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California Energy Commission
1516 Ninth Street
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RE: Docket 09-IEP-1H 2009 Integrated Energy Policy Report Committee Workshop on Combined Heat and Power Issues, July 23, 2009

Dear Commissioners:

I. INTRODUCTION

San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas) hereby submit their comments to the California Energy Commission (CEC) on: (1) the new assessment of the technical and market opportunities for Combined Heat and Power (CHP) in California; (2) alternate ownership options for CHP; and (3) the proposed efficiency standards for compliance with Assembly Bill (AB) 1613 contained in the *Guidelines for Certification of Combined Heat and Power Systems Under the Waste Heat and Carbon Emissions Reduction Act, Public Utilities Code Section 2840 Et Seq.*, CEC 200-2009-016-D (Staff Proposal).

II. ASSESSMENT OF THE TECHNICAL AND MARKET OPPORTUNITIES FOR CHP IN CALIFORNIA

The current and future state of CHP in California is a topic in a number of proceedings, plans and activities at the CEC, the California Public Utilities Commission (CPUC), and the California Air Resources Board (ARB). The last forecast of CHP technical and market potential under various scenarios was undertaken by the CEC in 2005. The aggressive market export case formed the basis for the ARB *AB 32 Climate Change Scoping Plan* complementary measure. Greenhouse Gas (GHG) emissions reductions of 6.7 million metric tons (MMT) are assumed to be available from the implementation of highly efficient CHP.

The new estimates of CHP technical potential and market and regulatory scenarios presented at the workshop by ICF International (ICF) have significant implications for the CEC, CPUC, and ARB. The fact that the bulk of the technical and market potential is on-site generation suggests that policies

focused on utility acquisition of excess power are misplaced. It would appear that policies centered on disincentives to installing on-site CHP (such as return, financing, permitting, air quality restrictions, and uncertainties associated with the proposed cap-and-trade program) may be more important. Also, the ICF study suggests that the CPUC and CEC, as lead agencies on implementing the CHP Scoping Plan measure, need to outline new strategies to increase CHP. The fact that 75 percent of the CHP opportunity is small CHP should lead to different strategies than in the past when 80 percent of CHP was large.

Finally, the ICF study suggests that the CEC and CPUC should engage with the ARB to change the 6.7 MMT goal to one that is more realistic. According to ICF, the ARB assumed high heating value efficiencies of 75-80 percent for new CHP, which are unrealistically high compared to the 60 percent standard set forth in AB1613. Further, ICF projects under the aggressive "all-in case" that in 2020, only 38 percent of ARB's 6.7 MMT goal is attainable (slide 32). While the estimate uses a different baseline, which would increase the GHG potential of CHP developed by ICF, the estimate does not appear to factor in the likelihood that small CHP systems may not be able to be sited in the South Coast Air Quality Basin, as mentioned in the presentation by Mr. McDannel. The agencies need to revisit the ARB Scoping Plan goal of 6.7 MMT

III. ALTERNATE OWNERSHIP OPTIONS FOR CHP

Two presentations were made in the afternoon session on utility-owned CHP, one by Plumas-Sierra Rural Electric Cooperative and one by the Sacramento Municipal Utility District (SMUD). SDG&E and SoCalGas fully support this model for new CHP development as a way to assist their customers for whom energy production is not the focus of their business. The gas utility is well situated to assist customers in achieving GHG reductions through the effective use of CHP, especially customers that would be considering small CHP facilities.

IV. EFFICIENCY STANDARDS FOR COMPLIANCE WITH AB 1613

SDG&E and SoCalGas have the following comments on the CEC Staff's proposed "Guidelines for Certification of Combined Heat and Power Systems Under the Waste Heat and Carbon Emissions Reduction Act Public Utilities Code Section 2843" (Staff Proposal). The comments first discuss areas where additional clarification is needed and then discusses where the Staff Proposal appears to go beyond AB 1613.

The following are issues that could use additional explication:

- Sections II.b), e), IV (title), IV a) and V a) 1) of the Staff Proposal use the term "Eligible CHP System." There is no formal definition of "Eligible CHP System".
- If the final, approved guidelines include mechanical energy as part of Useful Energy Output, the guidelines need to describe how the mechanical energy will be measured for purposes of energy efficiency calculations.
- Section III d) Without explanation the Staff Proposal changes the Greenhouse Gas (GHG) Emission Performance Standard (EPS) previously adopted by the CPUC/CEC.
- Section IV refers to timelines and milestones. More detail is needed on the public availability of this information, the process for notification of the load serving entity(LSE) of the CHP eligibility, and the process for public comment.
- Subsection V refers to a "violation of any operating permit." There is no reference to an operating permit in the Staff Proposal.
- If it is determined that a CHP system failed to comply with the efficiency requirements, what penalties face the CHP customer? Are penalties retroactive as well as prospective? Or are there consequences only after the "decertification" of a CHP system for non-compliance?

While the efficiency calculations seem to be technically correct, in attempting to establish new efficiency standards and calculations, the Staff Proposal appears go beyond what is required under AB 1613 and may contravene the emission performance standard already established by SB 1368. Examples include the following:

- Section II q) and elsewhere in the Staff Proposal includes "mechanical" energy in the definition of "Useful Energy Output." However, P.U. Code section 2840.2 (a) states: "Combined heat and power system" means a system that produces **both electricity and thermal energy for heating or cooling** from a single fuel input that meets all of the following:..." (emphasis added). Additionally, P.U. Code 2840.4 (a) states, in part: "Combined heat and power systems produce **both electricity and thermal energy** from a single fuel input..." (emphasis added). There is no provision in the P.U. Code for the inclusion of mechanical energy as Useful Energy Output. Section III. c) includes discussion of both Topping and Bottoming cycle technologies, even though the P.U. Code makes no distinction between Topping and Bottoming Cycle technologies. The CEC has chosen to divide the definition of CHP into Topping Cycle and Bottoming Cycle technologies with two different sets of standards. The efficiency standard for Topping Cycle must meet an efficiency standard of at least 60 percent pursuant to P.U. Code section 2843 (e). However, a new efficiency standard proposed for Bottoming Cycle is 40.8 percent.
- Section III. c) states, in part, that a "...system that does not use supplementary firing **is exempt from the Energy Efficiency Standard**." (emphasis added). There is no provision in the P.U. Code for this exemption.

V. CONCLUSION

SDG&E and SoCalGas support adding new, efficient and cost effective CHP in California and appreciate the efforts of the presenters at the workshop in providing valuable information to assist in moving in that direction. The issues associated with the large versus small CHP, on-site self-generation versus export CHP and the role for utilities are critical and can hopefully be more fully developed in the September ARB workshop on CHP.

Yours sincerely,

Samara Rasberry