BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA
AND THE CALIFORNIA ENERGY COMMISSION

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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)
AB 32 Implementation	CEC Docket 07-OIIP-01

COMMENTS OF THE ENERGY PRODUCERS AND USERS COALITION AND THE COGENERATION ASSOCIATION OF CALIFORNIA REGARDING INTERIM OPINION ON GREENHOUSE GAS REGULATORY STRATEGIES

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COMMENTS OF THE ENERGY PRODUCERS AND USERS COALITION AND THE COGENERATION ASSOCIATION OF CALIFORNIA REGARDING INTERIM OPINION ON GREENHOUSE GAS REGULATORY STRATEGIES

The Energy Producers and Users Coalition[1] and the Cogeneration Association of California[2] (jointly, EPUC/CAC) submit the following comments on the Interim Opinion on Greenhouse Gas Regulatory Strategies (PD) pursuant to the February 8, 2008 proposed decision.

I. OVERVIEW AND SUMMARY OF RECOMMENDATIONS

The PD carefully balances the many objectives of AB 32 in proposing a First Deliverer (Deliverer) approach and cap-and-trade compliance mechanism for greenhouse gas (GHG) regulation in California's electricity sector. The Deliverer approach should (a) ensure that emissions from imported power are accounted for in California's reduction efforts, (b) minimize leakage and facilitate linkage by adopting a regulatory approach that can be easily expanded, (c) ensure environmental integrity and (d) reduce the likelihood of legal challenge relative to certain other alternatives. In addition, the proposal to include the electricity sector in a multi-sector cap-and-trade program will ensure that the new GHG reduction efforts can take place in a cost-effective manner.

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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 LLC, Chevron U.S.A. Inc., ConocoPhillips Company, ExxonMobil Power and Gas Services Inc., Shell Oil Products US, THUMS Long Beach Company, Occidental Elk Hills, Inc., and Valero Refining Company – California.

[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.

While the PD takes a thoughtful approach to these very broad issues, it falls short in providing direction for achieving an important GHG reduction opportunity: *combined heat and power (CHP) generation*. CHP has been broadly recognized as an important part of the state's GHG reduction arsenal because of its potential to reduce emissions that would otherwise result from the separate production of thermal and electric energy. The PD overlooks these resources, leaving this important GHG reduction tool in jeopardy. If adopted without further consideration of CHP resources, the PD's approach would:

- √ Provide a disincentive to the continued operation and development of CHP resources; and
- √ Create an unnecessarily complex GHG regulation program for CHP resources, fragmenting their regulation into three separate sectors.

Regulators have an opportunity to avoid this undesirable result by recommending that the Air Resources Board create a separate CHP sector in which issues unique to these highly efficient resources can be addressed. Creation of a separate CHP sector by regulators will break down barriers to further CHP development, ensure proper incentives for CHP operations, and ease administrative burdens. Without this careful step, particularly as regulators approach the question of allowance distribution, the incentive to maintain existing and build new CHP may easily be lost.

Finally, the PD recommendation in favor of a partial auction is premature and should be eliminated pending further record development. Given the importance of allowance distribution policy decisions and California's history, the Commission should defer all allowance distribution issues to a single coordinated review and recommendation.

II. FIRST DELIVERER APPROACH REFLECTS FAIR BALANCING OF AB 32 OBJECTIVES

Regulators' objective in this proceeding is to design an electricity sector GHG model that satisfies AB 32's objectives. Among other things, AB 32 requires the inclusion of imports, administrative ease, accuracy and limited contract leakage.[3] The most challenging of these requirements – including imports in the electricity sector regulation – precludes a pure "upstream" or a pure "downstream" approach. Regulators thus have been confined to considering a variety of midstream or hybrid approaches: First Seller, Load Based and a Source-Based Hybrid.

The PD's proposed First Deliverer approach, a slightly modified version of the First Seller approach, reflects a careful balance of AB 32 objectives:

- *Inclusion of Imports*: The Deliverer approach will track the emissions of all imports except those that are wheeled through the state.
- *Administrative Ease*: Under the Deliverer approach, in-state electricity generators would essentially be regulated at the stack, and electricity importers would be responsible for complying with GHG regulations at the point the power enters California commerce. This avoids the need to calculate emissions associated with complicated utility portfolios under a load-based approach.
- *Accuracy*: In the Deliverer approach, the compliance obligation is borne by the supplier of electricity – generator or importer -- who is most likely to have the best available emissions data. This minimizes the need to rely on default emissions values.
- *Contract Leakage*: While the direction of federal GHG regulation remains unclear, the Deliverer approach is compatible with programs designed to date, including RGGI and the EU-ETS. Linkage with broader efforts is required to limit contract leakage in the long-run.

In addition, the Deliverer approach softens the potential for legal challenge that could arise under the Federal Power Act with the First Seller approach. For these reasons, the choice of a Deliverer approach represents a reasonable compromise within the framework of AB 32's electricity sector objectives.

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[3] Cal. Health & Safety Code § 38562(b).

Details of the Deliverer approach, however, are understandably absent. To ensure that these details can be reasonably resolved, regulators should hold technical workshops in the near-term, in advance of a final recommendation to the Air Resources Board in the fourth quarter of 2008. It will also be important for the state to continue monitoring the development of regional and federal GHG regulatory programs to ensure that state efforts can be expanded.

III. PD APPROPRIATELY RECOGNIZES THE VALUE OF A CAP-AND-TRADE MECHANISM TO ACHIEVE COST-EFFECTIVE GHG REDUCTIONS

AB 32 requires that the state adopt regulations that will achieve emissions reductions in a cost-effective manner.[4] The PD recommends including the electricity sector in a cap-and-trade program to promote cost-effective emission reductions and to provide incentives for investment in research and innovation.[5] By promoting this cost-effective approach, regulators will avoid imposing unnecessary GHG costs on consumers. EPUC/CAC thus support the PD's recommendation.

The PD's recommendation against a "wait and see" approach is also fitting. Regulators face the impending 2020 deadline requiring statewide emissions reductions totaling 174MMTCO_2,[6] absent action by the California legislature. It is not clear that a national or regional program can be in place quickly enough to support attainment of this goal.

Cap-and-trade design details will be critical to its success. The program's effectiveness will be affected by its liquidity, requiring regulators to maximize the number of participants and allowances in play. Similarly, the process used to

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[4] Cal. Health & Safety Code § 38562(b)(1) and (b)(5).

[5] PD, at 4.

[6] *See* Expanded List of Early Action Measures to Reduce Greenhouse Gas in California Recommended for Board Consideration, at 2 ("The 2020 target reductions are currently estimated to be 174 MMTCO2E.").

distribute allowances will directly impact the market's impact on certain technologies. These and other details must be discussed and evaluated to ensure the success of a cap-and-trade market.

IV. PD'S PROPOSED TREATMENT OF CHP RESOURCES CREATES PROBLEMS THAT CAN EASILY BE AVOIDED WITH CREATION OF CHP-SPECIFIC SECTOR.

The PD inadvertently creates an unstable regulatory framework for CHP resources. First, the PD fails to acknowledge the value of CHP resources, together with energy efficiency and renewable resources, in providing GHG reductions in the electricity sector. Second, as discussed in Section IV(C) below, the PD overlooks and fails to mitigate the disincentive to CHP operation and development that will naturally arise under the proposed Deliverer approach. Third, the proposed regulations will artificially segment CHP facilities into multiple sectors, whether the electricity, natural gas or industrial sector, with the potential for differential treatment. As explained below, there are many complex issues that arise when attempting to regulate CHP resources. These issues, however, can be addressed with certain accommodations. To ensure that the value of CHP resources is not overlooked in California's GHG reduction efforts, EPUC/CAC request the following modifications to the PD:

1. Recognize and explicitly acknowledge the importance of CHP resources, together with energy efficiency and renewable resources, in achieving GHG reductions in the production of electricity.

2. Recognize and explicitly acknowledge the potential disincentive to CHP created by GHG regulations that fail to account for the dual energy outputs of these resources.

3. Recommend that the ARB place CHP in a separate sector to facilitate the development of proper incentives and ease administrative burdens.

4. Commit to review the impact of allowance allocation methodologies on CHP in the ongoing proceeding.

Proposed findings and conclusions to effect these modifications are provided in Exhibit A.

A. Complexity Inherent In Regulating CHP Can Be Overcome With the Creation of a Separate CHP Sector.

CHP straddles the electricity and industrial sectors of the economy, presenting unique issues in choosing a point of regulation and designing an allowance distribution program. As discussed in the following sections, absent a clear understanding and very deliberate effort to address these issues, a GHG regulation could place CHP at risk as a means of further reducing the state's GHG emissions. Regulators thus should place CHP in a separate sector to ensure that the treatment of these resources does not present disincentives to operation or further development.

Some European Union (EU) Member States have created a separate CHP sector, including Finland, Hungary and Poland (Phase 1)[7] and the UK (Phase 2).[8] Other EU Member States, while not creating a separate sector, have recognized the need for separate treatment, including Germany, Austria and Italy[9].

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[7] Delta Energy and Environment, *CHP Policy Assistance - A Report for The Energy Producers and Users Coalition and The Cogeneration Association of California*, dated May 2007

[8] *See* March 2007 Presentation of the Department for Environment Food and Rural Affairs (DEFRA) entitled "*CHP in Phase II of the EU ETS*," located at http://www.chpqa.com/html/presentations/defra_chp_in_eu-ets_phase2.pdf . For additional detail related to the EU ETS Phase II allocation methodology is provided on the following website: http://www.berr.gov.uk/energy/environment/euets/phase2/allocation/page27064.html.

[9] See DEFRA / Ilex Energy (2005): EU ETS PHASE II: TREATMENT OF CHP. A final report to DEFRA (http://www.ilexenergy.com/pages/euetsphase2-treatmentchp2.pdf). And COGEN Europe Briefing Paper (2004): The European Emissions Trading Scheme: Allocation methods for CHP proposed in draft national allocation plans (http://www.cogen.org/Downloadables/Publications/Briefing_NAPs.pdf).

For all of the reasons explained below, California should take deliberate efforts to realize the state's CHP potential. As an important step in this process, the PD should be modified to recommend a separate CHP sector or, at a minimum, separate treatment.

B. CHP Resources, Along with Energy Efficiency and Renewable Resources, Offer Effective GHG Reduction Opportunities.

CHP is a vital element of the electricity sector's GHG reduction triad – energy efficiency, renewable resources and CHP – which policymakers estimate can together deliver annual savings of roughly 38-41 $MMTCO_2$ by 2020:

Energy efficiency:	15 $MMTCO_2$ Annual Savings[10]
California Solar Initiative	3 $MMTCO_2$ Annual Savings[11]
Renewables:	11 $MMTCO_2$ Annual Savings[12]
Combined Heat & Power:	9-11 $MMTCO_2$ Annual Savings[13]

The state's Energy Action Plan also lists CHP as a preferred resource.[14] Accordingly, it is important that regulators acknowledge the value of CHP resources and its potential contribution to emissions reductions.

GHG reductions from CHP arise when the fuel used in a consumer's stand-alone production of thermal and electrical energy is reduced through combined

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[10] Climate Action Team Report (April 2006), at 17.

[11] Climate Action Team Report (April 2006), at 59-60.

[12] This is the amount of emissions reductions that can be achieved for renewable energy generation if the RPS is increased from 20% to 33%. Climate Action Team Report (April 2006), at 59-60.

[13] These emissions savings can be achieved under the high deployment scenario discussed in the CEC's report entitled Assessment of California CHP Market and Policy Options for Increased Penetration, dated July 2005.

[14] *See* Energy Action Plan II, Implementation Roadmap for Energy Policies, at 2 ("*EAP II continues the strong support for the loading order – endorsed by Governor Schwarzenegger – that describes the priority sequence for actions to address increasing energy needs. The loading order identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs.* ***After cost-effective efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications.*** *To the extent efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, we support clean and efficient fossil-fired generation.*)(Emphasis added).

production of both types of energy by a CHP facility. The following table compares the GHG effects of separate production (stand-alone boiler for thermal production + combine cycle generation for electricity production) with CHP:

Table 1[15]
Comparison Between 100 MW CHP Facility With CCGT Power Plant and a Heat Only Boiler

		CHP	CCGT	Boiler
Electric Production	MWh/yr	797,160	797,160	0
Thermal Production	MMBtu/yr	3,264,848	0	3,264,848
Fuel Input (HHV)	MMBtu/yr	8,202,428	5,898,984	4,263,508
Total Fuel (HHV)	MMBtu/yr	8,202,428	10,162,492	
Fuel Savings (HHV)	MMBtu/yr	1,960,064		
CO2 Emissions	MTCO2/yr	435,190	312,978	226,206
Total CO2 Emissions	MTCO2/yr	435,190	539,184	
CO2 Savings	MTCO2/yr	103,994		

The table demonstrates that a CHP facility consumes about 19% less fuel and produces roughly 19% fewer emissions than a CCGT and boiler producing the same electric and thermal outputs. CHP also reduces grid losses because generation is close to load.[16] When taking this benefit into consideration, it further increases CHP-related GHG savings by another 5%, or 29,000 $MTCO_2$. Depending upon the assumption regarding the resources displaced by CHP (e.g., average or marginal fossil grid electricity), the savings can be even greater.

While end-use energy efficiency and renewables have received considerable attention in the AB 32 debate, the potential contribution of CHP resources has been largely overlooked. CHP is an energy efficiency measure, delivering GHG savings by reducing overall natural gas use and by reducing grid losses. CHP, in fact,

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[15] Assumptions: CHP with an overall efficiency of 81% (LHV); CCGT with an efficiency of 51.2% (LHV); and Boiler efficiency of 85% (LHV).

[16] *See* Recommendations of the Economic and Technology Advancement Advisory Committee Final Report on Technologies and Policies to Consider for Reducing Greenhouse Gas Emissions in California, at 4-4.

provides GHG emissions reductions of the same magnitude as renewables and it does not suffer from the intermittency problem attendant to some renewable resources. Taking relevant technology capacity factors into account, due to the intermittent nature of wind and solar resources, 1000 MW of new CHP would achieve CO_2 savings equal to 840 MW of wind or 720 MW of solar capacity.

The GHG reduction benefits of CHP resources are well-recognized by the Economic and Technical Advancement Advisory Committee (ETAAC), the CEC, the National Association of Regulatory Utility Commissions (NARUC) and in the joint agency Energy Action Plan.

- *ETAAC Report*: Cal EPA's ETAAC Committee efforts are directed to identifying and making recommendations regarding activities that will facilitate emissions reductions. Its report recognizes CHP's ability to "*avoid transmission bottlenecks, decrease transmission losses and provide other operational benefits*."[17] As part of its effort to identify such investments, it recommends the promotion of CHP projects that will contribute to lower GHG emissions and criteria air pollutants.[18]

- *CEC's Integrated Energy Policy Report*: The IEPR observes that CHP resources use fuel efficiently, minimize transmission and distribution line losses and will be important in the state's effort to lower GHG: *The importance of keeping this distributed generation capacity in the system is elevated by the state's need to reduce greenhouse gas emissions as part of AB 32. Combined heat and power in particular offers low greenhouse gas emissions rates for electricity generation taking advantage of fuel that is already being used for other purposes. The systems use waste heat for either process or electricity generation needs which results in very efficient use of fossil fuels. Large combined heat and power units appear to offer the greatest fuel efficiency of available distributed generation technologies. Because combined heat and power systems are located close to the load, transmission and distribution line losses are minimized, further reducing greenhouse gas impacts*.[19]

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[17] Recommendations of the Economic and Technology Advancement Advisory Committee Final Report on Technologies and Policies to Consider for Reducing Greenhouse Gas Emissions in California, at 4-4.

[18] *Id.*

[19] CEC's IEPR, at 211.

- *CEC's Report on CHP Market Potential*: The CEC estimates that emissions savings from a high deployment of CHP resources can be as high as 9-11 $MMTCO_2$ in annual savings.[20]

- *NARUC*: NARUC's recently adopted resolution reflects several CHP benefits: *The deployment of CHP and waste-energy recovery technologies increases generation efficiency, reduces fossil-fuel consumption, enhances generation diversity, and has the potential to improve system reliability, decrease line losses, reduce grid congestion, and reduce emissions of air pollutants and greenhouse gases . . . .*[21]

- *Joint Energy Action Plan 2008 Update*: The EAP 2008 Update recognizes the value of CHP resources to the state's efforts to lower GHG emissions: *In addition, new combined heat and power applications could play a large part in avoiding future greenhouse gas emissions due to the combined efficiency of the heat and power portions of the project.*[22]

In light of this broad-based support, an electricity sector recommendation to ARB that fails to adequately recognize the contribution of CHP resources to GHG reduction efforts will be incomplete.

C. PD Would Result in an Unintended Disincentive to the Operation and Development of CHP Resources.

Installation of CHP results in a societal *decrease* in GHG emissions when compared with the separate production of electrical and thermal energy. Paradoxically, however, the installation of CHP results in an *increase* in direct on-site GHG emissions responsibility for the industrial or commercial operation investing in CHP. This paradox occurs because installing CHP replaces (1) a consumer's indirect emissions responsibility, (imposed at the utility's *average portfolio emissions rate*) with (2) direct emissions responsibility as a CHP generator (imposed at a *marginal generation emissions rate*). Consequently, under a regulatory framework

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[20] Assessment of California CHP Market and Policy Options for Increased Penetration, dated July 2005.

[21] NARUC Resolution to Encourage the Use of Combined Heat and Power, including the Recycling of Waste Energy, adopted February 20, 2008.

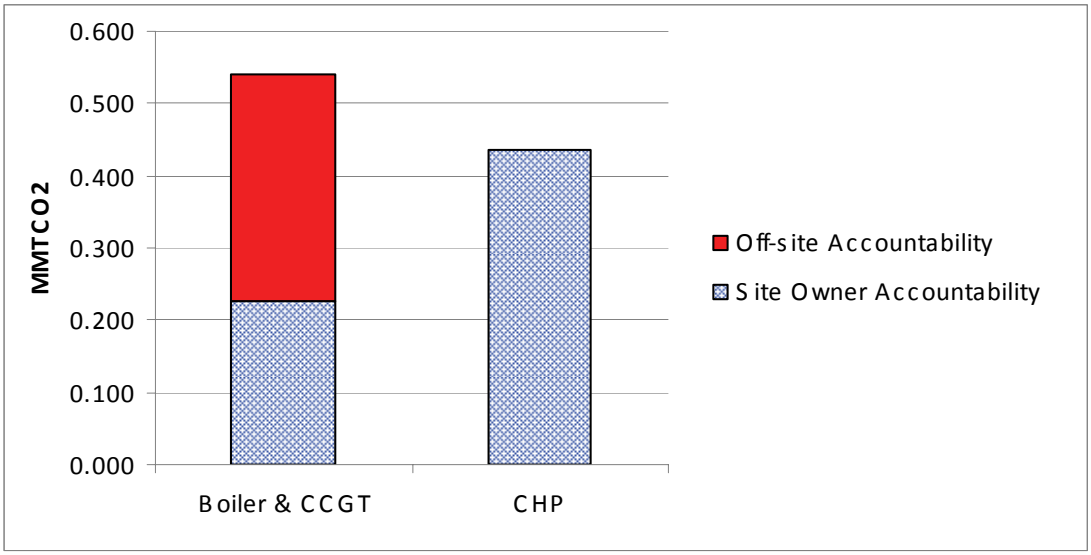
[22] Joint Agency EAP 2008 Update, at 15.

where customers are required to procure allowances to cover only their direct emissions, an industrial customer with on-site CHP will have greater cost responsibility for GHG compliance.

Consider the following illustrative example:

> Customer A and Customer B have identical industrial operations, with precisely the same thermal and electrical requirements. Customer A purchases its power from the utility and produces thermal energy using a conventional steam boiler. Customer B operates CHP on-site to meet both its thermal and electrical needs. Assume further that the applicable GHG regulations require the two Customers to acquire allowances to cover only its direct on-site emissions. In the case of Customer A, it must cover only the emissions from its steam boiler; it does not bear allowance responsibility for the power it purchases from the utility because the associated emissions are indirect. Customer B, in contrast, must procure enough allowances to cover both its electrical and thermal consumption because all of the emissions are direct on-site emissions.

The resulting distortion is depicted in the following graph. While the CHP installation *decreases* GHG emissions attributable to Customer B's energy consumption by 19%, it increases Customer B's direct responsibility to obtain GHG allowances by 92%.



Morgan Stanley has argued that investment in CHP will not increase GHG compliance costs for an industrial customer.[23] Morgan Stanley argues that there is no CHP disadvantage because if a customer did not install CHP, it would pay for its GHG compliance costs associated with purchased electricity through utility rates. While this argument has a superficial appeal, it fails in several respects.

The *average portfolio emissions rates*, and thus costs, for power sold by PG&E or SCE, for example, will always be lower than the *marginal emissions rates/costs* experienced by a CHP owner. These IOU average portfolio emissions costs per MWh of power sold will always be lower for the following reasons:

1. Utility rates will reflect an average portfolio emissions cost, blending zero emissions nuclear, hydro and renewable resources in the mix. Because of these zero emissions resources, the emissions costs of a fossil-fired CHP generator, while lower than marginal conventional resources that would be installed "but for" the CHP plant, will never beat or even equal the IOU average portfolio emissions rate. If, for example, an IOU's blended portfolio rate is 400 lbs/MWh, and a CHP plant's rate is 600 lbs/MWh, the CHP industrial consumer would be paying for 200 lbs of CO_2 more per MWh consumed than if it simply purchased electricity from the utility. At $40 mt CO_2, for example, this would translate into an additional cost for CHP of $3.6 per MWh consumed by the industrial site.
2. Even if the utility portfolio did not include these zero emissions resources, there likely would still be a disadvantage for a CHP consumer.
   - The PD discusses taking steps to mitigate the impact of carbon prices on ratepayers.[24] Taking this approach would mean direct subsidies to utility ratepayers to mitigate carbon impact without necessarily conferring the same advantage back to consumers who have invested in CHP facilities.
   - The GHG costs to the CHP plant are direct and unavoidable; to the extent it emits carbon to produce electricity for consumption, it must pay for that carbon. While this would also be true for utility-owned generation, the costs of carbon may not be fully reflected in the market price of the utility's purchased power.

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[23] Reply Comments of Morgan Stanley Capital Group Inc. on the Administrative Law Judge's Ruling Requesting Comments and Noticing Workshop on Allowance Allocation Issues, November 14, 2007, at 5.

[24] PD, at 84.

- Consumers served by CHP continue to pay a material amount of costs related to utility programs that will reduce GHG through the Public Purpose Program charges and other Nonbypassable Charges.

For these reasons, GHG regulation will create an unintentional disadvantage for CHP operation and investment. The disadvantage -- depending upon carbon prices, regulators' efforts to mitigate utility rate impact, pass-through provisions for CHP power sold to the utility and other CHP barriers -- could materially affect CHP operation and development in California.

D. PD Complicates Treatment of CHP Resources

The PD creates a confusing and complex regulatory scheme for CHP resources. Depending upon size and the product coming out of a single facility, the PD will scatter emissions among three sectors of the California economy. The PD appears to propose the following:

	Large CHP	**Small CHP**
Electricity sold to grid [25]	Electricity Sector	Electricity Sector
On-site electricity use	Industrial Sector[26]	Natural Gas Sector[27]
On-site thermal use	Industrial Sector	Natural Gas Sector

The PD will subject CHP facilities unnecessarily to complicated and inconsistent treatment that will discourage deployment of existing and prospective CHP facilities. A separate CHP sector will mitigate this potential complexity.

[25] PD, at 66.

[26] *See* PD, at 99 ("*ARB proposes to regulate emissions from large end users of natural gas (with emissions of 25,000 or more metric tons of CO2e per year) as individual industrial sources. Therefore, we propose that they not be included in the natural gas sector.*")

[27] PD, at 99.

V. PIECEMEAL CONSIDERATION OF GHG ISSUES REQUIRES THE STATE TO TAKE AFFIRMATIVE EFFORTS TO ENSURE GHG REGULATIONS SUPPORT AND DO NOT PENALIZE CHP RESOURCES

The PD evaluates and designates a regulatory approach for the state's electricity sector. It notes that a future decision will discuss allowance distribution issues in more detail. While these issues and other GHG issues require separate consideration, each individual piece impacts the overall GHG regulatory framework and incentives for CHP resources.

Deliberate efforts will be required as regulators approach the question of allowance distribution. A failure to recognize the CHP emissions paradox, discussed in Section IV(C), will penalize and discourage investments in CHP and increase the state's overall emissions. EPUC/CAC look forward to further discussion of (1) double-benchmarking in an administrative allowance;[28] (2) credit mechanisms under any auction scenario;[29]and (3) auction revenue retention by consumers for on-site reduction investments that will further AB 32's objectives.[30]

VI. DECISION TO PARTIALLY AUCTION ALLOWANCES IS PREMATURE AND REQUIRES FURTHER CONSIDERATION.

The PD briefly discusses allowance distribution issues. Despite an admittedly incomplete record, the PD moves forward to recommend the use of a partial auction. To temper the risk of volatile auction prices, the PD recommends banking or

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[28] EPUC/CAC Comments on Allowance Distribution, at 19-21 (explaining importance of using double-benchmarking given CHP's dual outputs and use of the technique for CHP by EU countries).

[29] *Id*., at 21-24 (providing four options for distribution of allowances that maintain incentive for investment in CHP).

[30] *Id*., at 29-30 ("*regulated firms should be permitted to set-aside auction payments in an escrow account for reinvestment to the extent they can employ the payments in cost-effective local GHG reducing projects*.")

borrowing of allowances, allowance price floors or ceilings and offsets.[31] The PD's recommendation in favor of a partial auction is premature.

The PD expressly and repeatedly acknowledges the lack of record on allowance allocation.[32] The decision also acknowledges that the GHG model, being developed by E3, is meant, to inform the Commission regarding the financial impacts of different GHG regulatory policy options.[33] Finally, the PD's analysis on the impact of a partial auction is also incomplete. For example, the PD fails to discuss or include any findings on the impact of an auction on existing contract holders and administrative price takers such as CHP resources.[34]

The PD acknowledges the potential impact of a poorly-designed auction on supply reliability and energy markets.[35] Given the significance of this issue and California's history, the impact of an auction, even a partial auction, warrants additional consideration. Accordingly, the Commission should defer all recommendations regarding allowance distribution issues at this time.

Respectfully submitted,

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31 PD, at 7.

32 PD, at 6-7, 82, 86.

33 PD, at 7, 87.

34 MAC Report at 56. *"Some independent power producers may operate under long term fixed price contracts and thereby [will] not be able to pass through costs until those contracts expire. Whether these producers should receive a free allocation in the interim should be evaluated carefully". See also* Stavins, Robert, *Comments on the Recommendations of the Market Advisory Committee to the California Air Resources Board* (June 2007). "*[C]onsideration should be given to the implications of long-term contracts for generators' and cogenerators' ability to recover any new allowance costs."*

35 PD, at 80-83.

Exhibit A

Changes to Text of the PD

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After evaluating the point of regulation options against these key criteria, we find that the deliverer option best meets the criteria.

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For all these reasons, we recommend deliverers as the point of regulation for a GHG cap-and-trade program as it applies to the electricity sector

We also consider comments we have received on the encouragement of combined heat and power resources. To ensure that this decision does not establish a regulatory scheme that will discourage these resources, we make several recommendations.

Finally, ~~W~~we ~~also~~ address certain policy questions regarding the distribution of GHG emissions allowances in a deliverer-based point of regulation system.

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SDG&E and SCE express concern that this option is vulnerable to challenges under the FPA and the Commerce Clause.

3.3.1.5. Treatment of CHP Resources

We have received comments advocating support and consideration of CHP issues. The comments highlight the efficiency of CHP resources and advocate the state's reliance on these resources to meet the state's emissions target. The comments also point out that while investment in CHP decreases global emissions, it increases GHG compliance costs for the CHP investor. The Economic Technology Advancement Advisory Committee (ETAAC), the CEC, the Joint Agency 2008 EAP Update have recognized the potential emissions reductions that CHP resources can provide. The CEC, in particular, estimates that the expansion of CHP resources can provide up to 11 MMTCO$_2$.[36]

[36] Assessment of California CHP Market and Policy Options for Increased Penetration, dated July 2005.

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Regulating the emissions associated with the multi-jurisdictional utilities' deliveries of electricity to the California grid on a retail provider basis, with GHG emissions attributed based on a proportional share of their electricity sales in California, appears to be the only reasonable approach. Therefore, this is the approach that we recommend to ARB for the multi-jurisdictional utilities.

3.3.2.9 Combined Heat and Power Issues (CHP)

We agree with the CEC and the ETAAC Committee that the state would benefit from the encouragement of CHP resources. CEC's analysis demonstrates that CHP emissions reductions are comparable to the emissions reduction potential of renewable resources and energy efficiency. We also acknowledge that, without targeted measures, the state's GHG regulations could impact the availability of these resources in the future. We believe specific consideration of CHP issues is necessary to ensure that recommended regulations limit CHP disincentives. We recommend that ARB place CHP in a separate sector. In addition, we will further consider the use of double-benchmarking and CHP allowance distribution issues.

~~3.3.2.9~~ 3.3.2.10 Conclusion

As described in the proceeding….

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Among parties that oppose auctions, some claim that they or their customers would suffer from facing the full and uncertain cost of auctioned allowances or that system reliability would suffer if producers fail to invest in generation for California (Calpine, EPUC/CAC, LADWP). **In particular, some parties observe that an auction could significantly limit investments in CHP, because it will add compliance costs to projects that are administrative price-takers (EPUC/CAC).** Other parties are concerned that sole or heavy reliance on auctions is untested . . .

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An important issue regarding auctions is what to do with the proceeds. SDG&E recommends that, if auctions are used, proceeds should benefit customers by being used for cost-effective contributions to climate change mitigation, or should be used to offset price impacts to price-regulated entities and their customers and to entities subject to competition from uncapped entities. **EPUC/CAC recommend that entities be entitled to retain auction proceeds to make investments in improvements that will further the state's emission reduction goals.** NRDC/UCS states that ….

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EPUC/CAC support administrative distribution and strongly oppose full auction. **They note that the impacts of a full auction on entities in existing procurement contracts and administrative price-takers remains unclear and could have drastic implications on state supply reliability. Where allowances are allocated, EPUC/CAC note the importance of use of double-benchmarking to allocate allowances to CHP resources.** Caithness and Dynegy favor free distribution of allowances to those…

* * *

Some parties are concerned that, should regulators over-estimate the number of allowances . . . as happened to many generators in Europe (Calpine, LADWP, SCE).

Finally, EPUC/CAC note that allowance distribution accommodations will be required to maintain and support development of CHP resources. They provide several recommendations to mitigate any disincentives that would otherwise impact existing CHP resources and future CHP developments.

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Impacts on entities with compliance obligations and on customers would depend on the use that is made of auction proceeds.

* * *

~~**For these reasons, and in light of the potential benefits of increased market liquidity on allowance prices,**~~ **Despite these findings,** we conclude that **additional record development is required to determine whether** auctioning ~~**of at least**~~ a portion of the allowances is superior to free allocations in terms of reducing costs to consumers of achieving GHG emission reductions.

Entities with potential compliance obligations are concerned …. **Additional review is necessary to determine if** ~~**However,**~~ the risks associated with price volatility can be tempered to a significant extent through the use of flexible compliance alternatives, which we will consider in more detail later in this proceeding.

* * *

Because of these benefits, we **may** conclude that at least some portion of the allowances available to the electricity sector should be auctioned. ~~**As an integral part of this recommendation, w**~~ **W**e **may also** conclude that at least some of the proceeds from the auction of allowances for the electricity sector should be used . . . Possibilities include use to augment investments in energy efficiency, renewable power**, clean fossil energy such as CHP,** or to maintain affordable electricity rates.

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If allowances are to be freely distributed, the manner of the free allocation must be determined. Options recommended by parties for determining allowance allocations range from use of historical emissions to output-based metrics. **For CHP resources, parties have advocated the use of double-benchmarking which is used by countries in the European Union.** In addition, some parties recommend direct distribution…

Findings of Fact

1. The state Energy Action Plan lays out a "loading order" for investment in electricity resources in California that puts energy efficiency as the top priority, with renewable resources second, and clean fossil-fired generation**, including CHP resources,** to the extent other options are not available.

* * *

7. CHP is an emissions reduction tool that has been recognized by ETAAC Committee and, based on CEC analysis, has the potential to reduce up to 11MMTCO$_2$ annually.

8. The emission reduction potential of CHP resources is comparable to the emission reduction potential of renewable resources and energy efficiency efforts.

9. Without targeted measures, GHG regulations will discourage the use and expansion of these resources because its investment increases GHG emissions responsibility for the investor.

10. It is reasonable to place CHP in a separate sector.

11. It is also reasonable for regulators to consider double-benchmarking, allocation distribution accommodations, and other measures to maintain incentives that will encourage the continued existence and development of CHP resources.

~~7.~~ **12.** For the electricity sector, a cap-and-trade system, . . .

* * *

9. For the electricity sector, a GHG emissions cap-and-trade program would encourage investment in research and innovation in **most** technologies that lower GHG emissions. **To encourage investment in CHP, additional measures are necessary.**

10. For the electricity sector, a GHG emissions cap-and-trade program would allow market participants to manage risk associated with compliance obligations.

11. For the electricity sector, a GHG emissions cap-and-trade program **with accommodations for CHP resources** would distribute the cost of GHG reductions most efficiently across all capped entities.

* * *

24. The proposed GHG regulations are intended to change the way that electricity is generated and consumed and are expected to increase the use of (i) renewable resources to generate electricity, (ii) low-emitting sources of generation, and (iii) more efficient methods of using electricity **including CHP**. To the extent such actions are unable to sufficiently reduce GHG emissions associated with the use of electricity, these regulations are expected to result in investments outside of these electricity sector that will cost-effectively reduce GHG emissions from other activities.

25. It is reasonable to regulate the GHG emissions associated with the multi-jurisdictional utilities' deliveries of electricity to the California grid on a retail provider basis, with GHG emissions attributed based on a proportional share of their electricity sales in California.

~~**26. The auctioning of at least some portion of the emission allowances available to the electricity sector would promote liquidity in the emissions allowance market, improve the accuracy of emissions allowance prices as a reflection of marginal emissions reduction costs, and allow new market entrants access to allowances on an equal basis with other parties.**~~

~~**27. It is reasonable to require that at least some portion of the GHG emissions allowances for the electricity sector be auctioned in a GHG emissions cap-and-trade system in which deliverers are the point of regulation for the electricity sector. As part of this approach, all proceeds from the auctioning of allowances for the electricity sector would be used in ways that benefit electricity consumers in California.**~~

28. The record in R.06-04-009 is not sufficient, at this time, to determine a reasonable mixture of auctioning and the administrative allocation of GHG emission allowances for the electricity sector.

* * *

INTERIM ORDER

4. We recommend that, if ARB concludes it does not have authority to adopt regulations consistent with Ordering Paragraphs 1 and 2, ARB seek such authority from the Legislature.

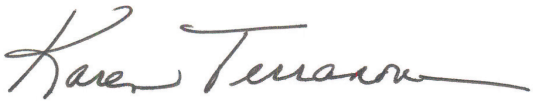
5. We recommend that ARB place CHP in a separate sector.

~~**5.**~~ **6.** We recommend that, for the electricity sector . . . .

CERTIFICATE OF SERVICE

I, Karen Terranova hereby certify that I have on this date caused the attached **Comments of the Energy Producers and Users Coalition and the Cogeneration Association of California Regarding Interim Opinion on Greenhouse Gas Regulatory Strategies** in R.6-04-009 to be served to all known parties by either United States mail or electronic mail, to each party named in the official attached service list obtained from the Commission's website, attached hereto, and pursuant to the Commission's Rules of Practice and Procedure.

Dated February 28, 2008 at San Francisco, California.



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