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*By E-Mail and Electronic Submission (*http:www.arb.ca.gov/lispub/comm/bclist.php*)*

Hon. Mary D. Nichols, Chairman
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Proposed Regulation to Implement the California Cap-and-Trade Program

Dear Madame Chairman:

Calpine Corporation ("Calpine") appreciates the opportunity to provide these comments on the California Air Resources Board's ("CARB") Proposed Regulation to Implement the California Cap-and-Trade Program, 17 California Code of Regulations ("C.C.R.") sections ("§§") 95800 *et seq.* ("Proposed Regulation") and corresponding amendments to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, 17 C.C.R. §§ 95100 *et seq.* ("Mandatory Reporting Rule" or "MRR").

I. INTRODUCTION AND SUMMARY OF COMMENTS

Calpine is a long-time advocate for low-carbon and renewable energy resources supporting state and federal carbon legislation and opposing recent efforts to overturn AB 32. Calpine is proud to be the nation's first power producer to include a limitation on a power plant's greenhouse ("GHG") emissions in a federal air permit. As a recognized leader in environmentally responsible power generation, in California, Calpine has 5,800 megawatts ("MW") of operating electric generating capacity, with another 700 MW in advanced development. As owner and operator of 725 MW of geothermal energy, Calpine is also California's largest renewable energy provider supplying nearly 25% of the state's current renewable power. We also own and operate the state's largest fleet of combined heat and power facilities. Since 2001, Calpine has invested more than $5 billion to add more than 4,000 MW of clean, efficient new generating capacity that is helping to retire older, higher emitting and less efficient power plants. Starting in 2011, Calpine plans to spend well over $1 billion to build two new state-of-the art generation projects that will support the integration of renewable resources.

Calpine would like to commend Chair Nichols, the CARB Board Members, and staff for the herculean effort undertaken to date to draft these regulations and bring them to this point in the process. As a general matter, Calpine strongly supports CARB's Proposed Regulation because we believe that putting a price on carbon emissions is necessary to encourage the transition from higher-emitting, less efficient generating sources, towards lower-emitting, more efficient fossil generation and renewable generating sources. Calpine also supports the Proposed Regulation's goal of moving towards a full auction of emissions allowances, while still providing transitional assistance to avoid some of the economic harm and emissions leakage that could result to affected sectors, particularly at the beginning of the program. Acknowledging that CARB is seeking to meet the statutory deadline imposed for approval of the cap and trade program by Assembly Bill ("AB") 32 and will likely need to consider additional amendments of the Proposed Regulation during 2011, Calpine believes it is critical that CARB finalize a complete regulatory package for submission to the Office of Administrative Law ("OAL") at the earliest opportunity within 2011. As a matter of routine business, Calpine is already making business decisions relative to 2012 and the sooner that regulatory certainty is provided to covered entities the better. As a supporter of a federal cap and trade program, Calpine wants CARB and the state of California's cap and trade program to succeed and be implemented by its legislative deadlines.

Calpine believes that CARB will lead the nation in demonstrating that a well-thought-out and well-planned-for cap and trade program can significantly reduce harmful carbon emissions but need not result in significant economic disruption. With that in mind, Calpine seeks to work cooperatively with CARB to ensure the program's success and viability, and we offer the following summary of our comments on the Proposed Regulation, with a detailed discussion of these comments at Section II below:

- The Proposed Regulation should be revised, similar to other existing and proposed cap and trade programs, to include a direct allocation to long-term contract generators that cannot recover the costs of allowances from their customers.

- The Proposed Regulation should be revised to clarify the exemption for greenhouse gas emissions from geothermal generating sources.

- The Proposed Regulation's 10% limit on purchases in any auction needs to be increased to reflect the size of affiliated generators in California.

- The Proposed Regulation's holding limit should be increased so that it does not limit larger generators' ability to take advantage of the flexibility afforded by unlimited banking and three-year compliance periods.

- Calpine supports the Proposed Regulation's $10 Reserve Price on allowances, so long as transitional assistance is provided to long-term contract generators that cannot recover allowance costs from their customers.

- The default emissions factor that would be relied upon to calculate the compliance obligation for unspecified power imported into California is too low and would disfavor more efficient specified imports and in-State generating sources.

II. DISCUSSION

A. The Proposed Regulation Should Be Revised to Include a Direct Allocation to Long-Term Contract Generators That Cannot Recover the Cost of Allowances From Their Customers

The Proposed Regulation should be revised to include a direct allocation of allowances to long-term contract generators that cannot recover the costs of GHG allowances from their customers, similar to existing and proposed cap and trade programs. In the Initial Statement of Reasons ("ISOR"), CARB explains that the Proposed Regulation does not provide any direct allocation to non-utility electric generators, but will require such generators to purchase allowances at auction. According to the ISOR, "[b]ecause the price of electricity in the wholesale electricity market will reflect the cost of these purchased allowances, staff expects that independent generators will incorporate their cap-and-trade compliance costs into their bids in the wholesale power markets. These costs will be paid by the [investor-owned utilities ("IOUs")] when the power is purchased." ISOR, II-32. However, CARB also acknowledges in a footnote that generators subject to long-term contracts may not be able to recover their allowance costs:

> Some generators have reported that some existing contracts do not include provisions that would allow full pass-through of cap-and-trade costs. These contracts pre-date the mid-2000s and many may be addressed through the recently announced combined heat and power settlement at the California Public Utilities Commission. Staff is evaluating this issue to determine whether some specific contracts may require special treatment on a case-by-case basis.

ISOR, II-32, n.22; *see also* ISOR, Appendix J, "Allowance Allocation," J-16, n.15.

Notwithstanding this acknowledgement, the Proposed Regulation makes no allocation for generators subject to long-term contracts that do not allow for recovery of the costs associated with purchasing allowances. Nor does it otherwise provide transitional assistance to such generators until such time as their existing contracts expire or are substantively amended. Further, while the California Public Utilities Commission's ("CPUC") proposed qualifying facility ("QF") settlement would allow combined heat and power ("CHP") generators to recover costs associated with purchasing allowances for generation of power sold to the grid, the QF settlement does not address the allowance costs such generators will bear as a result of their obligation to provide steam and electricity to industrial consumers pursuant to long-term contracts that provide no mechanism for recovery of allowance costs. Calpine believes this is a serious and important issue that must be addressed by the Board upon approval of the Proposed Regulation and through publication by staff of proposed 15-day amendments at the earliest opportunity.

Unlike either an IOU or a publicly-owned utility ("POU") that can seek to recover costs associated with emissions allowances from its ratepayers or a merchant generator that can recover such costs through the market price of electricity, long-term contractor generators can be severely impacted by the requirement to purchase emissions allowances. Further, long-term contractor generators do not exercise control over when their facilities can be dispatched, but must operate whenever called upon by their customers. In many instances, contracts entered into by the long-term contract generators prior to the enactment of AB 32 do not provide any mechanism for recovery of costs associated with purchasing GHG allowances and it is highly unlikely that their counterparties would agree to contract changes to allow cost recovery at this time. This is particularly true for purchasers of steam and electricity in energy intensive/trade exposed ("EITE") industries facing leakage concerns as a result of the Proposed Regulation.

Congress previously recognized that long-term contract generators do not have a mechanism to recover new environmental costs from their power purchasers, and exempted these plants from the Acid Rain Program under the 1990 Clean Air Act Amendments so long as the long-term agreements remained in effect. More recently, under The American Clean Energy and Security Act of 2009," (H.R. 2454) ("Waxman-Markey"), the House of Representatives passed legislation that would have made a pool of allowances available at no cost to long-term contract generators with an agreement executed before March 1, 2007 "that does not allow for recovery of the costs of compliance with the limitation on greenhouse gas emissions under this title." (*Id.* § 783(a)(5)(B).) Similar provisions were included in the Clean Energy Jobs and American Power Act, ("Kerry-Boxer") that was reported out of the Senate Environment and Public Works Committee in November 2009. Further, existing GHG regulatory programs, such as the Regional Greenhouse Gas Initiative ("RGGI"), have included similar provisions that provide transitional relief to long-term contract generators who cannot recover the costs to purchase allowances at auction.

The reason existing and proposed GHG regulatory programs have all sought to address the specific circumstance faced by long-term contract generators is clear: Rather than provide a constructive price signal to encourage lower emitting generation, imposing allowance costs on long-term contract generators would simply be punitive, since their customers could continue dispatching them without experiencing any increase in price associated with the costs to purchase GHG allowances; those costs would be borne solely by the long-term contract generator and would, in many instances, likely make its continued operation uneconomic. The consequences of such an imposition of costs on the long-term contract generator could realistically result in their decision to stop producing power, which could cause serious long-term reliability issues within the State and result in an even greater reliance upon higher-emitting imports.

The problem affects not only generators selling power to IOUs and POUs, but also those who are selling electricity and/or useful thermal energy to nearby or collocated industrial operations under long-term contracts. These CHP or cogeneration facilities represent a highly efficient, environmentally preferable alternative to meeting industry's energy needs. For this reason, CARB has made expansion of CHP a significant component of its overall Scoping Plan, which targets an increase of 4,000 MW of installed CHP capacity within the State by 2020.[1] This measure is intended to displace approximately 30,000 gigawatt-hours ("GWh") of demand from other power generation sources, resulting in a targeted reduction of 6.7 million metric tons of CO_2e in 2020. *Id.*

However, without providing transitional assistance for generators subject to long-term contacts that do not allow for recovery of costs associated with purchasing allowances, the continued viability of many existing CHP generators will be seriously threatened. Further, the CPUC's proposed QF settlement does not address the potentially serious economic consequences to CHP generators subject to long-term contracts that do not provide a mechanism for recovery of allowance costs associated with generation of electricity and steam sold to their industrial customers. Because of the importance of existing CHP facilities to assuring a highly efficient source of power and useful thermal energy for industry in California, CARB must provide transitional assistance to CHP owners subject to long-term contracts that do not provide a mechanism for recovery of GHG compliance costs. Where a covered entity or opt-in covered entity would receive a direct allocation for industry assistance under the Proposed Regulation, but that entity purchases power and/or steam from a CHP generator pursuant to a contact that provides for no recovery of allowance costs, Calpine believes that allowances attributable to the purchased power and steam should be provided to the long-term contract generator, and not the industrial host, since the industrial host would not in those circumstances experience an increase in costs associated with its purchase of such power and steam.

Calpine would propose that CARB publish a revision to the Proposed Regulation that provides for a direct allocation of emissions allowances to generators subject to long-term contracts that provide no mechanism for recovery of allowance costs. The proposed revisions would merely provide transitional assistance until such time as the existing contract expires or is substantively amended. Under the proposed revisions, CARB would provide allowances to qualifying long-term contract generators based upon their historic emissions, as established in their most recent verified emissions report submitted to CARB pursuant to the MRR. For conventional generators, the allocation would come from the 89 million metric tons CO_2e of allowances allocated to the load-serving entities for the 2012 budget. For cogeneration facilities, the allocation would come from the approximately 11 million metric tons CO_2e of emissions from cogeneration facilities, which the ISOR acknowledges have not been included within the 89 million tons allocated to the load serving entities, but have yet to be apportioned.[2] This

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[1] Climate Change Scoping Plan: A Framework for Change, CARB, December 2008, 44 (recommending measure no. E-2, "Increase Combined Heat and Power Use by 30,000 GWh").

[2] The ISOR explains that the 89 million metric tons of CO_2e allocated to the load serving entities does not include approximately 11.1 million metric tons of CO_2e that was emitted by cogeneration facilities in 2008:

> This estimate does not include the emissions from electricity produced at cogeneration facilities (11.1 $MMTCO_2e$ in 2008), a substantial portion of which is purchased by the distribution utilities. Staff recognizes that the purchase of this electricity should be addressed similar to the purchase of electricity from other generators, and that allowances will be allocated to distribution utilities to reflect purchased cogeneration electricity. Staff is continuing to evaluate the options for defining this portion of the allowance allocation to distribution utilities.

allocation to long-term contract generators would then be subject to an annual "true-up" based upon actual reported emissions for the year in which an allocation is made. No entity awarded allowances under this provision would be able to sell, transfer or otherwise use such allowances, except to meet their annual and triennial compliance obligations. Nor would they be allowed to bank such allowances for future use; any surplus allowances would be returned to the Allowance Price Containment Reserve after each annual true-up.

To accomplish these changes, Calpine proposes the following revisions to the Proposed Regulation, which are largely based upon the provisions concerning long-term contract generators appearing within proposed federal climate change legislation and regulations implementing RGGI. Proposed deletions are shown by red "strike-through" font, insertions are shown by blue underlined text, and relocated text is shown in green.

§ 95802. Definitions.

(a) Definitions. For the purposes of this article, the following definitions shall apply:

....

(111) "Long-Term Contract" means a sales or tolling agreement governing the sale of electricity and/or useful thermal energy from an electric generating facility or cogeneration facility at a price (whether a fixed price or price formula) that does not allow for recovery of the costs of compliance with this regulation and that is at least five (5) years in duration, provided that such agreements are not between entities that were affiliates of one another at the time at which the agreement(s) were entered into.

(112) "Long-Term Contract Generator" means a covered entity which is not an electric distribution utility and which operates an electric generating facility or cogeneration facility pursuant to one or more long-term contracts.

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§ 95870. Disposition of Allowances.

(a) Allowance Price Containment Reserve. On December 15, 2011, the Executive Officer shall transfer allowances to the Allowance Price Containment Reserve, as follows:

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(c) Allocation to Public Utilities.

(1) Electrical Distribution Utilities. The Executive Officer will place an annual individual allocation in the holding account of each eligible distribution utility on or before January 15 of each calendar year from 2012-2020 pursuant to section 95892. Allowances available for allocation to electrical distribution utilities shall be 89 million multiplied by the cap adjustment factor in Table 9.2 for each budget year 2012-

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ISOR, Appendix J-15.

~~2020.~~2020, less the amount of allowances for that year that are allocated to long-term contract generators pursuant to section 95894(a).[3]

§ 95890. General Provisions for Direct Allocations.

(a) Eligibility Requirements for Industrial Facilities. A covered entity or opt-in covered entity from the industrial sectors listed in Table 8-1 shall be eligible for direct allocations of California GHG allowances if it has complied with the requirements of the MRR and has obtained a positive or qualified positive verification statement for the prior year pursuant to the MRR.

(b) Eligibility Requirements for Electrical Distribution Utilities. An electrical distribution utility shall be eligible for direct allocation of California if it has complied with the requirements of the MRR and has obtained a positive or qualified positive verification statement on its sales number for the prior year pursuant to the MRR.

(c) Reserved for Natural Gas Distribution Utilities.

(d) Eligibility for Long-Term Contract Generators. A long-term contract generator that has demonstrated its eligibility to the satisfaction of the Executive Officer pursuant to section 95894 of this regulation shall be eligible for direct allocation of California GHG allowances if it has complied with the requirements of the MRR and has obtained a positive or qualified verification statement for the prior year pursuant to the MRR. The owner of a facility shall cease to be eligible to receive emissions allowances under this subsection upon the earliest date on which the facility no longer meets each and every element of the definition of a long-term contract generator or the requirements of this paragraph.

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§ 95894. Allocation to Long-Term Contract Generators.

(a) Direct Allocation to Long-Term Contract Generators. Not later than February 1, 2012 and each calendar year thereafter, the Executive Officer shall deposit in the compliance account of the owner or operator of each eligible long-term contract generator a quantity of emission allowances of the same vintage year that is equal to the average number of tons of greenhouse gas emitted as a result of sales pursuant to long-term contracts during the three preceding calendar years. Any allowances received by a covered entity pursuant to this paragraph shall remain within such entity's compliance account and shall not be transferred or sold to any other party or used for any other purposes, other than to satisfy the annual or triennial compliance obligation of the covered entity.

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[3] If CARB were to add the approximately 11 million metric tons CO_2e of emissions from cogeneration facilities to the amount available for the load-serving entities, this provision could also provide allowances to cogeneration facilities subject to long-term contracts that do not provide for recovery of allowance costs with respect to power and useful thermal energy sold to industrial consumers. As CARB has acknowledged, this 11 million metric tons of emissions has not been allocated under the Proposed Regulation. *See supra* at nt.2.

(b) Demonstration of Eligibility. To be eligible to receive a direct allocation of allowances under this section, an authorized account representative of a long-term contract generator shall submit each of the following in writing to the Executive Officer no later than September 30 of the year preceding the calendar year for which it is seeking an allocation:

(1) A copy of any long-term contracts for which it is seeking an allocation;

(2) A statement certifying that each such long-term contract does not allow the covered entity to recover the cost of GHG allowances from the counterparty purchasing electricity and/or useful thermal energy from the facility;

(3) A statement that the long-term contract was originally executed prior to January 1, 2007, remains in effect and has not been amended since the effective date of this regulation to change the terms governing the price or amount of electricity or useful thermal energy sold or the expiration date;

(4) A statement of the covered entity's total GHG emissions reported pursuant to the MRR for the three preceding calendar years;

(5) A statement of the covered entity's GHG emissions during the three preceding calendar years resulting from sales of electricity and/or useful thermal energy pursuant to qualifying long-term contracts; and

(6) The following certification statement by the authorized account representative or any alternative authorized account representative: "I am authorized to make this submission on behalf of the long-term contract generator requesting allowances. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted with this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining this information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I consent to the jurisdiction of California and its courts for purposes of enforcement of the laws, rules and regulations pertaining to title 17, article 5, sections 95800 et seq., and I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

If, subsequent to the submittal of the foregoing information and supporting documentation, there is any material change in the information and statements provided to the Executive Officer, the persons who submitted such information and statements shall submit a supplemental certification and supporting material addressing any such material change within 30 days after the change occurs. For purposes of this paragraph, a long-term contract shall be deemed to be originally executed prior to January 1, 2007 if it was originally executed prior to such date, but was subsequently amended and restated prior to the effective date of this regulation due to the bankruptcy or reorganization of the long-term contract generator or its parent company or affiliate.

(c) Determination of Eligibility. Upon receipt of the information required by paragraph (b) of this section, the Executive Officer shall determine whether the party submitting such information has demonstrated that it is eligible to receive a direct allocation of allowances pursuant to this section and shall notify that party of his or her determination by January 30 of the calendar year for which the allocation is sought.

(d) Annual True-Up Obligation. By March 1 of the year following the calendar year for which allowances have been provided pursuant to this section, the long-term contract generator shall submit a report to the Executive Officer stating the actual emissions of GHG resulting from sales of electricity and/or useful thermal energy pursuant to qualifying long-term contracts during the preceding calendar year.

(1) Distribution of Surplus Allowances to Long-Term Contract Generators with a Shortfall. If the amount of allowances previously allocated by the Executive Officer to a long-term contract generator for any given calendar year exceeds the long-term contract generator's actual emissions resulting from the sales of electricity and/or useful thermal energy pursuant to qualifying long-term contracts during such calendar year, the Executive Officer shall deduct the surplus allowances from the long-term contract generator's compliance account and shall then distribute them to long-term contract generators that reported a shortfall in the amount of allowances previously allocated to them for a given calendar year, in comparison to their actual emissions resulting from the sale of electricity and/or useful thermal energy pursuant to qualifying long-term contracts during such calendar year.

(A) If the amount of surplus allowances available for distribution for a given calendar year is less than the shortfall reported by all long-term contact generators for the same calendar year, the Executive Officer shall distribute an equal percentage of the surplus allowances to each long-term contract generator that experienced a shortfall, with the numerator equal to the total amount of surplus allowances to be distributed and the denominator equivalent to the total shortfall experienced by all long-term contact generators for such calendar year. For example, if the total number of surplus allowances available for distribution pursuant to this paragraph is 100,000 metric tons of CO_2e and the total shortfall claimed by five long-term contract generators is 200,000 metric tons of CO_2e, then each of the five long-term contract generators would receive allowances in an amount equivalent to 50% of its respective shortfall.

(B) If the amount of surplus allowances available for distribution for a given calendar year is greater than the shortfall reported by all long-term contact generators for such calendar year, the Executive Officer shall transfer the remaining portion of surplus allowances to the Allowance Price Containment Reserve administered pursuant to section 95913 of this regulation.

(2) The requirements of this paragraph shall not change the date when a covered entity's reporting obligation is due under the MRR.

As an alternative to a direct allocation to the long-term contract generators, the Proposed Regulation could be revised to require that the electric distribution utilities set aside a portion of the allowances allocated to them pursuant to section 95892 to meet the compliance obligation for all power purchased pursuant to long-term contracts. The electric distribution utilities would then be required to transfer the necessary allowances to the long-term contract generators' compliance accounts within 30 days of the relevant surrender date for the annual and triennial compliance obligations. Under this approach, the allowances attributed to CHP generators' sale of power and steam to industrial hosts could also be drawn from the pool of allowances allocated to the load serving entities, assuming that CARB added to that pool the approximately 11 million metric tons of emissions attributable to cogeneration, which are not reflected by the load serving entities' current allocation of 89 million metric tons CO_2e for 2012. *See supra* at nt.2. Long-term contract generators would need to apply to the Executive Officer to receive any such allocation in the same fashion as they would under the proposed alternative above, although the allocation would ultimately come out of the electric distribution utilities' limited holding account, rather than directly from CARB. Use of any allowances provided under such an alternative would similarly be limited to satisfying a long-term contract generator's compliance obligation; they could not be sold or banked for later use.

B. The Proposed Regulation Should Be Revised to Clarify the Exemption for Greenhouse Gas Emissions from Geothermal Generating Sources

The Proposed Regulation needs to be revised to clarify that GHG emissions resulting from geothermal power sources are not subject to a compliance obligation. California is fortunate to have some of the largest geothermal reservoirs in the world. Unlike intermittent renewable generating sources, such as wind and solar, geothermal power represents a continuous, baseload supply of clean energy, without requiring any combustion of fossil fuels. As such, geothermal resources represent a significant and important component of California's renewable generating portfolio. Calpine is the largest producer of geothermal energy in the United States, owning and operating 330 steam wells, 75 injection wells and 15 power plants located at The Geysers for approximately 725 MW of baseload generating capacity. Calpine is currently planning to undertake the first significant expansion of generation at The Geysers in decades.

The Proposed Regulation and corresponding amendments to the MRR would require reporting of GHG emissions from geothermal generating sources, but would exempt them from the cap and trade compliance obligation. Calpine strongly agrees with CARB's proposal to exempt geothermal GHG emissions from the cap and trade compliance obligation, since it would be unprecedented and inconsistent with all other existing and proposed GHG compliance programs to subject a renewable generating source to a cap and trade compliance obligation. Calpine, however, offers the following comments to assure that, in adapting the MRR and corresponding definitions within the Proposed Regulation to the U.S. Environmental Protection Agency's ("EPA") federal mandatory GHG reporting requirements set forth at 40 Code of Federal

Regulations ("C.F.R."), Part 98, CARB accurately describes and accounts for geothermal GHG emissions.

Under the existing version of the MRR, fugitive emissions are defined as "the unintended or incidental emissions of greenhouse gases from the transmission, processing, storage, use, or transportation of fossil fuels or other materials, including but not limited to HFCs from refrigeration leaks, SF6 from electric power distribution equipment, methane from mined coal, and CO2 emitted from geyser steam and/or fluid used in geothermal generating facilities." 17 C.C.R. § 95102(86). The proposed amendments to the MRR and the Proposed Regulation would both adopt a different definition of "fugitive emissions", so that they include "those emissions which are unintentional and could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening." 17 C.C.R. § 95102(a)(143) (proposed); 17 C.C.R. § 95802(a)(81) (proposed). This would bring the definition of "fugitive emissions" in line with its traditional understanding and interpretation in CARB's and EPA air quality control laws. *See, e.g.*, CARB Glossary of Air Pollution Terms ("Fugitive Emissions: Emissions not caught by a capture system which are often due to equipment leaks, evaporative processes and windblown disturbances."), available at: http://www.arb.ca.gov/html/gloss.htm#F; 40 C.F.R. § 51.165(a)(1)(ix) ("Fugitive emissions means those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening.").

However, GHG emissions from geothermal power plants can, in most cases, reasonably pass through a stack, vent or other functionally equivalent opening. Acknowledging this fact, the proposed revisions to the MRR would no longer categorize emissions from geothermal generating sources as "fugitive" in nature. *See* 17 CCCR 95112(f) (proposed) ("Operators of geothermal generating facilities must calculate annual emissions of CO2 and CH4 from geothermal energy sources using source specific emission factors derived from a measurement plan approved by the ARB."). In light of these changes to the MRR and in recognition of the fact that GHG emissions from geothermal generating sources are not truly fugitive in nature, Calpine would recommend that CARB revise the Proposed Regulation so that the exemption for GHG emissions associated with geothermal power generation no longer depends upon their classification as either "fugitive emissions" or "process emissions", but is instead separately enumerated within the Proposed Regulation as shown below.

§ 95852. Emission Categories Used to Calculate Compliance Obligations.

(a)

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(h) The compliance obligation is calculated based on the sum of (i) emissions of CO_2, CH_4, and N_2O resulted from combustion of fossil fuel; (ii) emissions of CH_4 and N_2O resulted from combustion of all biomass-based fuel; (iii) emissions of CO_2 resulted from combustion of unverifiable biomass-derived fuels, as specified in section 95852.2; (iv) emissions of CO_2 resulted from combustion of biomass-derived fuels not listed in section 95852.2; and (v) all process and vented emissions of CO_2, CH_4, and N_2O as specified in the

Mandatory Reporting Rule except for those listed in section 95852.2(~~a)(6~~g) below.

§ 95852.2. Emissions without a Compliance Obligation.

Emissions from the following source categories as identified in sections 95100 through 95199 of the Mandatory Reporting Regulation count toward applicable reporting thresholds but do not count toward a covered entity's compliance obligation set forth in this regulation. These source categories include:

(a) Combustion emissions from biomass-derived fuels (except biogas from digesters) from the following sources . . . .

(b) Biodiesel . . . .

(c) Fuel ethanol . . . .

(d) Municipal Solid Waste (biogenic fraction only as determined by methodology specified in ASTM D6866) . . . .

(e) Biomethane from the following sources . . . .

(f) ~~Fugitive and process emissions from:(1) CO_2 emissions from~~ Geothermal generating units~~;(2) CO_2~~ and ~~CH_4 emissions from~~ geothermal facilities~~;~~.

(~~3~~g) Fugitive and process emissions from:

(1) CO_2 emissions from hydrogen fuel cells;

(~~4~~2) At petroleum refineries: asphalt blowing operations, equipment leaks, storage tanks, and loading operations; or

(~~5~~3) At the facility types listed in section 95101(e) of the Mandatory Reporting Regulation, Petroleum and Natural Gas Systems: leak detection and leaker emission factors, and stationary fugitive and "stationary vented" sources on offshore oil platforms.

C. The Proposed Regulation's 10% Limit on Purchases in Any Auction Needs to Be Increased to Reflect the Size of Affiliated Generators in California

The Proposed Regulation sets an auction purchase limit for covered entities and opt-in covered entities of ten percent (10%) of the allowances available in any auction conducted during the first compliance period. 17 C.C.R. § 95911(c)(1) (proposed). While Calpine understands the need to prevent market manipulation, Calpine's covered entities in California could realistically need to purchase more than 10% of available allowances just to cover their compliance obligations, depending upon the amount of allowances that the POUs consign for auction.

The table attached as Attachment A shows Calpine's reported emissions for its California facilities and for those two out-of-state facilities that regularly import power into the California market. Notably, this table does not include a complete year's data for Calpine's Otay Mesa Energy Center, a highly efficient 510 MW combined-cycled gas-fired power plant, which began commercial operations in October 2009 and is expected to have significantly greater emissions than shown on this table. Nor does it include any data for Calpine's Russell City Energy Center, which is currently under construction and expected to come online in 2013. To estimate the future GHG emissions from Russell City Energy Center not shown on Attachment A, we would note that the Prevention of Significant Deterioration ("PSD") permit for Russell City Energy Center limits its GHG emissions to 1,928,182 metric tons of CO_2e per year. The attached table also does not reflect the anticipated increase in emissions associated with the planned conversion of Calpine's Los Esteros Critical Energy Facility from a simple-cycle peaking plant into a highly efficient combined-cycled power plant, which is expected to begin commercial operation in 2013. Like Russell City Energy Center, Los Esteros Critical Energy Facility has been found by the CPUC to meet the State's Emissions Performance Standard of 1,100 lbs CO_2 per MWh, which only applies to "baseload generation facilities designed and intended to provide electricity at an annualized plant capacity factor of at least 60 percent."[4] As baseload generation facilities, Calpine anticipates significant dispatch of both Russell City Energy Center and Los Esteros Critical Energy Facility in coming years. Given Calpine's existing emissions as shown by Attachment A and the anticipated dispatch of Otay Mesa Energy Center, Russell City Energy Center and Los Esteros Critical Energy Facility, Calpine believes that a 10% limit could realistically preclude it from purchasing sufficient allowances to meet its compliance obligations. By subjecting large affiliated generators such as Calpine to an auction limit that could realistically be lower than their total compliance obligation, the Proposed Regulation could force such large generators to obtain allowances from the secondary market or the Allowance Price Containment Reserve at a significantly higher cost than available from the general auction. As a result, the proposed auction limit could place large generators such as Calpine at a significant competitive disadvantage.

In addition, Calpine believes that the Proposed Regulation would provide an unfair exemption from this auction purchase limit for the IOUs, which would discriminate against independent power producers such as Calpine. According to the ISOR, IOUs are exempt from this purchase limit because, unlike POUs, IOUs cannot use their direct allocation of allowances for their own compliance obligations. *See* ISOR, II-38 ("ARB proposes to exempt the investor-owned utilities from the purchase limit because entities do not receive a direct allocation that they can use for their own compliance needs."). However, IOUs are no differently situated than independent power producers in this respect. Thus, under the Proposed Regulation, the IOUs would be allowed to acquire more allowances than they need for their own compliance obligations, which they could then either sell at an inflated price to independent power producers needing them to meet their own compliance obligations or use to gain leverage in bilateral power procurement negotiations. Calpine believes this betrays the design principle that the proposed cap and trade regulation should not discriminate between utility and independent power producers.

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[4] *See* Decision Approving Settlement Agreement Regarding the Second Amended and Restated Power Purchase Agreement, California Public Utilities Commission, April 16, 2009, Decision 09-04-010, issued April 20, 2009, Application of Pacific Gas and Electric Company for Expedited Approval of the Amended Power Purchase Agreement for the Russell City Energy Center, Application 08-09-007 (Filed Sep. 10, 2008) Company Project (U39E), 34-35; California Public Utilities Code § 8034(a) (defining baseload generation as "electricity generation from a powerplant that is designed and intended to provide electricity at an annualized plant capacity factor of at least 60%.").

Accordingly, Calpine would recommend revising the Proposed Regulation to delete this exemption for IOUs, as shown by the proposed language below.

In addition, Calpine would recommend that the auction purchase limit for covered entities during the first compliance period generally be kept at 10% of the total number of allowances available any given auction, but with an opportunity for any covered entity or group of covered entities with a corporate association to exceed this limit, so long as its total purchase of allowances of any vintage year does not exceed 125% of its average annual verified emissions during the preceding three calendar years, plus, for any entity with less than three years' reported emissions data, an additional amount that represents a reasonable estimate of the entity's anticipated emissions during that calendar year. This would allow large affiliated entities, such as Calpine, to satisfy their anticipated compliance obligation through purchases at auction, while still avoiding the potential for covered entities to engage in market manipulation by purchasing an amount of allowances grossly in excess of their anticipated compliance obligations for any calendar year. The 125% limitation for entities with three years' reported emissions date would provide sufficient flexibility to accommodate annual variation in a facility's dispatch, as well as some amount of increased dispatch that might be expected to occur as a result of a cap and trade program for more efficient generating units, such as Calpine's fleet. Additionally, the additional amount for entities with less than three years reported emissions is intended to provide a covered entity with the opportunity to purchase allowances for newly commissioned facilities. For Calpine, this would allow it to purchase sufficient allowances to satisfy the compliance obligations for its recently commissioned Otay Mesa Energy Center, as well as its projects currently in construction and under development (Russell City Energy Center and the combined-cycle conversion of the Los Esteros Critical Energy Facility).

Our proposal (below) would require the covered entity or group of covered entities that anticipates exceeding the 10% limit in any auction to submit a statement to the Executive Officer at least 30 days prior to the auction date, which identifies all of the facilities for which it anticipates purchasing allowances, the total average annual emissions over the past three years for those facilities with three years' reported emissions data and the anticipated emissions for any entities with less than three years' of reported emissions (*i.e.*, any newly commissioned facilities), along with any supporting data to demonstrate the reasonableness of any such estimate of anticipated emissions. This statement, which would include a certification by the authorized representative, would be deemed automatically accepted and the covered entity or group of entities automatically authorized to purchase allowances in excess of the 10% limit during the next auction, but with the understanding that the total purchase of allowances of that vintage year by the group of entities cannot exceed 125% of reported emissions, plus any anticipated emissions for new entrants to the market. If the Executive Officer does not find that the anticipated emissions for any entity identified in the statement with less than three years' reported emissions (*i.e.*, new entrants) represents a reasonable estimate of its emissions during that year, the Executive Officer would notify the entity at least 7 days prior to the auction date and the covered entity would not be authorized to purchase any amount in excess of the 10% limit solely with respect to that facility, although it could still purchase allowances in excess of the 10% limit for all of its other facilities for which it has three-years of reported emissions data or for which it has submitted an estimate of anticipated emissions that the Executive Officer has not disputed in the notification. If the Executive Officer does dispute an estimate of anticipated emissions for a particular facility, the covered entity could always submit additional supporting information prior to the next auction, revising and/or justifying the basis for its estimate of anticipated emissions.

§ 95911. Format for Auction of California GHG Allowances.

(a) Auction Format.

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(c) Auction Purchase Limit. For auctions conducted from January 1, 2012, through December 31, 2014, the share of allowances of any vintage year offered at any quarterly auction which may be purchased by one entity or a group of entities with a corporate association pursuant to 95914 shall be limited to less than:

(1) For covered entities and opt-in covered entities: ten percent of the allowances offered for auction~~.~~, provided, however, that the Executive Officer may authorize any covered entity or group of covered entities with a corporate association to purchase an amount of allowances in excess of ten percent during any auction, so long as such entity's or group of entities' total purchase of allowances of any vintage year does not exceed 125 percent of the entity's or group of entities' average annual verified emissions during the preceding three calendar years, plus, for any entity with less than three years' reported emissions data, an additional amount that represents a reasonable estimate of the entity's anticipated emissions during that calendar year.

~~For investor owned electrical utilities receiving a direct allocation of allowances pursuant to 95892(b) and subject to the monetization requirement pursuant to 95892(c): the auction purchase limit in (A) does not apply. This subsection (B) shall not be interpreted to exempt said investor owned electrical utilities from any other requirements of this article~~

(A) Any covered entity or group of covered entities with a corporate association that anticipates purchasing more than ten percent of the allowances offered for auction during any quarterly auction shall submit a statement to the Executive Officer within thirty (30) days prior to the auction date identifying the covered entities for which it anticipates purchasing allowances, the total average annual emissions for such entities with three years' reported emissions data and the anticipated emissions for any entities with less than three years' of reported emissions. The statement shall be accompanied by any supporting information and the certification set forth at section 95894(b)(6). If the Executive Officer does not find that the covered entity's or group of covered entities' anticipated emissions for any entity with less than three years' reported emissions represents a reasonable estimate of the entity's anticipated emissions during that year, the Executive Officer shall notify the entity within seven (7) days prior to the auction date.

(2) For all other auction participants: four percent of the allowances offered for auction.

As an alternative to the foregoing proposal, CARB could adopt a substantially higher auction purchase limit, such as the 25% limit applicable to RGGI states.[5]

D. The Proposed Regulation's Holding Limit Should Be Increased So That It Does Not Limit Larger Generators' Ability to Take Advantage of the Flexibility Afforded by Unlimited Banking and Three-Year Compliance Periods

The Proposed Regulation includes a holding limit that would dramatically limit the ability of large affiliated generators, such as Calpine, to utilize the important flexibility mechanisms otherwise provided, including unlimited banking of allowances and three-year compliance periods. While the Proposed Regulation would provide a limited exemption from this holding limit for allowances deposited in a covered entity's compliance account up to its most recent year's reported emissions, this would effectively nullify the flexibility afforded by limiting the annual compliance obligation to only 30% of the previous year's emissions. *See* 17 C.C.R. § 95855(b). In other words, covered entities would need to transfer 100% of their annual compliance obligation to their compliance accounts each year to avoid exceeding the holding limit. This would unfairly deny the largest generators within the State with the same flexibility afforded to other generators and would therefore place the largest generators at a competitive disadvantage. Further, the holding limit would severely restrict the ability of the largest generators within the State to bank allowances for use at a later time. This could forego the important early reductions to be gained by allowing unlimited banking of allowances. Although Calpine understands the importance of assuring that no one entity controls the allowance market or hoards allowances, Calpine is strongly opposed to the Proposed Regulation's holding limit, which it understands will equate to only approximately 6.02 million metric tons CO_2e for the first year of the program. As suggested by the emissions shown on Attachment A and discussed in the previous section, Calpine anticipates significantly greater emissions from its covered entities in California.

At the very least, Calpine believes that the holding limit must at least be equal to the sum of the amount derived through application of the formula appearing at subsection 95920(b)(3) (*e.g.*, 6.02 million metric tons CO_2e during 2012), plus 70% of a covered entity's emissions reported during the preceding calendar year, plus all banked allowances from prior vintages. Accordingly, Calpine would propose the following revisions to the Proposed Regulation's holding limit:

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[5] *See, e.g.*, DOER CO_2 Budget Trading Program Auction Regulation, 225 Code of Massachusetts Regulation § 13.06(8) ("No bidder, including any affiliate or agent of such bidder, shall purchase more than 25% of the allowable allowances in any one auction to ensure a fair and competitive outcome for an auction."), available at: http://www.mass.gov/Eoeea/docs/doer/rggi-auction-reg-final.pdf; Auction Notice for CO_2 Allowance Auction 10 on December 1, 2010, RGGI, Oct. 5, 2010, § 7.2.3 ("The maximum number of CO_2 allowances that any Applicant, or group of associated applicants, may bid for in a single auction is 25% of the CO_2 allowances offered for sale in that auction."), available at: http://www.rggi.org/docs/Auction_Notice_Oct_5_2010.pdf.

§ 95920. Trading.

(A) General Prohibitions on Trading.

....

(B) Holding Limit.

(1) The holding limit is the maximum number of California GHG allowances that may be held by an entity or group of associated entities registered pursuant to section 95830.

(2) The holding limit will apply to each entity with a holding account.

(3) Calculation The holding limit will be calculated and applied within each calendar year using the following formula:

Holding Limit = 0.1*Base + 0.025*(Annual Allowance Budget – Base) + 0.7(GHG Emissions) + Banked Allowances

In which:

"Base" equals 25 million metric tons of CO_2e.

"Annual Allowance Budget" is the number of allowances associated with the current budget year pursuant to subarticle 6.

"GHG Emissions" is equivalent to the positive or qualified positive GHG emissions reported by a covered entity or group of associated entities form the previous data year.

"Banked Allowances" is all allowances from a prior vintage year held by a covered entity or group of associated entities.

E. Calpine Supports the Proposed Regulation's $10 Reserve Price on Allowances, So Long as Transitional Assistance is Provided to Long-Term Contract Generators That Cannot Recover Allowance Costs from Their Customers

Calpine supports the Proposed Regulation's establishment of an initial Reserve Price of $10 per metric ton of CO_2e for 2012 vintage allowances and $11.58 for 2015 vintage allowances. *See* 17 C.C.R. § 95911(b)(6) (proposed). So long as the Proposed Regulation is revised to provide transitional relief for long-term contract generators that cannot pass-through allowance costs, as described in section A of these comments, Calpine believes that setting a strong Reserve Price will encourage covered entities both to undertake cost-effective emissions reductions within their own footprint and to support the development of real, additional emissions reductions through certified offsets projects.

F. The Default Emissions Factor That Would Be Relied Upon for Unspecified Power Is Too Low and Would Disfavor More Efficient In-State Generation

The proposed amendments to the MRR would set forth a procedure for calculating the default emission rate for unspecified power based on the average emissions rate derived using calculation tools developed by the Western Climate Initiative and announced by CARB along with the proposed MRR amendments. *See* 17 C.C.R. § 95111(b)(1) (proposed) (setting forth the default emission factor for unspecified electricity imports as equivalent to the factor published on the ARB Mandatory Reporting website or, for first points of receipt located in nonlinked jurisdictions as 0.435 MT of CO2e/MWh). This default emissions rate will then be used to calculate the allowance compliance obligation for unspecified power under the Proposed Regulation's cap and trade program. Calpine is concerned that, by relying upon a low default emissions rate for unspecified power, the Proposed Regulation will have the affect of allowing first delivers to classify their higher emitting imports as unspecified power so that they will be treated more favorably, in comparison to lower-emitting specified sources of imported power and in-state generating sources. This would have a perverse consequence of encouraging increased dispatch of higher-emitting sources, to the detriment of both lower-emitting specified imports and in-state generating sources.

To address this problem, Calpine recommends that the default emission rate for purposes of both the proposed amendments to the MRR and the Proposed Regulation should be set at 1,100 lbs (0.55 tons) CO_2e per MWh, which is equivalent to the State's Emissions Performance Standard and therefore represents the emission rate of the higher heat-rate existing combined-cycle gas-fired power plants likely to determine market-clearing prices in California.[6]

The use of a higher default emission rate will not disadvantage out-of-state resources provided that an appropriate mechanism is available so that any resource with an emission rate that is lower than the default may be treated as a "specified source of electricity". Calpine agrees with the comments submitted by the Western Power Trading Forum concerning the appropriate mechanisms that should be utilized to allow specified sources of electricity to claim a lower emissions rate than the default rate.

* * * *

Calpine looks forward to working with the Board and staff to ensure that a timely and successful cap and trade program is ready to begin on January 1, 2012. The changes recommend herein by Calpine are necessary to ensure that the program's flexibility is available to all covered entities,

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[6] *See* Decision 07-01-039 Jan. 25, 2007, California Public Utilities Commission, Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies, Rulemaking 06-04-009 ((Filed April 13, 2006), Interim Opinion on Phase I Issues, Greenhouse Gas Emissions Performance Standard, § 1.2 ("Based on our review of emissions rates associated with a broad range of [combined-cycle gas turbine] powerplants of varying vintages, we adopt an EPS emissions rate of 1,100 pounds of carbon dioxide (CO_2) per megawatt-hour (MWh)."), available at: http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/64072.pdf.

and importantly that the regulations do not result in unintended consequences that could threaten the continued viability of CHP and lower emitting resources.

Please feel free to contact me with any questions or concerns regarding these comments. Thank you for the opportunity to submit these comments.

Sincerely,

Kassandra Gough/mo

Kassandra Gough
Director, Government and Legislative Affairs

Attach.

cc: James Goldstene, Executive Officer
Kevin Kennedy, Assistant Executive Officer, Office of Climate Change
Sam Wade, Office of Climate Change
Judith J. Friedman, Chief, Program Evaluation Branch, Office of Climate Change
Steven S. Cliff, Ph.D., Manager, Program Evaluation Branch, Office of Climate Change
Claudia Orlando, Air Pollution Specialist, Office of Climate Change
Holly Geneva Stout, Esq., Senior Staff Counsel, Office of Legal Affairs

Attachment A

Sum of SumOfCO2_MASS		OP_YEAR			2007-2009
STATE	FACILITY_NAME	2007	2008	2009	3-yr Avg
AZ	South Point Energy Center, LLC	920,081	1,161,949	890,320	990,783
AZ Total		920,081	1,161,949	890,320	990,783
CA	Calpine Gilroy Cogen, LP	136,416	64,668	130,503	110,529
	Calpine Sutter Energy Center	1,119,265	1,215,631	971,649	1,102,182
	Creed Energy Center	7,979	9,931	7,431	8,447
	Delta Energy Center, LLC	2,205,555	2,018,136	2,093,905	2,105,865
	Feather River Energy Center	15,978	14,847	14,616	15,147
	Gilroy Energy Center, LLC	50,910	55,690	33,952	46,851
	Gilroy Energy Center, LLC for King City	11,615	15,011	10,034	12,220
	Goose Haven Energy Center	9,204	9,804	7,306	8,771
	Lambie Energy Center	9,083	10,331	8,347	9,254
	Los Esteros Critical Energy Fac	40,168	50,650	43,579	44,799
	Los Medanos Energy Center, LLC	1,546,010	1,385,466	1,495,607	1,475,695
	Metcalf Energy Center	1,337,585	1,408,514	1,186,689	1,310,929
	Otay Mesa Energy Center, LLC			340,047	340,047
	Pastoria Energy Facility	2,071,866	2,121,276	2,155,587	2,116,243
	Riverview Energy Center	16,397	18,133	11,083	15,204
	Wolfskill Energy Center	13,017	16,427	11,784	13,742
	Yuba City Energy Center	15,434	20,945	16,875	17,751
CA Total		8,606,482	8,435,459	8,538,994	8,526,978
OR	Hermiston Power Plant	1,328,586	1,587,554	1,476,542	1,464,227
OR Total		1,328,586	1,587,554	1,476,542	1,464,227
Grand Total		10,855,150	11,184,961	10,905,856	**10,981,989**

Agnews	106,344	68,534
Greenleaf 1	107,009	104,013
Greenleaf 2	141,152	132,459
King City Cogen	235,374	287,567
Pittsburg (closed)	124,663	124,553
Watsonville (closed)	85,871	86,682

Note that total for entities reported here that do not exceed 25,000 tons per year amounts to 100,536 tons per year