

**DOCKET**  
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respectfully requests the Electricity Committee to consider and support these principles in the respective sections of the Proposed Regulations.

Additionally, CMUA offers a strike-out version of the Proposed Regulations to guide further discussions at the Workshop on January 11, 2007.

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Respectfully submitted,



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**APPENDIX A**  
**CMUA's Revisions to Staff-Proposed Regulations**

**Chapter 11. Greenhouse Gases Emission Performance Standard**

**Article 1. Provisions Applicable to Electrical Generating Resources 10 MW and Larger**

**§2900 Scope**

- (a) This article only applies to long-term financial commitments entered into by local publicly-owned electric utilities for baseload generation supplied by Electrical Generating Resources 10MW and larger that is used to serve the utility's retail electricity customers, and long term financial commitments in such facilities. The requirements of this article apply at the time the utility enters the long-term financial commitment.
- (b) This article shall be re-evaluated and continued, modified, or replaced when an enforceable greenhouse gases emissions limit is established and in operation that is applicable to local publicly owned electric utilities.

**§2901 Definitions**

- (a) "Baseload generation" means electricity generation from a power plant that is designed and intended to provide electricity at an annualized, ~~rolling-year~~ capacity factor of at least 60 percent.
- (b) "Combined-cycle natural gas" means a power plant that employs a combination of one or more gas turbines and steam turbines in which electricity is produced in the steam turbine from otherwise lost waste heat exiting from one or more of the gas turbines.
- (c) "Covered procurement" means:
  - (1) A new ownership investment which includes the procurement of baseload generation, or
  - (2) A new contract commitment (including renewal contracts) with a term of five years or more, greater which includes the procurement of baseload generation from with:
    - (A) a baseload generation facility, unless the power plant facility that is not a deemed-compliant power plant, or
    - (B) any units added to a deemed-compliant facility power plant if the additional unit results in an increase of 50 MW or more to the power plant's rated capacity.
- (d) A "Deemed-compliant facility power plant" means any combined cycle natural gas power plant that was in operation or had an Energy Commission final permit decision to operate as of June 30, 2007.
- (e) "Local publicly owned electric utility" means a "local publicly owned electric utility" as defined in Public Utilities Code section 9604.

(f) "Long-term financial commitment" means either a new ownership investment in baseload generation or a new or renewed contract with a term of five or more years, which includes procurement of baseload generation.

(g) "New ownership investment" means:

- (1) ~~A financial commitment~~Any capital outlay to construct a new power plant construction;
- (2) ~~A financial commitment~~The to acquisition of a new or additional ownership interest or lease in an existing power plant previously owned by others, excluding a deemed-compliant power plant;
- (3) ~~A financial commitment to construct a~~Any units added to an existing power plant, if such units results in an increase of 50 MW or more to the power plant's rated capacity; or
- (4) ~~Any new capital outlay in a POU's own existing, non-CCGT power plant that:~~
  - (A) ~~is intended to extend the life of one or more units by five years or more;~~
  - (B) ~~results in a net increase in the rated capacity of the power plant; or~~
  - (C) ~~is intended to convert a non-baseload plant to a baseload plant.~~

(h) "Power plant" means a facility for the generation of electricity, and includes one or more generating units at the same location.

(i) "Rated capacity" means the power plant's maximum rated output under specific conditions designated by the manufacturer and usually indicated on the nameplate physically attached to the generator.

(j) "Renewable power plant" means any hydroelectric power plant or a power plant generating electricity using a resource, fuel, or technology as defined in the most recent edition of the Energy Commission's Renewables Portfolio Standard Eligibility Guidebook, without reference to deliverability criteria.

## **§2902 Greenhouse Gases Emission Performance Standard**

The greenhouse gases emission performance standard (EPS) applicable to this chapter is 11,000 pounds of (0.46-0.51 metric tons) carbon dioxide (CO<sub>2</sub>) per megawatt hour of electricity, which emissions shall be calculated in accordance with International Organization for Standardization (ISO) standards and protocols.

## **§2903 EPS Compliance Calculations**

The EPS applies to the emissions rate (pounds of CO<sub>2</sub> per MWh) of base load generation supplied under a long-term financial commitment. The emission rate of baseload generation is the quotient of the net power plant emissions (pounds of CO<sub>2</sub>) resulting from the production of baseload generation divided by the amount of baseload generation supplied (MWh) under the long-term financial commitment.

Unless otherwise specified, a power plant's compliance with the EPS shall be determined by dividing the power plant's annualized carbon dioxide emissions in pounds by the power plant's annualized net electricity production in MWh.

- (a) A power plant's annualized carbon dioxide emissions shall be calculated by summing the annualized quantity of each fuel used at the power plant directly attributable to electricity production, assuming all carbon in the fuels is converted to carbon dioxide. Fuels are those used in the boiler, combustion turbine, reciprocating or other engine, or fuel cell, including primary and secondary fuels, backup fuels, and pilot fuels. Fuels used in ancillary equipment (e.g., fire pumps, emergency generators, vehicles) are not to be included.
- (b) A power plant's annualized net electricity production in MWh shall be the net electricity available for use at a commercial or industrial process onsite or at a host site, or sale or transmission from the power plant.
- (c) Emissions calculations shall reflect the annual average of carbon dioxide emissions when a power plant is operated at its intended load, steadily, at ISO standard conditions.

## **§2904 Cogeneration Facilities**

A cogeneration facility's compliance with the EPS shall be determined by dividing the facility's annualized carbon dioxide emissions by the facility's annualized equivalent net electricity production. Cogeneration is the combined production of useful heat and electricity, or combined heat and power.

- (a) A cogeneration facility's annualized carbon dioxide emissions shall be calculated by summing the annualized quantity of each fuel used on site at the facility directly attributable to electricity production and industrial or commercial process, assuming all carbon in the fuels is converted to carbon dioxide. Fuels are those used in the boiler, combustion turbine, reciprocating or other engine, or fuel cell, including primary and secondary fuels, backup fuels, and pilot fuels. Fuels used in ancillary equipment (e.g., fire pumps, emergency generators, vehicles) are not to be included.
- (b) A cogeneration facility's annualized equivalent net electricity production in MWh shall be the net electricity available for use at a commercial or

industrial process onsite or at a host site, or for sale or transmission from the ~~facility~~ power plant, plus the useful thermal energy, converted to MWh equivalent by dividing the useful thermal energy, in million British Thermal Units (mmBtu) by 3.414 mmBtu/MWh. Useful heat, or thermal energy, output of a topping cycle cogeneration unit is that which is made available to an industrial or commercial process (net of any heat contained in condensate return and/or make up water); used in a heating application (e.g., space heating, domestic hot water heating); or used in a space cooling application (e.g., thermal energy used by an absorption chiller). The useful thermal energy of bottoming cycle cogeneration is that used by an industrial process.

- (c) Emissions calculations shall reflect the annual average when a power plant is operated at its intended load, steadily, at ISO standard conditions.
- (d) For bottoming cycle cogeneration, the useful thermal energy of cogeneration is that used by all associated industrial processes. The annualized carbon dioxide emissions shall be calculated by summing the annualized quantity of each fuel used on site that is directly attributable to the supply of baseload generation to a utility.

#### **§2905 ~~Offsets~~ Biomass, Biogas or Landfill Gas Energy Facilities**

##### **[Reserved]**

- (a) ~~Facilities using biomass, biogas, or landfill gas as fuel(s) are determined to be compliant with the EPS. Biomass fuels are agricultural and wood wastes and digester and landfill gases that would otherwise be disposed of utilizing open burning, forest accumulation, landfill, flaring, spreading, or composting.~~
- (b) ~~Non-RPS eligible facilities that use biomass, biogas or landfill gas in combination with other fuel(s) shall determine compliance with the EPS by calculating carbon dioxide emissions from the fuels other than other biomass, biogas or landfill gas.~~

#### **§2906 ~~Facilities that~~ Activities to Sequester, Capture, or Reduce Carbon Dioxide Emissions from Power plants**

- (a) If a ~~facility~~ power plant sequesters its carbon dioxide emissions in accordance with a sequestration program, the emissions calculation of that ~~facility~~ power plant, for the purposes of this chapter, shall not include the carbon dioxide emissions successfully sequestered. If a ~~facility~~ power plant provides documentation that a reasonable and technically feasible carbon dioxide injection project will result in a permanent sequestration of CO<sub>2</sub> once the injection project is operational, the ~~facility~~ power plant can determine EPS compliance by presenting projections (and documenting those projections) of net emissions over the life of the power plant.
- (b) The EPS shall not prohibit activities intended to advance the science or technology for reducing the emission rate of a power plant supplying baseload generation.

- (c) The EPS shall not apply to any activity of a utility that would be defined as qualified research under 26 U.S.C. § 41(d) if that activity had been undertaken by a taxpayer.

#### **§2907 Renewable Power plantsrtfolio Standard-Eligible Facilities**

For the purpose of EPS compliance:

- (a) ~~Renewable Portfolio Standard-eligible (RPS-eligible) facilities, as defined in the most recent edition of the Renewables Portfolio Standard Eligibility Guidebook, is~~ are Renewable power plants are determined to be compliant with the EPS.
- (b) Power plants that are not renewable power plants that use biomass, biogas, biodiesel, or landfill gas in combination with other fuel(s) shall determine compliance with the EPS by dividing the power plant's annualized carbon dioxide emissions in pounds from the fuels other than biomass, biogas, biodiesel, or landfill gas by the power plant's annualized net electricity production.

#### **§2908 Unspecified Power Contracts**

A contract of five years or more for unspecified baseload power is not compliant with the EPS.

This section applies to new or renewed contracts for long term financial commitments for baseload generation that do not identify a specific a unit(s) or Power Plant supplying power under the contract with a term of five or more years. The emissions of CO2 resulting from the generation of power provided under an unspecified contract shall be calculated for the various types of unspecified contracts as provided below. The emission value resulting from this calculation shall be compared against the EPS. If the emission value of CO2 per Megawatt-hour resulting from the calculation is at or below the EPS, the local publicly owned electric utility can attest that the unspecified contract passes the EPS and is not subject to further evaluation.

- (a) System contracts: System contracts are contracts for the delivery of power from the baseload generation resources of a supplier's integrated power system ("System"). The emissions from a System shall be calculated by dividing the average annualized emissions of CO2 from the System by the average annualized megawatt hours produced by the System. The average annualized totals should be calculated from historic operation of the system that includes both high and low hydroelectric and weather years (i.e. an average of the previous 10 years). This calculation of System emissions and energy would determine the pounds of CO2 per Megawatt-hour of electricity produced by the System.
- (b) Fuel specific contracts: Fuel specific contracts are power purchases from more than one baseload generation resource unit all powered by the same fuel source (i.e.

hydro or biomass). This type of contract could be with a single Power Plant with multiple units, or multiple units or Power Plants at multiple locations. The emissions from a multiple resource contract would be calculated by dividing the average annualized emissions of CO<sub>2</sub> from the baseload resources included in the contract by the average annualized Megawatt-hours produced by the baseload resources included in the contract. This calculation would determine the pounds of CO<sub>2</sub> per Megawatt-hour of electricity produced by the baseload resources included in the contract. If the fuel specific contract is with a renewable fuel source exempt under Section 2901(j), a contract specifying delivered power from the exempt renewable power plant resources are likewise exempt from the EPS.

- (c) Multiple resource contracts: Multiple resource contracts are power purchases from more than one unit. This type of contract could be with a single Power Plant with multiple units, or multiple units or Power Plants at multiple locations. The emissions from a multiple resource contract would be calculated by dividing the average year load emissions of CO<sub>2</sub> from the baseload resources included in the contract by the average year megawatt hours delivered by the baseload resources included in the contract. This calculation would determine the pounds of CO<sub>2</sub> per megawatt hour of electricity produced by the baseload resources included in the contract.
- (d) Market contracts: Market contracts are power purchases from sellers that agree to provide power delivered to a specific location at an agreed upon price. Power may be delivered under such market contracts from multiple units likely located within the regional area connected to the delivery point (e.g., COB, NP15 and SP15). Such market contracts can be measured against the EPS by looking at the average emissions over a rolling five year period for the regional area connected to the designated delivery point.

#### **§2908.5          Firmed Contracts**

This section applies to new or renewed contracts for long term financial commitments for baseload generation for firmed resources. These contracts can include unit specific contracts that are firmed by System or market power; or renewable contracts such as wind contracts firmed by system or market power. For a unit specific contract that is firm, the firming power is provided when the primary contracted for resource is unavailable to provide power during the hours or in the amounts specified in the contract. The emissions of CO<sub>2</sub> generated to support the power provided by firmed contract shall be calculated as provided below. The emission value resulting from this calculation shall be compared against the EPS. If the emission value of CO<sub>2</sub> per megawatt hour resulting from the calculation is at or below the EPS, the local publicly owned electric utility can attest that the firmed contract passes the EPS and is not subject to further evaluation.

- (a) Firmed renewable contracts: This subsection applies to renewable contracts that are firmed by a System or market resource. The emissions of CO<sub>2</sub> from contracts that meet the following two conditions would be equal to the



emissions of the renewable resource: 1) limit the amount of energy supplied by the firmed renewable contract to the total amount of energy produced by the renewable resource, and 2) contain the renewable energy credits along with the power. If that resource meets the requirements of Section 2907, firmed contracts with that resource that do not exceed the total energy produced by that resource and where the renewable energy credits are sold along with the energy would be determined to be compliant with the EPS. The emissions of CO<sub>2</sub> from a contract for a renewable resource that is firmed and exceeds the amount of energy produced by the renewable resource and/or does not include the renewable energy credits, will be calculated under the provisions for unspecified contracts in Section 2908.

- (b) Firmed unit specific contracts: This subsection applies to contracts that specify a unit supplying the power but are firmed by System or market power. Where power from the specified unit is firmed only when the specified unit is unavailable for service and when the amount of firming is limited to 15% of the total energy delivered under the contract, the emissions related to this contract shall be calculated by the method described in Section 2903 taking into account the emissions from the specified unit only. In such case no calculation is needed for the firmed portion of the contract. If the firming resource exceeds 15% of the energy provided under the contract, the emissions of CO<sub>2</sub> per megawatt hour will be calculated under the provisions for unspecified contracts in Section 2908.

#### **§2908.6 Exchange Transactions**

For exchange transactions, the annualized capacity factor shall be determined on the basis of net energy retained by an exchanging utility.

#### **§2909 Applicability of the Emission Performance Standard to Qualifying Facilities**

The emission performance standard shall not apply to any qualifying small power production facility or qualifying cogeneration facility, as defined by 16 U.S.C. §796 (17-18), that is the subject of a must-take provision pursuant to 16 U.S.C §824a-3.

#### **§2920 Public Notification**

Each local publicly owned electric utility shall provide public notice any time its governing board deliberates undertaking a long-term financial commitment that the governing board determines is or may be subject to the EPS.

- (a) Upon scheduling a public meeting at which proposed long-term financial commitments are to be considered, the utility shall inform the Energy Commission of the date, time and location of the meeting so that the Commission may make the information available on its website. This

requirement may be satisfied by providing the Energy Commission the URL at which this information is to be made available.

- (b) Upon producing documents to be provided the public for discussion of or comment on a proposed investment, the utility shall provide the Energy Commission with an electronic copy of each document for posting on the Commission website. This requirement may be satisfied by providing the Energy Commission the URL at which the documents are available, or by providing details regarding how the documents may otherwise be accessed by the public.

### **§2921 Annual Compliance Filing**

On or before February 15<sup>th</sup> of each year, each local publicly owned electric utility shall submit a compliance filing to the Energy Commission. The compliance filing shall be subject to the rules on confidentiality pursuant to Chapter 7, Article 2 of these regulations. The compliance filing shall contain one paper copy, with original signature, and, if feasible, an electronic copy of the following:

- (a) An attestation, signed by an authorized agent of the governing board of local publicly owned electric utility under penalty of perjury, that
  - (1) the signatory has reviewed, or caused to be reviewed, the compliance submittal, and
  - (2) based on the signatory's information, knowledge or belief, the compliance filing does not contain an untrue statement of a material fact or omits to state a material fact necessary to make the statements true.
- (b) A listing of all the covered procurements, excluding those that fall under ~~§2905(a) or §2907(a)~~, entered into by the utility during the previous calendar year, if any. Each entry shall include the following information:
  - (1) For new or renewed contracts with a term of five years or longer:
    - (A) the terms of the contract and options to extend the contract;
    - (B) the unit(s) or power plant ~~facility~~(ies) providing energy under the contract;
    - (C) a description of the design or operation of the energy source(s) so as to indicate whether or not they are baseload;
    - (D) an explanation as to how the contract is compliant with the EPS;
    - (E) supporting documents or information which allow for assessment of compliance with the standard, including but not limited to staff assessments and reports to the utility's governing board, planned or historical production and fuel use data, and continuous emissions monitoring data.

(2) For new ownership investment

- (A) For new construction or purchase of an existing generation unit or power plant facility, a description of the planned power plant or the purchased asset specifying the power generating equipment, power source (i.e. fuel type, wind, biomass), any supplemental fuel source and any historical production and fuel use data.
- (B) For incremental investment which is defined to be a covered investment per Section 29010(a), a description of the modifications to the unit(s) and their impact on generation capacity, CO2 emissions, and planned operation.
- (C) For non-renewable resources, the heat rate or CO2 emissions profile of the ~~facility~~power plant, and the source of this information.

**§2922 Compliance Investigation**

The Energy Commission may on its own motion, or as a result of a request from a member of the public, staff, or other agency, conduct a complaint or investigation proceeding, or both, pursuant to Chapter 2, Article 4, sections 1231 through 1237 of these regulations, to determine a POU's compliance with this chapter. In conducting such a proceeding, the Energy Commission may require the production of information and documents beyond those made available to the public during consideration of the investment or submitted with the Annual Compliance Filing, including, but not limited to, contracts, staff assessments and reports to the utility's governing board, land use and air quality permits, continuous emissions monitoring data, and other information and documents which aid in assessing compliance with this chapter. All documents produced under this section and designated as "Confidential" by the utility shall be treated as confidential by the Commission upon receipt.

**§2930 Case-by-Case Review for Reliability or Financial Exemptions**

A POU may petition the Commission for an exemption from application of this chapter to a particular long-term financial commitment. The Commission shall provide a response to the utility within 60 days of the application's filing. For such an exemption the POU must demonstrate that:

- (a) the long-term financial commitment to a non-compliant ~~facility~~power plant is necessary to address system reliability concerns; or
- (b) extraordinary circumstances, catastrophic events, or threat of significant financial harm will arise from implementation of this chapter due to unforeseen

circumstances not previously contemplated in the establishment of these regulations.

**Article 2. Provisions Applicable to Electrical Generating Resources Under  
10 MW  
[Reserved]**