

**CALIFORNIA ENERGY COMMISSION**

1516 Ninth Street  
Sacramento, California 95814

Main website: [www.energy.ca.gov](http://www.energy.ca.gov)



2008 Rulemaking on Implementation of the ) Docket No. 08-WHCE-1  
Waste Heat and Carbon Emissions )  
Reduction Act Pursuant to Assembly Bill )  
1613 )  
\_\_\_\_\_ )

**DOCKET**  
**08-WHCE-1**

DATE \_\_\_\_\_  
RECD. APR 02 2009

**Electricity and Natural Gas  
Committee Workshop:  
Combined Heat and Power Guidelines**

The California Energy Commission's Electricity and Natural Gas Committee will conduct a workshop to discuss the Combined Heat and Power (CHP) Technical Guidelines (the Guidelines) being developed under the Waste Heat and Carbon Emissions Reduction Act (the Act).<sup>1</sup> The Guidelines will establish the eligibility of CHP systems for incentive programs to be developed by the California Public Utilities Commission (CPUC) and municipal utilities. Commissioner Jeffrey D. Byron is the Presiding Member of the Electricity and Natural Gas Committee (the Committee), and Vice Chair James D. Boyd is the Associate Member.

**MONDAY, APRIL 13, 2009**

10 a.m.

CALIFORNIA ENERGY COMMISSION

1516 Ninth Street

First Floor, Hearing Room A

Sacramento, California

(Wheelchair Accessible)

**Remote Attendance**

**Webcast** - Presentations and audio from this meeting will be broadcast over the Internet through Windows Media. For details, please go to [\[www.energy.ca.gov/webcast/\]](http://www.energy.ca.gov/webcast/).

**Conference Call** - To participate in the meeting by phone, please call **888-566-5914** by 10 a.m. Passcode: RULE MAKING Call Leader: **Linda Kelly**

<sup>1</sup> The Act is codified in Sections 2840 through 2845 of the California Public Utilities Code. The Act was enacted through Assembly Bill (AB) 1613 (Blakeslee, Chapter 713, Statutes of 2007) and amended in AB 2791 (Blakeslee, Chapter 2553, Statutes of 2008).

## Purpose and Background

The Act encourages new combined heat and power (also known as “cogeneration”) systems with generating capacity of not more than 20 megawatts (MW). The Act requires the CPUC and the Energy Commission to establish policies and procedures for the purchase of electricity from new CHP systems that are 20 MW or less and requires the state Air Resource Board (ARB) to report to the Governor and the Legislature by December 31, 2011, on the reduction in emissions of GHG resulting from the increase of new electrical generation that utilizes excess waste heat through CHP systems. In this report, ARB must recommend policies that further the legislation’s goals.

The CPUC, in consultation with the California Independent System Operator (California ISO) is responsible for establishing a standard tariff for purchase of excess electricity from a CHP system by an investor-owned utility (IOU). In addition, the CPUC is directed, when approving an IOU procurement plan, to require the inclusion of CHP solutions to the maximum degree that is cost effective compared to other competing forms of wholesale generation and ensure that any planning and upgrades to transmission and distribution systems proposed by utilities are not inconsistent with promoting CHP systems. The CPUC must also establish “pay-as-you-save” pilot programs requiring IOUs to assist in financing the installation of qualifying CHP systems by nonprofit and government entities. Publicly-owned utilities (POUs) are also required to establish incentive programs and tariffs for the purchase of excess power generated by CHP facilities that qualify under the Act.

Finally, the Energy Commission is required to adopt guidelines setting forth technical requirements that CHP systems must meet to qualify for the incentive programs developed pursuant to the Act. These guidelines will apply to qualifying CHP systems covered in both IOU and POU programs.

The Act sets forth the following requirements for qualifying CHP systems:

- The CHP system shall meet a minimum efficiency standard of 60 percent measured as useful energy output divided by fuel input, based on 100 percent load.
- The CHP system shall meet an oxides of nitrogen (NO<sub>x</sub>) emissions rate standard of 0.07 pounds per megawatt hour (MWh).
- A system meeting the efficiency standard may take a credit of 1 MWh for each 3.4 million British thermal units of heat recovered to meet the NO<sub>x</sub> standard.
- The CHP system shall be sized to meet the eligible customer-generator’s thermal load.
- The CHP system shall operate continuously in a manner that meets the expected thermal load and optimizes the efficient use of waste heat.
- The CHP system shall be cost effective, technologically feasible, and environmentally beneficial, particularly with respect to carbon dioxide and other greenhouse gases (GHG).

- The CHP system shall comply with GHG emission performance standard (EPS) pursuant to Public Utilities Code Section 8341. For the purposes of calculating compliance with the EPS, a cogeneration power plant's annual average electricity production is the sum of the MWh of electricity produced and the useful thermal energy output expressed in MWh.
- An eligible customer generator shall adequately maintain and service the CHP system so that the system continues to meet or exceed efficiency and NO<sub>x</sub> and GHG emissions standards.

The Act further specifies that the Guidelines should ensure that qualifying CHP systems be designed to reduce waste energy whenever it is cost effective, technologically feasible, and environmentally beneficial, especially with regard to reducing GHG emissions. These facilities must be interconnected to the electric transmission and distribution grid, sized to meet the eligible customer-generator's onsite thermal load, and operate continuously in a manner that meets the expected thermal load and optimizes the efficient use of waste heat.

A draft staff presentation will be posted online before April 6, 2009, at <http://www.energy.ca.gov/wasteheat/>.

## **ISSUES FOR DISCUSSION**

The following issues will be discussed at the workshop:

1. Is a minimum 60 percent efficiency requirement (on a Higher Heating Value basis) the appropriate minimum efficiency to achieve the objectives of the Act (for 20 MW or under)? Would a higher efficiency standard result in fewer CHP installations and perhaps lower GHG emission reductions than a 60 percent standard? Why or why not?
2. Is there an optimum efficiency for achieving the greatest total GHG emission reductions from all new CHP systems (including 20 MW and above)? If so, what is it, and why?
3. Is the previous Self Generation Incentive Program (SGIP), when it still covered CHP systems (pre-January 1, 2008), an appropriate model for documentation requirements on the proposed CHP system and all thermal system equipment, electrical and thermal output, performance and emission estimates, and CHP system design specifications and forms? Why or why not?
4. The ARB's mandatory GHG reporting guidelines apply to CHP facilities above a certain GHG emissions threshold and general stationary combustion facilities, among others. Are the ARB's reporting guidelines sufficient for satisfying the Act's requirements on being environmentally beneficial? Why or why not?
5. Should a CHP System Commissioning Test Plan, a Long Term Monitoring and Reporting Plan, and a Performance Compliance Plan be part of the application process? Why or why not? If so, which organization should be responsible for reviewing the Plans, or is a self-assessment adequate?

6. Utility ownership of CHP systems is encouraged in the Act. Should the guidelines apply to both utility and private party ownership? Why or why not?
7. Should there be additional performance or reporting requirements within the Energy Commission Guidelines? If yes, what are they and why are they necessary; if not, why not?
8. Other issues raised by participants.

Participants should be prepared to discuss these issues and propose answers to these questions. Participants should provide justification for all positions asserted.

## Written Comments

Written comments on the workshop topics must be submitted by 5:00 p.m. on April 27, 2009. Please include the docket number 08-WHCE-1 and indicate "Combined Heat and Power Technical Guidelines" in the subject line or first paragraph of your comments. Please hand deliver or mail an original plus 10 paper copies to:

California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. 08-WHCE-1  
1516 Ninth Street  
Sacramento, CA 95814-5512

The Energy Commission encourages comments by e-mail. Please include your name or organization's in the name of the file. Those submitting comments by electronic mail should provide them in either Microsoft Word format or as a Portable Document (PDF) to [[08-WHCE-1@energy.state.ca.us](mailto:08-WHCE-1@energy.state.ca.us)]. **One paper copy** must also be sent to the Energy Commission's Docket Office.

Participants may also provide an original and 10 copies at the beginning of the workshop. All written materials relating to this workshop will be filed with the Dockets Office and become part of the public record in this proceeding.

## Proposed Schedule

April 13, 2009	Committee Workshop to Discuss Topics for Inclusion in Guidelines
April 27, 2009	Written Comments Due on Workshop Topics
June 15, 2009	Staff Draft Proposed Guidelines Posted
June 29, 2009	Written Comments Due on Staff Draft Proposed Guidelines
Mid-July 2009	Staff Workshop (if necessary)
August 25, 2009	Staff Recommendations for Final Guidelines Posted
September 16, 2009	Committee Workshop on Staff Recommendations for Final Guidelines
September 30, 2009	Written Comments Due on Staff Recommendations for Final Guidelines
November 18, 2009	Energy Commission Business Meeting to Adopt Guidelines

## Public Participation

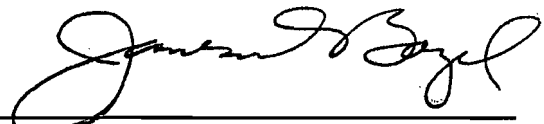
The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission activities. If you want information on how to participate in this forum, please contact the Public Adviser's Office at (916) 654-4489 or toll free at (800) 822-6228, by FAX at (916) 654-4493, or by e-mail at [PublicAdviser@energy.state.ca.us]. If you have a disability and require assistance to participate, please contact Lou Quiroz at (916) 654-5146 at least five days in advance.

Please direct all news media inquiries to the Media and Public Communications Office at (916) 654-4989, or by e-mail at [mediaoffice@energy.state.ca.us]. If you have questions on the technical subject matter of this forum, please call Arthur J. Soinski, Ph.D., Electric Generation System Specialist, at 916-654-4674 or by email at [asoinski@energy.state.ca.us]. For general questions regarding the proceeding please contact Linda Kelly, Electric Generation System Specialist, at 916-654-4815 or by e-mail at [lkelly@energy.state.ca.us].

The service list for the Rulemaking on Implementation of the Waste Heat and Carbon Emissions Reduction Act is handled electronically. Those who wish to receive notices and other documents related to this proceeding should sign up for the list server through the website at [<http://www.energy.ca.gov/wasteheat/>].



JEFFREY D. BYRON  
Commissioner and Presiding Member  
Electricity and Natural Gas Committee



JAMES D. BOYD  
Vice Chair and Associate Member  
Electricity and Natural Gas Committee

Mail Lists: Combined Heat and Power, Distributed Generation, and Electricity and Natural Gas

Note: California Energy Commission's formal name is State Energy Resources Conservation and Development Commission.