

STATE OF CALIFORNIA
Energy Resources Conservation
And Development Commission

DOCKET

08-WHCE-1

DATE April 27 2009

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In the Matter of: 2008 Rulemaking on
Implementation of the Waste Heat and Carbon
Emissions Act Pursuant to Assembly Bill 1613

Docket No. 08-WHCE-1

**COMMENTS OF THE CALIFORNIA COGENERATION COUNCIL
ON COMBINED HEAT AND POWER TECHNICAL GUIDELINES**

I. INTRODUCTION AND SUMMARY

The California Cogeneration Council (CCC)¹ offers the following comments on the California Energy Commission (CEC) Staff's proposed Combined Heat and Power Technical Guidelines (Small CHP Guidelines). CCC member projects are "qualifying facilities" (QFs) that sell power to the IOUs under the provisions of the Public Utilities Regulatory Policies Act (PURPA) of 1978. CCC projects also serve significant on-site electrical and thermal loads at industrial, commercial, and institutional facilities across the state. CCC members are owners and operators of CHP installations ranging between 10 MW and 100 MW. While the focus of CCC members is generally toward facilities larger than the 20 MW limit in AB 1613, we offer the following observations regarding the guidelines and the April 13, 2009, workshop. In summary:

¹ The CCC is an *ad hoc* association of natural gas-fired cogenerators located throughout California, in the service territories of all three of California's major investor-owned electric utilities (IOUs) - Pacific Gas & Electric Company (PG&E), Southern California Edison (Edison), and San Diego Gas & Electric (SDG&E). In aggregate, CCC members' 32 different CHP projects in California generate about 1,300 megawatts (MWs), most of which are sold to the California IOUs.

- AB 1613 specifies a minimum efficiency level of 60% that cannot be administratively changed by the Commission;
- To meet the California Air Resources Board (CARB) scoping plan CHP measure of reducing greenhouse gas (GHG) emissions by 6.7 million metric tons of carbon dioxide equivalent (MMTCO₂e), the AB 1613 guidelines should encourage any CHP installation that produces fewer GHG emissions than would the separate heat and power (SHP) alternative.
- The scope of this proceeding should be limited to new CHP development that meets the requirements of AB 1613. Consideration and conclusions regarding larger CHP facilities should be addressed in the upcoming CPUC rulemaking.

In addition, the CCC supports the comments of the Energy Producers and Users Coalition on the CHP Technical Guidelines, including their comments that the program should include both topping and bottoming cycle facilities.

II. MINIMUM EFFICIENCY STANDARD SHOULD BE 60 PERCENT

A significant amount of time at the workshop was devoted to the discussion of CHP efficiency, specifically whether a minimum 60 percent efficiency requirement on a Higher Heating Value (HHV) basis was the appropriate minimum efficiency to achieve the objectives of AB 1613. A debate as to the minimum efficiency percentage is not relevant as the legislation clearly states that to be eligible for this program a customer-generator's CHP system must meet the requirements described in Public Utilities Code §2843(e):

(1) An eligible customer-generator's combined heat and power system shall meet an oxides of nitrogen (NOx) emissions rate standard of 0.07 pounds per megawatthour and a minimum efficiency of 60 percent. A minimum efficiency of 60 percent shall be measured as useful energy output divided by fuel input. The efficiency determination shall be based on 100-percent load.

(2) An eligible customer-generator's combined heat and power system that meets the 60-percent efficiency standard may take a credit to meet the applicable NOx emissions standard of 0.07 pounds per megawatthour. Credit shall be at the rate of one megawatthour for each 3.4 million British thermal units of heat recovered.

Note that subsection (2) is not subject to the word, “minimum”, but states that if an eligible-generator’s CHP system meets the 60% efficiency standard, they may take a credit to meet the NOx standard.

The statute is unambiguous and does not leave discretion with the CEC to increase or decrease the minimum efficiency requirement. Any proposed change would require a legislative amendment. The CCC submits that this debate has already been settled by the legislature.

The question to be considered is whether the minimum 60% efficiency is HHV or Low Heating Value (LHV).² In addressing this question, the CCC suggests considering the overarching objectives of the program.

As CEC staff member, Art Soinski pointed out in his presentation at the Workshop, the objective of the guidelines is to set CHP system requirements that both reduce wasteful consumption of energy and facilitate more CHP installations.³ A too restrictive interpretation of the standard will inevitably limit the amount and type of new CHP projects. The point of a standard should be to ensure that there is at least a certain minimum gain in efficiency. A too high standard will exclude CHP that is still more efficient than a SHP alternative, thus raising GHG emissions.

As indicated in the Workshop Notice, Commission staff propose to employ a 60 percent HHV determination, rather than LHV. As noted in the Mr. Soinski’s workshop presentation on slide 7, use of an HHV determination raises the minimum standard by 6-7

² Notice of Electricity and Natural Gas Committee Workshop: Combined Heat and Power Guidelines Workshop. http://www.energy.ca.gov/wasteheat/notices/2009-04-13_committee_workshop.html

³ Presentation of Art Soinski, CEC at April 13, 2009 Workshop at slide 3. http://www.energy.ca.gov/wasteheat/documents/2009-04-13_workshop/presentations/Arthur_Soinski_California_Energy_Commission.PDF

percent. While HHV is perhaps most commonly used in natural gas sales and transportation, and the state's Self Generation Incentive Program used HHV, LHV is the approach used by the Federal Energy Regulatory Commission regulations implementing the Public Utilities Regulatory Policies Act of 1978.

The data presented at the workshop by a range of participants, including the Energy Producers and Users Coalition, Southern California Edison, Cummins Inc. and DE Solutions Inc., showed existing CHP efficiencies both across the nation and within the state, as ranging from 40% to 90%, depending upon the type of application and specific needs of the thermal host. If new projects can demonstrate GHG savings by installing CHP instead of the alternative, then the Commission should allow a 60 % LHV. This would achieve the objective of facilitating more CHP installations and increase the number of systems that can participate in the program, thus contributing to the CHP Scoping Plan measure to reduce GHG emissions by 6.7 million metric tons of carbon dioxide equivalent (MMTCO₂e).⁴

III. THE SCOPE OF THIS PROCEEDING SHOULD BE LIMITED TO SMALL CHP (LESS THAN 20 MW)

Issue number 2 listed for discussion in the Workshop Notice states, "*Is there an optimum efficiency for achieving the greatest total GHG emission reductions from all new CHP systems (including 20 MW and above)?*"⁵ The CCC submits that this proceeding should be limited to the issues relevant to the implementation of the AB 1613 program. This broader question will no doubt be an issue for discussion in the upcoming

⁴ CARB, Proposed Scoping Plan (October 2008), at 43 and Table 2.

⁵ Notice of Electricity and Natural Gas Committee Workshop: Combined Heat and Power Guidelines Workshop. http://www.energy.ca.gov/wasteheat/notices/2009-04-13_committee_workshop.html

CPUC proceeding on large CHP, and is more appropriately addressed in that forum where possibly other interested parties not participating in this proceeding, may provide input.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Beth Vaughan', with a long, sweeping flourish extending to the right.

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