



California Energy Commission

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PASADENA WATER AND POWER

October 1, 2012

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 12-01R-1
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Docket No. 12-01R-1
Rulemaking to Consider Modification of Regulations Establishing a
Greenhouse Gases Emission Performance Standard For Baseload
Generation of Local Publicly Owned Electric Utilities

The City of Pasadena Water and Power Department (PWP) appreciates the opportunity to provide comments on the question "Whether to make any other changes in EPS to carry out the requirements of SB1368".

Background

PWP, a local publicly owned electric utility, is responsible for providing electric and water services in the City of Pasadena. PWP procured approximately 24% renewable energy in 2011 and has set a target of 40% by 2020. PWP serves about 64,000 electric retail customers with a peak load of approximately 320 Megawatts (MW) and is a California Independent System operator (CAISO) participant. PWP depends on single electricity import location in its service area and maintains approximately 200 MWs of in-city natural gas fired local generation consisting of five electric generating units (four simple cycle combustion turbines and one steam electric unit). The local generation is essential for Pasadena's electrical system reliability and hedge against abnormally high market electricity rates. The local plants provide backup power when the import or sub-transmission capacities are constrained or insufficient to meet Pasadena's electric demand. Being a CAISO participant, to meet its mandatory local resource adequacy requirements, these plants also provide ancillary services. To maintain system reliability, depending on PWP's system or CAISO needs, one or more units are operated at varying partial loads for extended periods. In spite of a lower annualized plant capacity factor based on actual operation, all of the local generating units are permitted to operate at or near 100% capacity factors i.e. baseload generation. PWP plans to replace its existing 47 years old 71 MW steam unit with an equivalent size combined cycle unit by 2015. The options for a new combined cycle unit in the 71 MW

range are limited to aero-derivative combustion turbines as prime movers with once through steam generators for quicker start and load following requirements. PWP proposes to perform California Environmental Quality Act (CEQA) analysis and seek air permitting for the new combined cycle unit as baseload generation for 100% annualized plant capacity factor.

New Combined Cycle Baseload Power Plant Using Aero-Derivative Technology Does Not Meet 825-850 lbs CO₂/MWh Emissions Limit

The new combined cycle unit's quick start and load following characteristics are essential for PWP's objectives to meet Pasadena's system reliability, local resource adequacy, ability to integrate varying energy resources such as wind and solar, and provide ancillary services to CAISO. Due to the fluctuating nature of energy output, the energy efficiency is sacrificed which adversely affects greenhouse gas emissions. Based on an extensive engineering evaluation, PWP estimates that the state of the art and most emission efficient combined cycle units in 71MW range will be able to meet current 1,100 lbs CO₂/MWh with a very thin margin but not 825-850 lbs CO₂/MWh as proposed by NRDC and Sierra Club.

Potential Consequence of 825-850 lbs CO₂/MWh standard

If the new emission performance standard (EPS) of 825-850 lbs CO₂/MWh is adopted by the California Energy Commission (CEC), PWP would not be able to build the planned new combined cycle unit and be forced to extend life of existing old inefficient high GHG emitting steam unit or compromise its electrical system reliability ... both unacceptable outcomes.

Conclusion

We respectfully request that the CEC does not revise existing EPS given that the state has embarked upon aggressive GHG reduction measures such as renewable portfolio standard and cap and trade programs, and US EPA's GHG emissions control through its Tailoring Rule. The proposed EPS could lead to unintended consequences of unreliable electric service and an unnecessary cost burden on rate payers.

Sincerely,



Gurcharan S. Bawa
Assistant General Manager (Power Supply)