proceedings.

V. CONCLUSION

PG&E appreciates the opportunity to provide these comments and is happy to discuss them with the CEC staff. Should you have any questions about PG&E's comments, please do not hesitate to contact me.

Sincerely,

/s/

Valerie J. Winn

cc: Sekita Grant (via email: sekita.grant@energy.ca.gov)

[i] http://www.pge-corp.com/corp_responsibility/reports/2011/index.html/en03_clean_energy.jsp