ALCANTAR & KAHL, LLP

November 19, 2010

Sam Wade
Office of Climate Change
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Treatment of Electricity Use and CHP Generation for Energy Intensive Trade Exposed Entities in Greenhouse Gas Cap-and-Trade Market

Dear Sam,

These comments are offered on behalf of the Energy Producers and Users Coalition[1] and the Cogeneration Association of California[2] (EPUC and CAC). Members of these coalitions have a substantial interest in how combined heat and power generation (CHP or cogeneration) and electricity use are treated under the greenhouse gas (GHG) cap and trade (C/T) regulation. EPUC and CAC members own and operate roughly 2,400 MW of existing CHP in California. Electricity from these facilities is used largely to serve refineries and enhanced oil recovery operations, which are considered energy intensive trade exposed (EITE) industries under the C/T regulation. In addition, EPUC members have the potential to develop additional CHP capacity, depending on market conditions and the removal of existing development barriers. Beyond their generation interests, EPUC members purchase substantial quantities of bundled investor owned utility (IOU) and publicly owned utility (POU) electricity services to serve their demand.

These comments offer important refinements to CARB's current proposal for treatment of EITE covered entities' consumption of electricity. The ISOR makes clear CARB's intent to cover the carbon costs of EITE entities to ensure they remain competitive and to avoid leakage. However, there remain critical ambiguities in the regulations that could prevent CARB from achieving its stated goal of ensuring these entities receive necessary transitional assistance. In particular:

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[1] EPUC is an ad hoc group representing the electric end use and customer generation interests of the following companies: Aera Energy LLC, BP West Coast Products LL, ConocoPhillips Company, ExxonMobil Power and Gas Services Inc., Shell Oil Products US, THUMS Long Beach Company, and Occidental Elk Hills, Inc., ConocoPhillips Company, Shell Oil Products US, THUMS Long Beach Company, and Occidental Elk Hills, Inc.

[2] CAC represents the combined heat and power and cogeneration operation interests of the following entities: Coalinga Cogeneration Company, Mid-Set Cogeneration Company, Kern River Cogeneration Company, Sycamore Cogeneration Company, Sargent Canyon Cogeneration Company, Salinas River Cogeneration Company, Midway Sunset Cogeneration Company and Watson Cogeneration Company

- ✓ **Imported Power:** The ISOR makes clear ARB's intent to cover the carbon costs of EITE entities' energy use to ensure they remain competitive and to avoid leakage. Depending on the mechanics of allocation,[3] the proposed regulation could miss the mark. EITE entities have four primary options to procure electricity, and the proposed regulation provides certainty for emissions cost recovery for only one of those options. If an EITE entity produces and consumes power "on-site", its carbon costs will be covered. If an entity procures power from its interconnected utility, through self-generation that may not be located "on-site", or under a PUC Code §218(b) over-the-fence transaction, the regulation is unclear about the level of coverage. To achieve CARB's stated objective, the proposed regulation should be revised to provide for carbon cost recovery by an EITE entity regardless of the entity's source of electricity. Specifically, if relying on the existing framework, CARB should provide that:

    - An IOU or POU must convey free allowance value to an EITE entity through a rebate or bill credit, rather than through potential access to energy efficiency programs; alternatively, CARB should allocate free allowances to cover EITE entities' costs of carbon embedded in utility purchased power and deduct those allowances from the utility allocation.

    - An EITE entity importing power from a non-utility generator through non-utility facilities should receive a free allowance allocation to cover the cost of carbon emissions associated with these imports.

    - Any form of "self generation" should be covered by a free allowance allocation provided the delivery of the power does not rely on utility delivery.

  With these changes, CARB can be assured that the carbon costs associated with electricity consumed by all EITE entities will be covered in a competitively neutral way without risk of double recovery.

- ✓ **Exported Power:** To avoid potential conflicts associated with implementation of the qualifying facility/combined heat and power (QF/CHP) settlement pending at the California Public Utilities Commission (CPUC), CARB's regulations must explicitly state what is implicit in the draft regulation: none of the free allowances allocated to EITE entities will be provided to cover the emissions associated with those entities' power exports to the grid.

- ✓ **Use of Allowances:** The regulations should clarify that EITE entities receiving free allowances may place those allowances in the auction or retain them for future compliance.

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[3] EPUC looks forward to further discussions with CARB Staff to discuss the mechanics of addressing electricity in allowance allocation for Oil & Gas Extraction and Refining.

- ✓ **New Investment in CHP:** CARB should clarify that investment in new CHP or expanded reliance on CHP will benefit from the free allowances designated for new entrants in §95853(e) in an amount that ensures parity with other similarly-situated EITE entities.

- ✓ **Market Recovery of Carbon Costs**. CARB should state its intent that CHP delivering power to the grid has a sufficient opportunity to recover carbon costs in the market price and provide for periodic review of market prices to assure that coverage.

Finally, these comments recommend the inclusion of clarifying language to the revised mandatory reporting regulations to ensure that bottoming cycle CHP emissions exclude industrial process emissions.

I. CURRENT REGULATIONS DO NOT ASSURE COMPETITIVENESS OF INDUSTRIAL FACILITIES WILL BE MAINTAINED

CARB's proposed regulations leave open critical gaps that may compromise its ability to adequately provide transition assistance to EITE entities. CARB proposes to provide free allowance allocations to EITE entities to "*avoid imparting undue initial economic gain or loss*" in the early program years and to prevent leakage. CARB notes that current competitiveness is maintained if the free allocation covers all of the EITE's carbon costs:[4]

Current competitiveness is maintained if:
Free allocation = carbon costs – carbon cost recovered

Table J-7, however, creates a major gap in this framework. As shown below, while CARB intends to directly reduce carbon costs associated with heat consumption and on-site energy consumption, an EITE facility will be exposed to GHG compliance costs associated with "imported" power.

	Energy Self-Generated or Imported?		
Source of Direct or Indirect Carbon Costs		Produced On-site	Imported from Off-site
	Heat Consumed	Direct Allocation	Direct Allocation
	Electricity Consumed	Direct Allocation	Compensation Through Distribution Utility

CARB does not intend to provide free allocation of allowances for the carbon costs associated with imported power because it assumes that carbon costs associated with these imports will be offset by the allocation of allowances to its interconnected utility:

[4] *See* Appendix J of the Initial Statement of Reasons (ISOR), Figure J-5.

> *Indirect carbon costs arising from purchased electricity from the grid will be reduced through compensation from distribution utilities that are given allowance value for the purpose of ratepayer protection.*[5]

The rationale for §95891(c) reiterates these expectations. In discussing thermal-energy based equations, the ISOR states:

> *Electricity purchased from off-site is not part of the thermal energy-based allocation equation but receives indirect compensation through [the] distribution utility to offset the expected indirect GHG costs, as described in Section 95892.*[6]

The regulations, however, do not assure that this form of compensation will occur. In addition, CARB's analysis leaves unclear the boundary between power "produced on-site" and "imported from off-site." The place in which this boundary is drawn will undermine the goal of maintaining EITE entities' competitiveness.

While the proposed regulations aim to maintain competitiveness by permitting carbon cost recovery, the implementation of this principle could be comprised, depending on the mechanics of the allowance allocation formula. First, if the utilities return the allowance value to industrial customers as contemplated in the ISOR, an EITE entity may receive no coverage for the carbon costs embedded in its utility rates. Second, depending on where the boundary is drawn between "on-site" and "imported" power, EITE entities receiving power from non-utility generation over non-utility wires may not receive any coverage for the carbon costs associated with the electricity they consume. As noted below, effective transitional assistance to industrial facilities requires recovery of GHG compliance costs associated with power purchased from a utility or non-utility..

A. Allocation of Allowances to Utilities Alone Will Not Assure Recovery of Carbon Costs Associated with Utility Power Imported by an EITE Entity

The proposed regulations would not adequately compensate an EITE for GHG compliance costs associated with imported power. While the ISOR appropriately contemplates direct rebates to residential customers, industrial customers' allowance value would be provided through energy efficiency (EE) benefits, rather than bill relief.[7]

> *The proposed regulation limits how the return of allowance value to customers might function. Staff believes that any rebates to residential customers should be made as separate payments and not simply deducted from customer bills….*

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5 *See* Appendix J, at J-32.
6 *See* ISOR at IX-59
7 See Appendix J, at J-61.

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As shown in Table J-7, electric distribution utilities are expected to reduce the carbon costs faced by industrial sources due to power purchased from the grid. Staff envisions this compensation would be in line with that given to other customer classes. However, the form of compensation to industrial ratepayers might best be structured as energy-efficiency programs rather than per-customer rebates.[8]

It is unclear, however, whether additional EE programs will have material value to EITE industries in the future. Energy-intensive entities have been leaders in EE because of the impact of energy costs on profitability. Moreover, even if an energy-efficiency program could be leveraged, a trade-exposed entity may not be able to realize full carbon cost recovery. Energy efficiency programs and incentives may encourage incremental investments but they will not adequately compensate EITE entities for the carbon costs associated with imported power. Importantly, CARB also leaves this issue to be resolved by the CPUC, which further increases uncertainty related to this issue. In other words, EE incentives, particularly those that have not yet been litigated, are not sufficient to ensure the competitiveness of EITE facilities.

B. The Proposed Regulation Leaves EITE Entities Exposed to Carbon Costs Associated with Power Imported From Non-Utility Sources

The ISOR Table J-7, makes clear that EITE entities will be covered for the emissions costs associated with electricity generated and consumed "on site." As discussed above, this characterization leaves power imports from the utilities fully exposed. Moreover, an additional ambiguity in the proposed regulation – the boundary between "imported" and "on-site" power -- leaves one additional category of EITE entities exposed to carbon costs associated with power. It is not clear whether entities securing non-utility power using non-utility wires would qualify as importers or receive a free allowance allocation as "on-site" generation to cover the emissions associated with that power.

The proposed regulation's use of the term "on-site" power is unclear. Does this mean that carbon costs for electricity must be generated on the same physical real property as the host operation? If so, the definition would preclude cost recovery by entities that own and operate generation, or purchase from non-utility generators that may not be located directly on the host property site.

Consider the following scenarios:

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[8] See Appendix J, J-61.

- EITE 1 owns a CHP generator that delivers power to its industrial operation, and that generator is located physically on the same real property as the industrial operation;
- EITE 2 holds an ownership interest in a CHP generator that is physically on the same real property as the industrial operation and buys its power from that generator;
- EITE 3 owns a CHP generator that delivers power to its industrial operation, but that generator is not located physically on the same real property as the industrial operation;
- EITE 4 holds an ownership interest in a CHP generator that is not physically on the same real property as the industrial operation and buys its power from that generator.

There appears to be no basis on which to discriminate against any of these EITE entities based on the geographic location of the serving generation or the ownership. Regardless of ownership or geography, these entities will incur carbon costs for their power use – whether directly as a generating cost or indirectly as a power purchase cost. Likewise, regardless of ownership or geography, these entities will not have an alternative means to recover their carbon costs.

For this reason, the boundary of free allowance allocation can and should be drawn simply. Based on the existing regulatory framework, if an entity imports its power from a utility, the utility should be required to provide a direct rebate to cover those costs. (Alternatively, to ensure that all EITE entities importing power are treated equally, CARB could provide a direct allocation of allowances to these entities to cover carbon costs associated with imports.) If an entity self-generates or purchases power over private wires from a non-utility, the carbon costs associated with the power should be recoverable through a direct allowance allocation. There should be no distinction drawn based on the physical location or ownership of the generation.

C. Proposed Regulations Can Easily Be Modified to Ensure EITEs Recover All GHG Compliance Costs

As CARB correctly notes, current competitiveness can be maintained only if the regulations ensure that all GHG compliance costs are recovered. CARB's proposal does not meet the agency's own objective of ensuring that trade-exposed entities receive coverage of the emissions associated with electricity use. CARB can mitigate the potential competitive impacts in one of two ways. Under the proposed framework, CARB can require the utility to share the benefits of free allowance value with trade-exposed entities through *direct rebates*. The direct rebate could be based on the average carbon adder factor per MWh. This can be accomplished with the incorporation of the following language as subpart (D):

§95892(b)(3)

Auction proceeds obtained by an electrical distribution utility shall be used exclusively for the benefit of retail ratepayers of each electrical distribution utility, consistent with the goals of AB 32, and may not be used for the benefit of entities or persons other than such ratepayers.

* * *

(D) ***Utilities shall provide auction proceeds to energy- intensive, trade-exposed industrial ratepayers through a direct rebate equal to the carbon costs embedded in the ratepayer's average MWh rate multiplied by the MWh consumed by the ratepayer.***

An alternative, simpler way to achieve this objective would be for CARB to provide an EITE entity a direct allocation of free allowances for power purchased from a distribution utility. To avoid double counting, CARB could then exclude these allowances from the allocation of free allowances to the entity's serving utility. If CARB elects to take this approach, the following modifications should be reflected in §95891:

§95891(a):

"A_t" is the amount of California GHG allowances directly allocated to the operator of an industrial facility for all activities with a product output-based allocation from budget year "t". ***This allocation shall include allowances to cover the carbon costs associated with electricity imported from an interconnected utility.***

§95891(c):

"A_t" is the amount of California GHG allowances directly allocated to the operator of an industrial facility with a thermal energy-based allocation from budget year "t". ***This allocation shall include allowances to cover the carbon costs associated with electricity imported from an interconnected utility.***

In addition, the final regulation should provide for allowance allocations to recover the carbon costs of non-utility power, whether self-generated or otherwise procured over proprietary wires. The following modifications are required:

§95891(a):

"A_t" is the amount of California GHG allowances directly allocated to the operator of an industrial facility for all activities with a product output-

based allocation from budget year "t". ***This allocation shall include allowances to cover the carbon costs associated with electricity self-generated or procured over private distribution facilities from a source other than facility's interconnected utility.***

§95891(c):

"A_t" is the amount of California GHG allowances directly allocated to the operator of an industrial facility with a thermal energy-based allocation from budget year "t". ***This allocation shall include allowances to cover the carbon costs associated with electricity self-generated or procured over private distribution facilities from a source other than facility's interconnected utility.***

In short, CARB should eliminate any distinctions between power produced "on-site" and imported, making the distinction solely based on whether or not the power is procured from the entity's interconnected utility. To better ensure that all imported power receives the same treatment, CARB could provide for a direct allocation of allowances (in §§95891(a) and (c)) to cover the carbon costs associated with imported power from a utility.

II. CONSISTENT WITH ISOR, THE REGULATIONS SHOULD CLARIFY THAT CARB CONTEMPLATES NO ALLOWANCE ALLOCATION FOR POWER EXPORTED BY EITE FACILITY CHP

A CHP policy settlement was filed before the CPUC on October 18, 2010, and is currently pending approval. Provisions of the settlement require clarification from CARB that none of the allowances allocated to EITE entities that own exporting CHP generation are intended to cover carbon costs associated with exports.

The settlement provides that free allocation of allowances to cover carbon compliance costs associated with exported electricity can decrease a CHP facility's short-run marginal cost (SRAC) energy payments. The settlement on page 67-68 provides a formula for allocating free allowances between on-site use and exported power in the event that CARB or another agency fails to make clear the purpose of a free allowance allocation:

(ii) If CARB (or any other Governmental Authority) does not allocate Free Allowances received by Seller as described in subsection (i) above, then Seller shall set forth in the Free Allowance Notice the quantity of Free Allowances allocated to the energy generated by the Generating Facility and delivered to Buyer during the applicable time-period (FAd) utilizing the following formula:

*FAd = FAt * [Ge/(Ge+ Gt)] * [Ed/(Esh + Ed)]*

Implicit in the regulations and ISOR is the notion that any free allowance allocation is provided only for CHP power used by the industrial host. The ISOR and accompanying appendices suggest that CARB would not provide an allocation of allowances to cover industrial CHP emissions associated with exported power, but this clarification is not reflected in the draft regulations. Importantly, Table J-7 provides that an industrial facility would be allocated allowances to cover emissions associated with heat consumed and electricity generated and used on-site. Not stated is CARB's expectation that industrial CHP must recover GHG compliance costs associated with exported power from the market. Failure to clarify this point in the Final Statement of Reasons and regulation could leave industrial CHP exposed to significant compliance costs, moving free allowances from the industrial to the utility side of the ledger. This would in turn, compromise the contemplated levels of industry assistance noted in Table 8-1 of Subarticle 8, which indicates that from 2012-2014, all industrial facilities, regardless of leakage risk, would receive 100% industry assistance.

To address this significant gap in the proposed regulations, the following language must be added to the following sections of §95891:

§95891(a):

> *"A_t" is the amount of California GHG allowances directly allocated to the operator of an industrial facility for all activities with a product output-based allocation from budget year "t".* ***This allocation shall exclude GHG compliance costs associated with electricity generated by the facility and exported to an interconnected utility.***

§95891(c):

> *"A_t" is the amount of California GHG allowances directly allocated to the operator of an industrial facility with a thermal energy-based allocation from budget year "t".* ***This allocation shall exclude GHG compliance costs associated with electricity generated by the facility and exported to an interconnected utility.***

CARB should also consider modifications to the regulations to clarify how the treatment of exported power may impact the allowance allocation to the EITE host.

III. REGULATIONS SHOULD CLARIFY THAT INDUSTRIAL FACILITIES CAN USE ALLOWANCES FOR COMPLIANCE PURPOSES

The regulations should clarify that industrial facilities receiving an allocation of allowances will be able to use the allowances for compliance purposes. Section 95891

provides for an allocation of allowances to industrial sector facilities. Unlike §95892, which clarifies how IOUs and POUs use allocated allowances, §95891 fails to clarify this use for industrial facilities. While the regulations allow a POU to distribute allowances from their holding accounts to their compliance accounts, IOUs are required to monetize all allowances immediately to "*ensure that the amount of value given to distribution utilities is transparent to the public and that this value is used on behalf of electric ratepayers*." [9] CARB's regulations should clarify, in §95891, that industrial facilities can use allowances in a manner similar to POUs, particularly in light of the fact that the identified restrictions required for IOUs are not relevant to industrial facilities. Accordingly, two sections of the regulations should be modified.

The following provision should be added to §95891:

> *(d) At least 90 days prior to receiving a direct allocation of allowances, industrial facilities will inform the Executive Officer of the share of their allowances that is to be placed:*
> *(1) In the industrial facility's compliance account; or*
> *(2) In the industrial facility's limited use holding account.*

§95831(a)(3) should be modified as follows:

> *(3) Limited Use Holding Accounts. When an entity qualifies for a direct allocation under section 95890, the accounts administrator will create a limited use holding account for the entity that shall be subject to the following restrictions:*
>
> *(A) the entity may not transfer compliance instruments from other accounts into the limited use holding account; and*
>
> *(B) ~~the entity~~ an investor-owned utility may not transfer compliance instruments from the limited use holding account to any account other than the Auction Holding Account.*

IV. REGULATIONS SHOULD ENSURE PARITY IN ALLOWANCE ALLOCATIONS FOR NEW OR EXPANDED RELIANCE ON CHP

Providing allowances to encourage incremental reliance on CHP will promote the Scoping Plan. Section 95853(e) provides a new entrant free allowances in the first year following the year in which its emissions exceed the threshold in section 95812. It further provides that the allowance allocation in the first qualifying year will be "*twice the number calculated pursuant to section 95891*." This provision should clarify that this treatment applies not only to new entrants, but that industrial facilities' increasing reliance on CHP will receive allowances in parity with other similarly-situated, existing facilities. Accordingly, the following language should be added to §95853:

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[9] See Appendix J, at J-60.

For a new entrant that is eligible to receive free allowances pursuant to subarticles 8 and 9, the first year for this entity to receive free allowances is the year ….The number of free allowances for this new entrant to receive in that year is twice the number calculated pursuant to section 95891. ***For purposes of this provision, "new entrant" includes an existing facility that increases its reliance on cogeneration.***

V. CARB SHOULD MONITOR MARKET PRICES FOR ELECTRICITY TO ENSURE ADEQUATE CARBON COST RECOVERY FOR COMBINED HEAT AND POWER FACILITIES.

CARB's Scoping Plan recognizes CHP as a specific measure in reducing GHG emissions. One potential disincentive to optimally efficient CHP development lies in the larger carbon footprint such development imposes on the industrial facility. Installing CHP increases the emissions responsibility of the facility because it requires coverage of the export emissions. But for the exports, the facility's obligation would be limited to thermal emissions from a boiler. Consequently, to invite development there must be some assurance that a facility exporting CHP power will be able to recover its carbon costs in the market.

California regulators universally seem to have taken the position that recovery of carbon costs in the market price of electricity is a theoretical "given." Developers, however, and particularly industrial facilities whose core business is not electricity generation, might not be willing to bet their capital on market theory alone. Consequently, CARB should take action to ensure that CHP export power can recover its power costs in the market. Specifically, CARB should provide the following language in the ISOR rationale for §§ 95891(a) and (c):

While allowances will not be allocated to industrial cogeneration to cover emissions associated with electricity exports to the grid, this limitation is based on the assumption that these entities will be able to fully recover their costs in the market.

In addition, the final regulations should provide the following language as §95891(d):

To ensure that industry assistance through allowance allocations meets the objectives of maintaining competitiveness and avoiding leakage, the Executive Director shall annually review electricity market prices to examine the extent to which these prices permit full carbon cost recovery for efficient cogeneration facilities serving industrial facilities. If the prices do not permit full carbon cost recovery, the Executive Director shall take action to ensure full recovery following consultation with the Public Utilities Commission.

Placing this language in the cap-and-trade regulation will substantially increase investors' confidence in new or expanded CHP economics and increase the likelihood of new development.

VI. REPORTING REGULATIONS FOR BOTTOMING CYCLE CHP SHOULD REFLECT EMISSIONS ASSOCIATED ONLY WITH SUPPLEMENTAL FIRING

The revised reporting regulations appropriately rely on total fuel consumption to calculate emissions for CHP facilities. However, in the prior set of reporting regulations, CARB inaccurately required bottoming cycle CHP facilities to count the emissions generated in the manufacturing process. The CPUC has since clarified that it is appropriate only to count emissions generated in supplemental firing when calculating emissions associated with a BC CHP facility:

> *We therefore modify D.07-08-009 to state that when calculating the EPS for bottoming-cycle cogeneration, the Conversion Method [which calculates the effective GHG emissions rate] shall not include the emissions associated with the industrial or commercial process, but rather, shall only include emissions associated with any supplemental firing that might occur.*

The revised regulations would benefit from a similar clarification:

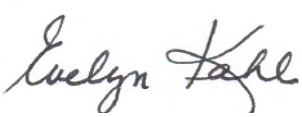
(b) Basic Information for Cogeneration Units. In addition to the information required by paragraph (a) of this section, the operator of a cogeneration unit must:

(1) Indicate whether the unit is topping or bottoming cycle, and the prime mover technology;
(2) Provide useful thermal output (mmBtu);
(3) Where steam or heat is acquired from another facility for the generation of electricity, report the provider, the provider's ARB ID, and the amount of acquired steam or heat (mmBtu);
(4) Where supplemental firing has been applied to support electricity generation or industrial output, report fuel consumption by fuel type using the units in paragraph (a)(3) of this section and indicate the purpose of the supplemental firing. ***For a bottoming cycle facility, report only emissions associated with supplemental firing.***

(c) CO_2 from Fossil Fuel Combustion. When calculating CO_2 emissions from fuel combustion, the operator who is subject to Subpart C or D of 40 CFR Part 98 must use a method in 40 CFR §98.33(a)(1) to §98.33(a)(4) as specified by fuel type in Section 95115 of this article. ***A bottoming cycle cogeneration unit shall not include the emissions associated with the industrial or commercial process, but rather, shall only include emissions associated with any supplemental firing that might occur.***

We are available to discuss these issues at your request.

Very truly yours,



Evelyn Kahl

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Dave Mehl