

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

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)

California Energy Commission Docket #07-OIIP-01

**REPLY COMMENTS OF THE NATURAL RESOURCES DEFENSE
COUNCIL (NRDC), THE UNION OF CONCERNED SCIENTISTS (UCS)
AND THE GREEN POWER INSTITUTE (GPI) ON ALLOWANCE
ALLOCATION, FLEXIBLE COMPLIANCE, CHP, EMISSION
REDUCTION MEASURES, AND MODELING ISSUES**

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Kristin Grenfell
Ben Carver
Audrey Chang
Peter Miller
Natural Resources Defense Council
111 Sutter St., 20th Floor
San Francisco, CA 94104
415-875-6100
KGrenfell@nrdc.org

Gregg Morris
Green Power Institute
2039 Shattuck Avenue, Suite 402
Berkeley, CA 94704
510-644-2700
gmorris@emf.net

Cliff Chen
Chris Busch
Union of Concerned Scientists
2397 Shattuck Avenue, Suite 203
Berkeley, CA 94704
510-843-1872
CChen@ucsusa.org

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I. INTRODUCTION

The Natural Resources Defense Council (NRDC) and Union of Concerned Scientists (UCS) respectfully submit these reply comments on allowance allocation, flexible compliance mechanisms, CHP, emission reduction measures, and modeling issues, in accordance with the "Administrative Law Judges' Modifying Schedule and Correcting Suggested Outline for Comments and Reply Comments" (ALJ Ruling), dated May 20, 2008, and in accordance with Rules 1.9 and 1.10 of the California Public Utilities Commission's (CPUC) Rules of Practice and Procedure. NRDC/UCS also concurrently submit these comments to the California Energy Commission (CEC) in Docket #07-OIIP-01, the CEC's sister proceeding to this CPUC proceeding. As requested by California Air Resources Board (CARB) staff, we are also sending a copy to them at ccplan@arb.ca.gov.

NRDC is a non-profit membership organization with a long-standing interest in minimizing the societal costs of the reliable energy services that a healthy California economy needs. In this proceeding, NRDC represents its more than 124,000 California members' interest in receiving affordable energy services and reducing the environmental impact of California's energy consumption.

UCS is a leading science-based non-profit working for a healthy environment and a safer world. Its Clean Energy Program examines the benefits and costs of the country's energy use and promotes energy solutions that are sustainable both environmentally and economically.

GPI is the renewable energy program of the Pacific Institute, a leading environmental research and advocacy institution that is active in water and energy issues. The GPI has performed pioneering research on the greenhouse gas implications of renewable energy production.

II. SUMMARY

NRDC, UCS, and GPI appreciate the opportunity to submit these reply comments to aid the Commissions' recommendations to the California Air Resources Board (CARB) on a comprehensive approach for reducing greenhouse gas (GHG) emissions in the electricity and natural gas sectors. In summary:

- Many parties oppose grandfathering allowances to first deliverers.
- Many parties support auctioning or selling allowances and using most or all the auction revenue from the electricity sector for GHG reducing investments in the electricity sector.
- A multi-sector cap and trade program should include at minimum the electricity, natural gas and industrial sectors. If these three sectors are included in a cap and trade program, there is no need to create a separate CHP sector.
- It is critical to implement complementary policies such as expanded energy efficiency and renewable energy measures in addition to a cap and trade program.
- The Commissions should move forward with a recommendation to CARB to auction allowances and use the majority of the revenue from the electricity sector to the electricity sector.
- If auction revenue is used to further the purposes of AB 32 then it should be considered a fee, not a tax.
- We agree with other parties who urge California to design a system that will encourage the voluntary renewable energy market and all the emission reductions it achieves.
- The Commissions should recommend that CARB approach offsets with great skepticism.

- A price cap will compromise environmental integrity and could burden the economy.
- Many parties support a three-year compliance period.
- Banking should be allowed, but borrowing should not.
- The model overestimates the cost of a 33% RPS.
-

III. ALLOWANCE DISTRIBUTION

A. THE COMMISSIONS SHOULD STRONGLY RECOMMEND THAT CARB NOT GRANDFATHER ANY ALLOWANCES TO DELIVERERS

1. *Many parties rightly oppose grandfathering allowances to deliverers.*

Many parties rightly oppose grandfathering allowances to deliverers. Many parties rightly oppose grandfathering allowances to deliverers.¹ The reasons for this opposition are that grandfathering will cost California more money,² set a precedent that would be harmful to California in a federal system,³ penalize efficient generation sources and provide a perverse incentive to prolong the life of dirty sources,⁴ and, importantly, it does not reward entities who made investments years ago to reduce their GHG emissions and may discourage future investment if entities have reason to fear those will also be ignored.⁵ We strongly urge the Commissions to recommend that CARB not grandfather any allowances to deliverers.

2. *No transition period is necessary to accommodate entities that took on the risks of high GHG-emitting resources.*

The threat of global warming and the risk of forthcoming GHG regulations have been known and recognized since at least 1990.⁶ Pretending that the passage of AB 32

¹ *Calpine Opening Comments* (June 2, 2008), pp.7-8; *SDG&E/SCE Opening Comments* (June 2, 2008), p.6, 11; *PG&E Opening Comments* (June 2, 2008), pp.20, 22, 26, 27; *NCPA Opening Comments* (June 2, 2008), p.15; *DRA Opening Comments* (June 2, 2008), pp.6, 9-10; *SCPPA Opening Comments* (June 2, 2008), p.32; *See also SMUD Opening Comments* (June 2, 2008), p.13 (supporting fuel-differentiated output-based allocation)

² *PG&E Opening Comments* (June 2, 2008), p.27.

³ *NCPA Opening Comments* (June 2, 2008), p.15.

⁴ *Calpine Opening Comments* (June 2, 2008), pp.7-8.

⁵ *Id.* at 8 (“an allowance allocation approach aimed solely at compensating higher emitting resources ignores the contribution of entities that have already invested in lower emitting generating fleets prior to the imposition of the cap, and could discourage future investment in low-emitting technologies”).

⁶ *See NRDC/UCS/GPI Reply Comments on Allowance Allocation* (Nov. 20, 2007), pp.5-6 and attachment: NASUCA and NRDC, “An Open Letter to the Managers of the U.S. Utility Industry, Re: Implications of

sixteen years later was the first call to action would be re-writing history. Nonetheless, some parties indicated that there is a need to transition slowly to full auctions in order to give entities that made investments in high GHG-emitting technologies prior to AB 32 time to adjust.⁷ In particular, some parties argue that past decisions to invest in GHG-polluting technologies were prudent so they should not be punished for those investments, and by extension, entities that invested in clean technologies should not be rewarded.⁸ We strongly disagree.⁹ California should not shield those entities who took on the risk of investing in high GHG-emitting resources in the face of mounting evidence of the threat of global warming, at the expense of those who managed the risk well. Those who accepted the risk should bear the risk. Grandfathering allowances would unnecessarily shield those entities who took GHG risks, while penalizing those who took early action to manage the risk, and we urge the Commissions to reject this allocation approach.

In addition, grandfathering would create a very bad precedent for a federal system. California is a relatively low GHG-emitting state, largely due to its 30-year success in energy efficiency. With its continuing energy efficiency efforts as well as AB 32 and SB 1368, California is putting itself on a path to emit even less GHG intensive. California will be very disadvantaged if a future federal system chooses to ignore all these pre-federal-legislation efforts and instead grandfather allowances to high GHG-emitters.

3. *Grandfathering could result in a wealth transfer from less GHG-intensive entities to more GHG-intensive entities.*

Several parties argue that allocation methods other than grandfathering will result in wealth transfers from retail providers that are relatively dirty from a GHG perspective

the Greenhouse Challenge for the Utility Planning, Financial Risks, and Future Prudency Reviews,” January 31, 1991.

⁷ *Dynegy Opening Comments* (June 2, 2008), pp.8-12; *Pacificorp Opening Comments* (June 2, 2008), pp.4,19; *WPFT Opening Comments* (June 2, 2008), p.7; *EPUC/CAC Opening Comments* (June 2, 2008), p.29; *DRA Opening Comments* (June 2, 2008), pp.9,14; *SCPPA Opening Comments* (June 2, 2008), p.31.

⁸ *Pacificorp Opening Comments* (June 2, 2008), pp.4,19.

⁹ For support of rewarding action to reduce emissions prior to AB 32, *See also NCPA Opening Comments* (June 2, 2008), p.15; *Calpine Opening Comments* (June 2, 2008), p.8.

to those who have cleaner GHG footprints.¹⁰ However, it is important to recognize that a “wealth transfer” can happen in the opposite direction under a grandfathering allocation approach, from cleaner to dirtier utilities. Since higher-emitting utilities have more low cost opportunities to reduce emissions, grandfathering effectively creates a “wealth transfer” from lower-emitting utilities who do not have low-cost options to reduce but also don’t receive many allowances, to higher-emitting utilities who receive allowances *and* are able to pursue low-cost reductions. This could even require the customers of those cleaner utilities to “pay twice” since they have already paid for the investments in their cleaner systems, and would also have to pay for the more expensive reductions. Of course, the actual outcome would depend on the particular circumstances of any given utility. We urge the Commissions to focus on the core equity considerations, since these wealth transfer arguments can be made about any allowance distribution system.

B. THE COMMISSIONS SHOULD RECOMMEND THAT ALLOWANCES BE AUCTIONED OR SOLD, AND MOST OR ALL THE REVENUE FROM THE ELECTRICITY SECTOR BE RECYCLED TO THE ELECTRICITY SECTOR FOR INVESTMENTS TO REDUCE GHG EMISSIONS.

1. Many parties support, at minimum, an eventual auction of allowances.

Many parties support, at minimum, phasing towards an eventual auction.¹¹ As TURN points out, an auction is the fairest distribution method.¹² Auctions are fair because they avoid windfall profits, reward early action, and allow equal access to the market, thus enhancing market liquidity.¹³

Some parties suggest that we do not have sufficient experience with auctions or that auctions are too complicated.¹⁴ It is important to note that all 10 of the RGGI states plan to auction some allowances, eight plan to auction at least 90%, and five plan to

¹⁰ *SCE Opening Comments* (June 2, 2008), p.10; *Pacificorp Opening Comments* (June 2, 2008), pp.4,22; *LADWP Opening Comments* (June 2, 2008), pp.1-2,19; *Modesto Irrigation District Opening Comments* (June 2, 2008), p.7.

¹¹ *TURN Opening Comments* (June 2, 2008) pp. 9, 15; *DRA Opening Comments* (June 2, 2008) pp. 7, 10; *PG&E Opening Comments* (June 2, 2008), p. 21; *Dynegy Opening Comments* (June 2, 2008), pp.8,12 (supporting phasing to 100% auction); *FPL Energy Opening Comments* (June 2, 2008), p.3; *WPTF Energy Opening Comments* (June 2, 2008), p.7 (supporting transition to auction).

¹² *TURN Opening Comments* (June 2, 2008) pp. 9.

¹³ See *PG&E Opening Comments* (June 2, 2008), p.21.

¹⁴ *EPUC/CAC Opening Comments* (June 2, 2008), p.28; *DRA Opening Comments* (June 2, 2008), p.10; *NCPA Opening Comments* (June 2, 2008), pp.14, 18.

auction 100%.¹⁵ The first auction will take place in just a few months.¹⁶ This will give us time to learn from RGGI before implementing our first auction. In addition, the authorities managing the European Union's Emission Trading System (EU ETS) have recognized that auctioning is preferable to free allocation and have moved to make auctioning the primary method of allowance distribution in Phase 3 of the program, which covers the years 2013-2020. The European Commission's proposal recommends auctioning 60% of allowances in 2013, and eventually auctioning 100% of allowances.¹⁷

2. *Most parties support using most of the auction revenue from the electricity sector to invest in energy efficiency and low-GHG technologies in the electricity sector.*

Most parties support recycling auction revenue to be used for investments in the electricity sector, especially for end-use energy efficiency and low-GHG technologies.¹⁸

Some parties assume that auction revenue will disappear into the General Fund and will not return to the electricity sector,¹⁹ and then, using this assumption, they argue that auctions will be too costly.²⁰ This assumption is false and impossible. As NRDC/UCS explained in our Opening Comments, it would be illegal for AB 32 auction revenue to go into the General Fund.²¹ Short of the California legislature passing a new law by a two-thirds majority authorizing a new tax, AB 32 auction revenue **must** be used for AB 32 purposes. Given this fact, we must assume that all auction revenue will be used to further the goals of AB 32 and should further assume that most revenue from the

¹⁵ See http://www.capanddividend.org/files/RGGI_Auctions.pdf

¹⁶ RGGI Press Release (March 17, 2008), available at http://www.rggi.org/docs/20080317news_release.pdf

¹⁷ Commission of the European Communities. 2008. *Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community*. (January 23 – COM(2008 16 Final)

¹⁸ *IEP Opening Comments* (June 2, 2008), pp.A10, A14, 19-20; *Dynegy Opening Comments* (June 2, 2008), pp.10, 13; *FPL Energy Opening Comments* (June 2, 2008), p.4; *PG&E Opening Comments* (June 2, 2008), pp.19, 24; *Solar Alliance Opening Comments* (June 2, 2008), p.15; *TURN Opening Comments* (June 2, 2008) p.17; *DRA Opening Comments* (June 2, 2008), p.9, 16, 17; *EPUC/CAC Opening Comments* (June 2, 2008), p.34; *GPI Opening Comments* (June 2, 2008), p.21-22; *SMUD Opening Comments* (June 2, 2008), 4 (supporting full return of auction revenue to electric sector); See also *LADWP Opening Comments* (June 2, 2008), pp.2, 14-15 (supporting investments in energy efficiency and renewable energy, though not in the context of auction revenue); *Powerex Opening Comments* (June 2, 2008), p.9 (supporting returning revenue value to ratepayers).

¹⁹ *LADWP Opening Comments* (June 2, 2008), pp.17-19; *NCPA Opening Comments* (June 2, 2008), p.15; *NCPA Opening Comments* (June 2, 2008), p.15

²⁰ *CMUA Opening Comments* (June 2, 2008), p.3; *NCPA Opening Comments* (June 2, 2008), p.14; *SMUD Opening Comments* (June 2, 2008), p.17; *SCPPA Opening Comments* (June 2, 2008), p.18.

²¹ See *NRDC/UCS Opening Comments* (June 2, 2008), pp.20-21; See also *PG&E Opening Comments* (June 2, 2008), p.35.

electricity sector will be returned to the electricity sector. Using this assumption, auctioning is not costly, and in fact will save California consumers \$900 million/year to \$1.5 billion a year compared to free allocation.²²

3. Auction revenue should be used to augment existing funding for programs that will provide essential GHG emissions reductions.

Auction revenue should be used to *augment* current energy efficiency funding, not to *replace* it, as some parties suggested.²³ As SMUD points out, volatility in auction revenue could make it difficult to plan investments in energy efficiency, renewable energy, and other low-GHG technologies based on auction revenue.²⁴ This is exactly why we must retain current baseline funding sources for these critical reduction measures, and use auction revenue to supplement and build on top of them.

Stability of funding for energy efficiency and renewable energy is very important to successful procurement. The Commissions have seen first-hand over the past decade that unstable funding for energy efficiency disrupts the industry and significantly reduces savings for consumers. In addition, the existing programs for energy efficiency and renewable energy were established for many valid reasons beyond GHG reductions, including cost-effective resource acquisition, system reliability, and reduced exposure to natural gas price volatility.

Taking another tack, SCE suggests that putting a price on GHG emissions will negate the need for new energy efficiency funding because more energy efficiency will become cost-effective.²⁵ This argument suggests that cost-effectiveness is sufficient to ensure that energy efficiency is achieved. However, California's experience disproves this notion. Consumers routinely leave highly cost-effective efficiency opportunities untapped because of various non-price market barriers. Utility energy efficiency programs are necessary to ensure that these opportunities are not wasted. Just as the fact that energy efficiency is the cheapest, fastest energy resource available does not negate the need for energy efficiency programs now, putting a price on GHG emissions will not

²² See NRDC/UCS Opening Comments (June 2, 2008), p.11.

²³ Some parties suggested that auction revenue should replace existing funding for energy efficiency, rather than supplement it. TURN Opening Comments (June 2, 2008), p.18; PG&E Opening Comments (June 2, 2008), p.31; PacifiCorp Opening Comments (June 2, 2008), p.23.

²⁴ SMUD Opening Comments (June 2, 2008), p.17

²⁵ SCE Opening Comments (June 2, 2008), p.6.

negate the need to use energy efficiency programs to pursue all cost-effective energy efficiency even more aggressively in the future.

In order to meet the AB 32 limit *and* get on the path to a very low-carbon economy by 2050, while minimizing costs for consumers, we must capture every bit of cost-effective energy efficiency available. If auction revenues simply replace existing energy efficiency and renewable energy funds, then those revenues will not get us closer to achieving the state's goals. Auction revenue must be used to further the goals of AB 32 by supplementing, not replacing, funding for energy efficiency, new low-carbon technologies, and other GHG emission reduction programs.

4. Recycling revenue is different than allocating allowances, even if the same distributional method is used.

SDG&E/SoCalGas claim that free allocation to retail providers on an output basis would be equivalent to an auction with revenue recycled to retail providers on a sales basis.²⁶ However, there is an important difference between allocating allowances for free and auctioning allowances and recycling the revenue, even if the same distributional methodology (e.g., historical emissions-based or output-based) is used to allocate allowances as to recycle revenue. Distributing auction revenue based on NRDC/UCS' "use it or lose it" proposal would allow the market to determine the value of the allowances, and then allow CARB, along with the CPUC and local governing boards of the POUs, to monitor the investment of the auction revenue and ensure that the value is used in ways that benefit consumers and get California on the path to a low-GHG emissions future. Giving away allowances for free does not create a transparent value for the allowances and possibly allows the value of a public asset to be diverted for other uses. We urge the Commissions and all parties to keep this important difference in mind when comparing free allocation to auctions with revenue recycling.

IV. CALIFORNIA SHOULD ENCOURAGE THE VOLUNTARY RENEWABLE ENERGY MARKET.

We agree with Solar Alliance and Renewable Energy Marketers (REMA) that California should continue to encourage the voluntary renewable energy market by

²⁶ SDGE/SoCalGas *Opening Comments* (June 2, 2008), p.2.

expressly recognizing its contributions to reducing GHG emissions.²⁷ We would support a solution that REMA presents and which we supported for RGGI states: retire allowances on behalf of voluntary renewable energy demand.²⁸ This approach reduces the number of allowances available to regulated entities by the estimated tons of reductions created by renewable energy sales in the voluntary market, ensuring that such sales result in real emission reductions. We support this solution because it will allow retail voluntary purchasers of renewable energy to retain claims to legitimate GHG reductions. We also remain open to other solutions that would encourage further emissions reductions from the voluntary renewable energy market.

V. TREATMENT OF CHP

A. THE SIMPLEST WAY TO INCENTIVIZE CLEAN, LARGE CHP IS TO INCLUDE THE ELECTRICITY, NATURAL GAS, AND INDUSTRIAL SECTORS IN A CAP AND TRADE PROGRAM.

All parties agree that CHP facilities that are net GHG reducers should be incentivized, but those that are net GHG increasers should not be incentivized.²⁹ There is also some agreement that there should be a threshold above which CHP facilities are included in the cap and trade program and below which they are not.³⁰ We support this view, and note that in order for large, clean CHP to be properly incentivized, the electricity, natural gas, and industrial sectors *all must be included* in a cap and trade program.³¹

²⁷ *Solar Alliance Opening Comments* (June 2, 2008), p.11; *REMA Opening Comments* (June 2, 2008), p.4.

²⁸ *REMA Opening Comments* (June 2, 2008), pp.11, 13; See RGGI MODEL RULE XX-5.3(d), p.47, available at http://www.rggi.org/docs/model_rule_corrected_1_5_07.pdf (giving option for member states to retire allowances for voluntary renewable energy market).

²⁹ *PG&E Opening Comments* (June 2, 2008), p.66; *SDG&E/SoCal Gas Opening Comments* (June 2, 2008), p.13; *NCPA Opening Comments* (June 2, 2008), p.31; *FPL Opening Comments* (June 2, 2008), p.11;

³⁰ *PG&E Opening Comments* (June 2, 2008), pp.66-67; *SDG&E/SoCal Gas Opening Comments* (June 2, 2008), p.15

³¹ As we have discussed here and in other comments, a cap and trade program should be a complement to, not a replacement for, other regulatory programs. Complying with these regulations would help capped entities reduce their emissions and thus reduce the number of allowances they would need to surrender to meet their compliance obligations under the cap and trade program, but meeting their compliance obligations under the cap and trade program would not in any way negate their obligations to comply with regulations. In other words, capped entities would not be able to use allowances from a cap and trade program towards compliance with direct regulations.

Several parties ask that CHP be made its own sector, and that all CHP be included in this sector without regard to size or technology.³² We are unconvinced that it is necessary to create a separate CHP sector if the large CHP facilities would be included in a multi-sector cap and trade system anyway. We see two differences between creating a CHP sector to be included in a cap and trade program and simply including the electricity, natural gas and industrial sectors in a cap and trade program: 1) it would be more complicated to create a separate CHP sector; and 2) small CHP facilities that do not have the resources to effectively participate in a cap and trade program would be dragged in if a special sector is created. We agree that CHP deserves special attention, which is why we suggest using targeted programmatic measures to encourage clean CHP facilities. We continue to believe that including the electricity, natural gas and industrial sectors in a cap and trade program will properly incentivize large CHP in addition to programmatic measures, and that programmatic measures alone are the best way of addressing small CHP.

VI. NATURAL GAS

A. THERE IS BROAD SUPPORT FOR INCLUDING THE NATURAL GAS SECTOR IN A POTENTIAL CAP AND TRADE PROGRAM.

There is broad support for including the natural gas sector in a cap and trade program.³³ As we have indicated in past comments, we also support the inclusion of the natural gas sector in a cap and trade program, and reiterate that in order to get the most benefit from a cap and trade system, it must be a large and fluid market, which means including as many sectors as possible. We have sufficient data on the natural gas sector to warrant including it in a multi-sector cap and trade program, and including it would be consistent with current proposals at the federal level.³⁴

³² *EPUC/CAC Opening Comments* (June 2, 2008), pp.4,50; *CCC Opening Comments* (June 2, 2008), pp.4,6.

³³ See *IEP Opening Comments* (June 2, 2008), pp.4, 15-18 (arguing that a cap and trade program must be multi-sector); *Dynegy Opening Comments* (June 2, 2008), p.5 (arguing that cap and trade should include all major sectors); *SMUD Opening Comments* (June 2, 2008), p.35.

³⁴ See *NRDC/UCS Opening Comments* (Feb. 28, 2008), pp.2-4; *NRDC/UCS Reply Comments* (March 4, 2008), p.2.

B. THE COMMISSIONS SHOULD RECOMMEND THAT CARB CONSIDER ALL THE NATURAL GAS EMISSION REDUCTION MEASURES THAT HAVE BEEN RAISED IN THIS PROCEEDING.

In these recent Opening Comments and in previous comments in this proceeding, we and other parties have suggested many different options for reducing emissions in the natural gas sector.³⁵ The Commissions should recommend that CARB give careful consideration to these suggestions and the emission reductions they can achieve as it finalizes its scoping plan.

VII. EMISSION REDUCTION MEASURES IN THE ELECTRICITY SECTOR

A. CALIFORNIA MUST CONTINUE AND EXPAND COMPLEMENTARY REGULATORY POLICIES FOR EMISSION REDUCTION MEASURES, IN ADDITION TO A POTENTIAL CAP AND TRADE PROGRAM.

In their comments, a number of parties recommended against the adoption of additional regulatory policies to achieve increased levels of energy efficiency and renewables penetration.³⁶ We disagree. Achieving California's GHG emission reduction goals, both in 2020 and 2050, will require a dramatic and rapid expansion of our efforts in both efficiency and renewable energy. Experience has shown that voluntary commitments, no matter how well intentioned, are inadequate given the substantial barriers that must be overcome. Moreover, a cap and trade program has strengths as a policy tool, but also weaknesses that can be complemented by the strengths of regulatory programs, as we described in our opening comments. In particular, while the price on GHG emissions established by a cap and trade program is essential, it does not overcome the various non-price market barriers that other regulatory programs can more effectively address.³⁷ We believe that the best approach is for the state to adopt mutually-reinforcing, complementary mandates through regulations, including a 33% RPS, aggressive energy efficiency goals, and a tight declining cap on emissions.

³⁵ *NRDC/UCS Opening Comments* (June 2, 2008), pp.35-37 (see footnote 46 for other past comments from us and other parties on natural gas emission reduction measures); *PG&E Opening Comments* (June 2, 2008), p.96; *SDG&E/SoCal Gas Opening Comments* (June 2, 2008), p.38.

³⁶ *PG&E Opening Comments* (June 2, 2008), p. 90; *SCE Opening Comments* (June 2, 2008), p. 6.

³⁷ Market Advisory Committee Report, June 2007, p.19 ("By itself, a cap-and-trade program alone will not deliver the most efficiency mitigation outcomes for the state. There is a strong economic and public policy basis for other policies that can accompany an emission trading system.").

B. THE COMMISSIONS SHOULD NOT ASSUME THAT LOWER COST REDUCTIONS WILL BE AVAILABLE IN OTHER SECTORS

Several parties argue that California should not expand emissions reduction regulations in the electric and natural gas sectors until more is known about the cost of emissions reductions in the transportation and other sectors. For instance, DRA suggests that “more data is needed on the costs of emission reductions in other sectors before decisions can be made about expanding existing mandates,”³⁸ and until the CARB macroeconomic modeling results “are vetted, finalized, and published in the ARB Draft Scoping Plan, there is simply no basis for the Joint Commissions to recommend increased mandates in the electricity sector.”³⁹

These arguments imply that the electricity sector will be able to comply with AB 32 by purchasing cheaper emission reductions from other sectors while doing little to directly reduce emissions within the electricity sector. While NRDC/UCS/GPI support the establishment of a well-designed multi-sector cap-and-trade system to reduce GHG emissions under AB 32, it is a false hope to presume that the mere presence of such a system will automatically create large quantities of low-cost emission reductions outside of the electricity sector that can be readily purchased for AB 32 compliance. Indeed, the GPI argued in Opening Comments that the electricity sector is more likely to be a source of reductions for other sectors, rather than a purchaser of reductions.⁴⁰

First, while we strongly recommend the inclusion of other sectors, it remains to be seen whether CARB will include any sectors beyond the electricity sector in any cap-and-trade system. Second, if other sectors are included in cap-and-trade, it is imprudently optimistic to assume that these sectors will be significant sources of low-cost emission allowances for the electricity sector. In some ways, it will be even more challenging to achieve significant reductions in other sectors, which may contain millions of individual point sources, outnumbering those in the electricity sector by orders of magnitude. The transportation sector, which is the highest emitting sector in the California economy and therefore a likely candidate for eventual inclusion in a multi-sector cap-and-trade system, will be tremendously challenged to reduce its emissions to 1990 levels. While

³⁸ *DRA Opening Comments*, p.48.

³⁹ *Ibid*, p.53.

⁴⁰ *GPI Opening Comments*, p.33-34.

strengthened Pavely standards and the Low-Carbon Fuel Standard are expected to result in several million tons of emission reductions, CARB estimates indicate that on-road passenger vehicle emissions will still exceed their 1990 levels by 14 MMTCO₂e in 2020 *even* with both of these aggressive policies in place.⁴¹

As a result, it is reasonable to expect that the electricity sector will be responsible for *at least* its proportional share of emissions reductions. The attempts of some parties to shun the responsibility to achieve significant direct, in-sector emissions reductions through expansion of California's energy efficiency and renewable energy programs will defer urgently needed investments in these areas, thereby increasing the overall cost of AB 32 compliance. Therefore, the Commissions should maintain their commitment to expanding and strengthening energy efficiency programs and renewable energy mandates as key complementary policies to any cap and trade program.

C. ENERGY EFFICIENCY IS THE CLEANEST, CHEAPEST, FASTEST EMISSIONS REDUCTION OPTION AVAILABLE.

LADWP and SCPPA complain that implementation of energy efficiency programs will result in significant costs for retail providers and their customers.⁴² On the contrary, energy efficiency is a cost-saver for consumers. As both Commissions have and continue to emphasize, energy efficiency is the cheapest resource available and in fact will lower overall customer costs, even absent consideration of its GHG reduction benefits. Utilities are procuring end-use energy efficiency not only to capture its GHG reduction benefits, but also to fulfill their obligations as portfolio managers to procure resources to provide reliable, affordable, and environmentally sensitive energy services to customers. We strongly urge the Commissions to recommend maintaining the utilities' portfolio management responsibilities, including procurement of cost-effective energy efficiency and renewable resources, and to recommend that auction revenues augment, not replace, funding for existing programs that reduce GHG emissions

⁴¹ CARB Symposium Notice: *Reducing Greenhouse Gas Emissions from Passenger Vehicles: "What's Next?"* Available at: http://www.arb.ca.gov/cc/ccms/meetings/042108/arb_its-davis_vehghgsymp_042108.pdf

⁴² *LADWP Opening Comments* (June 2, 2008), p.12; *SCPPA Opening Comments* (June 2, 2008), p.20.

VIII. LEGAL ISSUES

A. THE COMMISSIONS SHOULD RECOMMEND THAT CARB AUCTION ALLOWANCES AND USE MOST OR ALL OF THE AUCTION REVENUE FROM THE ELECTRICITY SECTOR TO ACHIEVE FURTHER GHG EMISSION REDUCTIONS IN THE ELECTRICITY SECTOR.

Most parties have conducted independent legal analyses and concluded that the proposed allocation methods do not violate the dormant Commerce Clause, and an auction will not violate Proposition 13 so long as the funds are used for the purposes of AB 32.⁴³ Although some parties continue to have doubts on these issues, our analysis, consistent with the analysis of the majority of commenters, shows that there would not be sufficient bases for a successful legal challenge. In any case, since the Commission is evaluating policy tools, the diversity of legal opinions on these topics should not prevent the Commissions from making a recommendation to CARB. Accordingly, we urge the Commissions to move forward with an allowance distribution recommendation to CARB based on policy principles. CARB will then have the benefit of the Commissions' informed advice, and will be able to resolve lingering legal doubts as they see fit.

1. We do not see the potential for a successful Dormant Commerce Clause challenge.

We agree with DRA that none of the proposals for allocating allowances demonstrates a problematic preference for California entities.⁴⁴ SMUD raises the concern that returning auction revenues to California retail providers could discriminate against interstate commerce and that revenues should instead be distributed to all Deliverers.⁴⁵ We understand SMUD's argument to be that if an in-state deliverer also happens to be a retail provider, then receiving auction revenue will put it at a competitive advantage compared to an out-of-state deliverer that is not receiving any auction funds, thus resulting in discrimination against out-of-state entities compared to in-state entities. There are several problems with this argument: 1) the auction revenue would have to be used for very specific purposes, and would not be allowed to be used to reduce the retail provider's price of power when they are acting as a deliverer in competition with other

⁴³ We addressed DCC issues and the possibility of preemption by the Federal Power Act in our previous comments. See, e.g., *NRDC Comments* (Dec. 3, 2007), p.8

⁴⁴ *DRA Opening Comments* (June 2, 2008), p.18

⁴⁵ *SMUD Opening Comments* (June 2, 2008), pp.21-22.

deliverers; 2) there would be no line drawn at the California border; all deliverers would be treated the same in the auction whether they are in-state or out-of-state, and then auction revenue would be used to accomplish the purposes of AB 32.

2. If auction revenues are used to further the purposes of AB 32 and not diverted to the general fund, they should not be considered a tax.

We agree with SMUD, DRA, and PG&E that so long as auction revenues are used to reduce GHG emissions and are not used for unrelated purposes or put into the state's General Fund, they will be considered a fee and not a tax.⁴⁶ LADWP, on the other hand, misinterprets *Sinclair Paint*. It twists *Sinclair*'s language dictating that funds must be used for "mitigating the adverse effects" of lead pollution into a mandate that funds can only be used to defray administrative costs.⁴⁷ The very language that LADWP quotes belies its interpretation. *Sinclair* is distinguishing funds raised for general revenue purposes from funds used to accomplish the purposes of a particular bill.⁴⁸ In the case of *Sinclair*, that purpose is to mitigate the adverse effects of lead poisoning in children; in the case of AB 32, the primary purpose is to reduce global warming pollution. We absolutely agree with LADWP that if the state wishes to raise revenue for the general fund, it must do so with a tax.⁴⁹ Using auction revenue under AB 32 to achieve GHG reductions in the electricity sector is decidedly ***not*** raising revenue for the general fund.

IX. FLEXIBLE COMPLIANCE MECHANISMS

A. THE COMMISSIONS SHOULD RECOMMEND THAT CARB TAKE A SKEPTICAL VIEW OF OFFSETS.

1. By Definition, Offsets Can Only Originate from Uncapped Sectors

By definition, an offset in a cap and trade program can only be an emission reduction project in an uncapped sector which CARB could decide to allow an entity in a capped sector to use to meet its compliance responsibility. Allowing emissions

⁴⁶ SMUD Opening Comments (June 2, 2008), p.p22-24; DRA Opening Comments (June 2, 2008), p.21; PG&E Opening Comments (June 2, 2008), p.35 (stating that there could be a problem if revenues were used for purposes unrelated to AB 32); we disagree with SCCPPA's conclusion to the contrary, see SCCPPA Opening Comments (June 2, 2008), pp.49-50.

⁴⁷ LADWP Opening Comments (June 2, 2008), p.25.

⁴⁸ *Sinclair Paint Co. v. State Bd. of Equal.*, 15 Cal. 4th 866, 881 (1997) (funds must be used for "mitigating the adverse effects of lead poisoning if children, and not for general revenue purposes.")

⁴⁹ See LADWP Opening Comments (June 2, 2008), p.26.

reductions within a capped sector to count as offsets is inherently flawed, since it would double-count emission reductions and would cause a net *increase* in emissions. Some projects proposed by parties as offsets in the opening comments do not meet this definition. For example, PacifiCorp’s suggestion that grid infrastructure improvement projects be considered offsets⁵⁰ is not appropriate because grid infrastructure falls squarely within the electricity sector, which would be capped.

PG&E’s suggestion of biogas from dairy farms⁵¹ presents an interesting case study of projects that can reduce emissions in multiple sectors. PG&E suggests that biogas from dairies upgraded to pipeline quality should be eligible to earn offsets based on both the avoidance of fossil gas use, and the destruction of CH₄ from the breakdown of the manure. As discussed elsewhere in these comments, the natural-gas sector should be included in a cap-and-trade program, and if it is, the avoided use of fossil gas would not be an offset but rather a project that would help PG&E reduce its emissions and meet its compliance obligations under the cap. On the other hand, methane emissions from dairy manure would not be covered by the cap even if the natural gas sector is included, so the controlled destruction of CH₄ from the manure should be targeted directly by incentive measures or other regulatory approaches (note that PUC § 399.12(h)(2) presupposes the creation of credits “associated with the reduction of solid waste and treatment benefits created by the utilization of biomass or biogas fuels”).

2. CDM Offsets Should Not Be Accepted in California at this time.

We recommend that Clean Development Mechanism (CDM) Certified Emissions Reductions (CERs) not be allowed to be used for compliance in California at this time.⁵² We agree with DRA that the CDM has significant problems that must be addressed before CERs are included in a California system.⁵³ While we support the objective of the CDM to reduce emissions in less developed countries and to encourage sustainable development, the CDM is failing to guarantee that its offset projects provide real, truly additional, verifiable, permanent, and enforceable GHG reductions. Several parties

⁵⁰ *PacifiCorp Opening Comments* (June 2, 2008), p.40

⁵¹ *PG&E Opening Comments* (June 2, 2008), pp.36-37

⁵² Our opinion here is limited to a California system. We do not opine here on a potential future national system.

⁵³ *DRA Opening Comments* (June 2, 2008), pp.40-42

identified the additionality of CDM projects as a concern,⁵⁴ and in our view no party provided arguments compelling enough to justify California's use of CDM offsets at this time.

There is evidence that CDM offset projects do not result in real, additional, verifiable, permanent, and enforceable emission reductions. An evaluation of a random sample of 97 CDM projects, the largest such effort to date, found that up to 40% of CDM projects have not resulted in GHG reductions that are additional, and that market forces push the program to low cost reductions like chemical destruction, which does not contribute to sustainable development and could possibly be captured at lower cost through other policy instruments, such as direct subsidies for such reductions.⁵⁵ A paper by Michael Wara and David Victor at Stanford University, which DRA cites,⁵⁶ describes failures of the CDM to guarantee the additionality of offset projects; for example, all new hydro projects in China are applying for CERs, but it is extremely unlikely that *none* of these projects would have happened without the CDM.⁵⁷ EcoSecurities agrees there are problems with the CDM, but suggests the CDM Executive Board has or will fix them.⁵⁸ While we are hopeful that the CDM Executive Board will solve many of these problems in the future, we do not believe sufficient progress has been made. Wara and Victor summarize the systemic and procedural problems:

The host governments and investors that seek credit have a strong incentive to claim that their efforts are truly additional. The regulator—in this case, the CDM Executive Board—can't in many cases gather enough information to evaluate these claims. These problems of asymmetrical information are compounded in the CDM, to be sure, because the CDM Executive Board is massively under-staffed and the CDM system relies on third-party verifiers to check the claims made by project proponents. In practice, these verifiers, who are paid by the project developers, have strong incentives to approve the projects they check. Further, there is scant oversight on the integrity of the verification process and no record of

⁵⁴ *AReM Opening Comments* (June 2, 2008), p.7; *The Climate Trust Opening Comments* (June 2, 2008), p.15; *DRA Opening Comments* (June 2, 2008), p.40; *Dynergy Opening Comments* (June 2, 2008), p.21; *EcoSecurities Opening Comments* (June 2, 2008), p.9; *LADWP Opening Comments* (June 2, 2008), p.10; *Morgan Stanley Opening Comments* (June 2, 2008), p.15;

⁵⁵ Schneider, Lambert. 2007. "Is the CDM fulfilling its environmental and sustainable development objectives? An evaluation of the CDM and options for improvement," (November 5).

⁵⁶ *DRA Opening Comments* (June 2, 2008), p.55 (citing Wara, Michael and David Victor. "A Realistic Policy on International Carbon Offsets." Working Paper #74. Program on Energy and Sustainable Development, Stanford University, April 2008, p.12.)

⁵⁷ *Id.* at 13.

⁵⁸ *EcoSecurities Opening Comments* (June 2, 2008), p.9.

punishing verifiers for misconduct. Lacking any other source of information about individual projects and facing pressure from both developing and developed country governments, the CDM Executive Board is prone to approve projects. Asymmetries of information are rampant; the incentives mostly align in favor of approval.⁵⁹

In light of the current problems with CDM, allowing CERs to be used in a California cap and trade program could compromise the entire effort. We recommend CDM offsets not be allowed in a CA program at this time.

3. Offsets Should Be Limited in Quantity

All parties commenting on this topic agree that offsets must be real, additional, verifiable, permanent, and enforceable.⁶⁰ However, the reality is that any offset program will have difficulty guaranteeing real, additional, verifiable, permanent, and enforceable emission reductions. The failures of the CDM are the most well known and largest in scope, but they are emblematic of the difficulty of overseeing an offset program. Any new program, particularly in its early years, will have at least some projects that do not meet this standard. Consequently, we agree with DRA that some quantity limits are appropriate.⁶¹ RGGI limits use of offsets for entities in the electric sector to 3.3% of their reported emissions in any compliance period.⁶² If offsets are allowed in California's program, a similar limit is appropriate to hedge against the risk that offset projects are neither real, additional, verifiable, permanent, nor enforceable. Other reasons for quantity limits include:

1. Limits would ensure that cap-and-trade yields meaningful reductions in capped sectors. Without quantity limits on the use of offsets as an alternative compliance mechanism, emissions in capped sectors (as well as possibly overall emissions) could continue to rise significantly.

⁵⁹ Wara and Victor at 14.

⁶⁰ *AReM Opening Comments* (June 2, 2008), p.7; *Calpine Opening Comments* (June 2, 2008), p.15; *CEERT Opening Comments* (June 2, 2008), p.6; *PG&E Opening Comments* (June 2, 2008), p.60; *The Climate Trust Opening Comments* (June 2, 2008), p.10; *DRA Opening Comments* (June 2, 2008), p.44; *Dynegy Opening Comments* (June 2, 2008), p.10; *EPUC/CAC Opening Comments* (June 2, 2008), p.72; *GPI Opening Comments* (June 2, 2008), p.25; *IEP Opening Comments* (June 2, 2008), p.6; *LADWP Opening Comments* (June 2, 2008), p.2; *PacificCorp Opening Comments* (June 2, 2008), p.15; *Powerex Opening Comments* (June 2, 2008), p.5; *SCE Opening Comments* (June 2, 2008), p.14; *SDG&E/SCG Opening Comments* (June 2, 2008), p.25; *TURN Opening Comments* (June 2, 2008), p.21;

⁶¹ *DRA Opening Comments* (June 2, 2008), p.39.

⁶² RGGI, Model Rule Draft, March 23, 2006, p. 51, available at http://www.rggi.org/docs/public_review_draft_mr.pdf.

2. Limits would ensure clean investment and the avoidance of investment in high emitting capital that would eventually have to be retired prematurely in the future to achieve our long term reduction goals.
3. Limits would ensure capture of valuable environmental and economic co-benefits.
4. Limits would preserve the option of linkage. Quantitative limits on offsets would preserve the option of linkage to other cap-and-trade programs. Both the EU system and the RGGI system in the northeast have fairly strict limits on offsets and can be expected to resist linkage to a system without limits.

4. Offsets Should Be Discounted

We agree with DRA that discounting offsets can “mitigate potential issues with offset integrity”⁶³ and believe discounting is another method the Commissions should recommend to account for uncertainty in an offset program, if an offset program is selected. We believe discounting offsets is appropriate in a cap and trade program such as California’s, where the main focus is on achieving GHG emissions reductions to meet our 2020 and 2050 goals. Achieving these goals will require long-term planning with significant investment in capped sectors. A discounted offset program would help encourage this investment. EcoSecurities agrees offset programs have inherent uncertainty: “For many types of projects, uncertainty associated with baseline conditions may be much higher than the uncertainty associated with actual measurements of sequestration or emissions. Baseline uncertainty will also lead to unavoidable uncertainty about leakage.”⁶⁴ But they suggest discounting is “arbitrary.” We maintain that *not* discounting offsets that have uncertainty in their baseline is equally arbitrary and is less useful in achieving the goals of AB 32. Would it be better to allow for an arbitrary amount of invalid reductions to substitute for real ones? We think not.

⁶³ *Id.* at 43.

⁶⁴ *EcoSecurities Opening Comments* (June 2, 2008), p.17

B. PRICE TRIGGERS AND OTHER SAFETY VALVES

1. A Safety Valve or Price Cap Compromises Environmental Integrity and Is More Likely to Burden the Economy

Some parties call for the Commissions to recommend that CARB set an explicit price cap in addition to the emergency mechanism built into Health and Safety Code section 38599(a).⁶⁵ We continue to maintain that a safety valve or price cap *in addition to* the emergency mechanism in the statute is unnecessary and would lead to unacceptable consequences. A safety-valve, especially an explicit price cap, would cause at least two major problems. First and foremost, a safety valve would compromise the environmental integrity of the program by allowing the cap to be broken. Second, instead of decreasing uncertainty, a safety valve would increase uncertainty in the market and discourage investment in emissions reductions. NRDC/UCS disagree with the DRA's assertion that a safety valve will prevent price shocks and reduce uncertainty,⁶⁶ and instead agree with Morgan Stanley Capitol Group's assessment that a safety valve will "create uncertainty in the market that discourages and undermines investment incentives for the development and deployment of new or existing technologies that can reduce emissions."⁶⁷ Indeed, Morgan Stanley calls an explicit safety valve the "worst of all possible worlds" where "cost of allowances and/or offsets essentially becomes a tax that burdens the economy without attaining the desired environmental goal."⁶⁸ Southern California Edison also expresses concerns with a safety valve: "a price trigger can also cause real, verifiable, and cost-effective emission reduction opportunities to be ignored solely because of an arbitrary price trigger. The purpose of cost containment is to allow for the lowest-cost, efficient emissions reduction and compliance opportunities to be utilized. A price trigger thus defeats the purpose of cost containment."⁶⁹

Some parties propose a price ceiling at which the regulator or regulated entities borrow allowances from future compliance periods in order to maintain the overall cap over time, even if not in that particular period. While slightly better than a pure price cap

⁶⁵ *DRA Opening Comments* (June 2, 2008), p.25-26; *PG&E Opening Comments* (June 2, 2008), p.40; *SCE Opening Comments* (June 2, 2008), p.19; *PacificCorp Opening Comments* (June 2, 2008), p.27; *SCPPA Opening Comments* (June 2, 2008), p.53; *FPL Energy Opening Comments* (June 2, 2008), p.6-7;

⁶⁶ *DRA Opening Comments* (June 2, 2008), p.26

⁶⁷ *Id.*

⁶⁸ *MSCG Opening Comments* (June 2, 2008), p.6

⁶⁹ *SCE Opening Comments* (June 2, 2008), p.19

because it better maintains environmental integrity, this approach still increases uncertainty in the market in both current and future compliance periods. Like a price cap, borrowing from future compliance periods once the price reaches a certain value will reduce the certainty of a return on an investment in GHG emissions reductions. Additionally, borrowing increases the risk of non-compliance in the future, which we discuss in more detail below. Including a safety valve risks not achieving the required emissions reductions and increases the cost of a cap and trade program by raising market uncertainty.

2. Linking California's Cap and Trade Program to Other Programs Should Only Be Done With Careful Oversight

Linking cap and trade programs could potentially undermine the integrity of the state's program and reduce the state's regulatory control. If California were to link with another system, California's program would inherit the design elements of the other program that are less stringent than California's, and California would cede the power to strengthen those design elements. Linked programs must be extremely similar in design and market conditions. To achieve the necessary synchronization, DRA proposes a phased in linkage to other trading systems once the Californian and other markets have been tested and reasonably harmonized.⁷⁰ As DRA suggests, CARB should establish conditions for linkage including achievement of similar levels of reductions before the systems are linked, establishment of similar penalties, synchronization of cost containment measures, and harmonized standards for offsets and other protocols.⁷¹ This proposal is consistent with the comments of most other parties, who support linkage only with programs of similarly high standards.⁷²

We agree with CEERT that to meet AB 32's statutory requirements, CARB must consider the potential for lost co-benefits in deciding whether to link with other

⁷⁰ *DRA Opening Comments* (June 2, 2008), p.28

⁷¹ *DRA Opening Comments* (June 2, 2008), p.32

⁷² *PG&E Opening Comments* (June 2, 2008), p.48-49; *SDG&E/SCG Opening Comments* (June 2, 2008), p.28 (calling for linkage only to "systems of comparable integrity with similar targets, acceptable measurement protocols, and similar safety valves."); *Modesto ID Opening Comments* (June 2, 2008), p.9; *Calpine Opening Comments* (June 2, 2008), p.15; *Powerex Opening Comments* (June 2, 2008), p.8 ("Linkage to other markets would only be advisable if the designs of the market are compatible and linked markets adopt mutually acceptable and compatible cost containment mechanisms."); *EPUC/CAC Opening Comments* (June 2, 2008), pp.69-70; *EcoSecurities Opening Comments* (June 2, 2008), p.8.

programs.⁷³ Criteria pollutants and toxic pollutants are often co-pollutants with CO₂. In many situations, reducing CO₂ will reduce other pollutants that have a more local effect. CPUC, CEC, and CARB must consider lost opportunities for reductions in co-pollutants when deciding whether to link with programs outside California.

C. COMPLIANCE PERIODS, BANKING, AND BORROWING

1. Many Parties Support Staggered Compliance Periods of Three Years

We agree with the large majority of the parties who support a compliance period of three years.⁷⁴ This provides capped entities flexibility to make the investment decisions necessary to meet their compliance obligations, and helps reduce price variability. In addition to a three year compliance period, we could support CARB further smoothing market functioning by staggering compliance periods, so that periods end on predetermined but different dates for different covered entities.⁷⁵

SCE suggests allowing entities to self-end their compliance periods early to mitigate chances of market manipulation.⁷⁶ We do not see any advantage to such “floating” compliance periods and believe this approach could in fact result in market manipulation and cause greater market volatility. Multiple covered entities could each react to market conditions by trying to end their compliance periods at the same time, thus resulting in a price spike. A three year compliance period and banking should allow covered entities sufficient flexibility, and we see no need for floating compliance periods. CARB should maintain control over the timing of compliance periods, but could stagger them in order to ensure smooth market functioning.

⁷³ *CEERT Opening Comments* (June 2, 2008), pp.4-5.

⁷⁴ *DRA Opening Comments* (June 2, 2008), p.32; *FPL Energy Opening Comments* (June 2, 2008), p.24; *IEP Opening Comments* (June 2, 2008), p.6; *SDG&E/SCG Opening Comments* (June 2, 2008), p.30; *SMUD Opening Comments* (June 2, 2008), p.5; *Calpine Opening Comments* (June 2, 2008), p.16 (3-5 years); *PG&E Opening Comments* (June 2, 2008), p.37 (3-5 years); *CMUA Opening Comments* (June 2, 2008), p.4 (multi-year); *NCPA Opening Comments* (June 2, 2008), p.33 (multi-year); *PacificCorp Opening Comments* (June 2, 2008), p.33 (multi-year up to 5 years); *SCE Opening Comments* (June 2, 2008), p.12 (multi-year); *WPTF Opening Comments* (June 2, 2008), p.16 (3-5 years).

⁷⁵ *PG&E Opening Comments* (June 2, 2008), p.52; *DRA Opening Comments* (June 2, 2008), p.32-33; *SCE Opening Comments* (June 2, 2008), p.12; *SDG&E/SCG Opening Comments* (June 2, 2008), p.30;

⁷⁶ *SCE Opening Comments* (June 2, 2008), p.12.

2. Banking Should Be Allowed, with Appropriate Limits

We agree with the large majority of parties who support banking of allowances for use in future compliance periods.⁷⁷ Banking encourages early action in long-term emissions reductions and allows obligated entities to better prepare for future unknowns. For example, we agree with Sacramento Municipal Utility District that banking is an important tool to smooth out the natural variability in hydropower.⁷⁸ We also agree with Morgan Stanley's assertion that a well-run auction would greatly reduce the risk of hoarding.⁷⁹ We support a well-run auction as a market mechanism that will reduce administrative cost and remove risk of market failure. Some constraints on banking, such as limits on the number of allowances an entity may bank and limits on the number of compliance periods an entity may wait to surrender allowances, may be appropriate to prevent hoarding and market distortions from allowances being kept out of circulation for too long.

3. Borrowing Threatens the Environmental Integrity of the Cap and Should Not Be Allowed

We agree with Calpine that borrowing can diminish incentives to take early action.⁸⁰ Some other parties suggest borrowing will help regulated entities comply with reduction requirements should unexpected events occur.⁸¹ Although this may be true in the short term because borrowing from future compliance periods will make compliance easier today, it will make complying in the future more difficult. Fewer allowances will be available over time because they will have been used up through borrowing. This allowance scarcity in future periods caused by borrowing in the short term will compound the allowance scarcity caused by a cap declining over time, possibly resulting

⁷⁷ *DRA Opening Comments* (June 2, 2008), p.33; *PG&E Opening Comments* (June 2, 2008), p.38, 53; *SCE Opening Comments* (June 2, 2008), p.12; *SDG&E/SCE Opening Comments* (June 2, 2008), p.30; *NCPA Opening Comments* (June 2, 2008), p.33; *SCPPA Opening Comments* (June 2, 2008), p.52; *SMUD Opening Comments* (June 2, 2008), p.26; *Dynegy Opening Comments* (June 2, 2008), p.14; *Calpine Opening Comments* (June 2, 2008), p.16; *FPL Energy Opening Comments* (June 2, 2008), p.10; *WPTF Opening Comments* (June 2, 2008), p.18; *Powerex Opening Comments* (June 2, 2008), p.4; *EPUC/CAC Opening Comments* (June 2, 2008), p.71;

⁷⁸ *SMUD Opening Comments* (June 2, 2008), p.26

⁷⁹ *Morgan Stanley Opening Comments* (June 2, 2008), p.11-12

⁸⁰ *Calpine Opening Comments* (June 2, 2008), p.16;

⁸¹ *NCPA Opening Comments* (June 2, 2008), p.33; *SCPPA Opening Comments* (June 2, 2008), p.52; *SMUD Opening Comments* (June 2, 2008), p.26; *Dynegy Opening Comments* (June 2, 2008), p.19; *EPUC/CAC Opening Comments* (June 2, 2008), p.72.

in capped entities not being able to meet their compliance obligations in the future. Borrowing for easier compliance in the short term will simply increase the risk to the success of the program in achieving the required emissions reductions in the long term.

D. PENALTIES AND ALTERNATIVE COMPLIANCE PAYMENTS

There is broad agreement amongst parties that the penalty for non-compliance must be set significantly higher than the market price to provide sufficient disincentive for non-compliance and that regulated entities should not be able to pay their way out of compliance.⁸² We agree with DRA that “a penalty structure that is predictable, certain, automatic, and easily enforceable is the best approach for the California cap-and-trade system.”⁸³ Without a predictable and certain penalty, the threat of enforcement may not compel compliance. In addition, the best way to compel compliance would be to levy a meaningful penalty for non-compliance *and* in order to maintain the integrity of the cap over time, also require that a multiple of the allowances not surrendered in the current period be retired in the next compliance period.

For these reasons, we do not support PG&E’s suggestion of a discretionary penalty subject to mitigating factors.⁸⁴ Penalties that are not automatic, but are instead selectively applied at the discretion of the regulator, would negate the certainty of penalties necessary to maintain a meaningful cap. Regulated entities must be able to plan for compliance. Any sort of discretionary penalty outside the emergency clause in Health and Safety Code section 38599(a) would decrease the viability and authenticity of a cap.

We agree with Morgan Stanley’s statement that alternative compliance payments would likely add unnecessary administrative complexity,⁸⁵ and also believe that alternative compliance payments would threaten the environmental integrity of the cap. PG&E’s proposal that alternative compliance remedies be available, such as “affirmative environmental projects or remediation”,⁸⁶ would allow projects unrelated to greenhouse

⁸² *CEERT Opening Comments* (June 2, 2008), p.5; *DRA Opening Comments* (June 2, 2008), p.35; *TURN Opening Comments* (June 2, 2008), p.21; *Calpine Opening Comments* (June 2, 2008), p.17; *FPL Energy Opening Comments* (June 2, 2008), p.30; *Morgan Stanley Opening Comments* (June 2, 2008), p.13; *WPTF Opening Comments* (June 2, 2008), p.19.

⁸³ *DRA Opening Comments* (June 2, 2008), p.36.

⁸⁴ *PG&E Opening Comments* (June 2, 2008), p.55.

⁸⁵ *Morgan Stanley Opening Comments* (June 2, 2008), p.13.

⁸⁶ *PG&E Opening Comments* (June 2, 2008), p.55

gas reductions to count for compliance obligations, thereby rendering the cap meaningless.

X. MODELING ISSUES

A. THE E3 MODEL OVERSTATES THE COST OF IMPLEMENTING THE 33% RENEWABLES PORTFOLIO STANDARD

NRDC/UCS/GPI agree with CalWEA and the Large-Scale Solar Association (“LSA”), CEERT, and the Solar Alliance that the model overestimates the cost of renewable energy and underestimates the cost of natural gas generation, resulting in an unreasonably high estimated cost to achieve the 33% RPS. As CalWEA and LSA point out, using a more realistic natural gas price forecast and a more reasonable market heat rate of 8,000 Btu/kWh (compared to the heat rate of 6,600 Btu/kWh implied by the model) would significantly narrow the difference between renewable and conventional generation costs.⁸⁷ With near-term NYMEX futures prices trading at around \$13/MMBtu, the Commissions should be wary of relying on modeling cost estimates that are based on an electricity market price of just \$54/MWh.⁸⁸ NRDC/UCS/GPI observe that a natural gas price of \$13/MMBtu translates to a fuel cost component *alone* of natural gas-fired electricity of over \$90/MWh, even using a “state-of-the-art” heat rate of 7,000 Btu/kWh. The E3 modeling results are predicated on a scenario of low and stable natural gas prices – an assumption that fails to reflect the reality of historic natural gas prices – and may not be appropriate to reliably inform AB 32 policy decisions. As LADWP points out, “Assuming more realistic prices for natural gas of \$12 [per MMBtu] for natural gas and \$1.90 [per MMBtu] for coal, fossil generation costs could run to \$46 billion for the reference case (20% RPS and EE) thereby making the 33% RPS and aggressive energy efficiency very cost effective on their own merit, even with a conservative allowance price of \$30/ton.”⁸⁹

NRDC/UCS/GPI remain concerned that the Commissions’ modeling efforts do not account for the increasing risk of California’s continued reliance on volatile natural

⁸⁷ *CalWEA/LSA Opening Comments* (June 2, 2008), pp.8-10.

⁸⁸ *Ibid*, p.10.

⁸⁹ *LADWP Opening Comments* (June 2, 2008), p.9.

gas supplies. These risks carry significant costs for California customers,⁹⁰ and any cost impact modeling that does not take these costs into account will provide incomplete and unreliable information for policymakers charged with implementation of AB 32 policies. As NRDC/UCS note in their opening comments, the “33% RPS/High EE Goals” scenario could reduce statewide natural gas demand by 20%, an impact that is almost certain to reduce natural gas prices while mitigating the energy price risk faced by California customers.⁹¹ The Commissions cannot afford to overlook these benefits of increasing clean energy use in their modeling of AB 32 scenarios for the electricity and natural gas sectors.

B. THE MODELING RESULTS DO NOT ARGUE AGAINST EXPANDING COMPLEMENTARY EMISSIONS REDUCTION MEASURES

NRDC/UCS/GPI are concerned that some parties are inappropriately using the E3 modeling estimates to argue against expanding complementary emissions reduction measures in the electricity sector. For instance, PG&E states: “To date, available economic modeling by the CPUC suggests a 33% RPS target by 2020 is unrealistic, and it is premature to establish any expanded renewable procurement targets beyond the 20% by 2010 mandate.”⁹² Similarly, DRA claims that “Mandating a 33% RPS for the purposes of GHG emissions reductions would represent a significant ratepayer investment with very little return.”⁹³

PG&E and DRA point to the E3 model’s estimate that the GHG reductions from the 33% RPS would cost approximately \$133/tonne to justify their conclusions. However, as explained above and in the June 6, 2008 opening comments of NRDC/UCS,⁹⁴ this conservatively high cost estimate is based on a low and stable natural gas price forecast, an unrealistically static view of renewable technology advancement, and a number of other assumptions that are likely to overstate the incremental cost of

⁹⁰ To wit, PG&E recently applied at the CPUC for a \$482 million electricity rate increase. In its press release, PG&E cited “skyrocketing” natural gas prices as a key factor in driving the requested increase, and noted that natural gas prices had increased by 30% in 2008 alone. See: PG&E press release: “Rising Natural Gas Prices and Lower Hydroelectric Power Supplies Expected to Increase Electricity Costs,” June 10, 2008.

⁹¹ *NRDC/UCS Opening Comments* (June 2, 2008), p.45.

⁹² *PG&E Opening Comments* (June 2, 2008), p.91.

⁹³ *DRA Opening Comments* (June 2, 2008), p.50.

⁹⁴ *NRDC/UCS Opening Comments* (June 2, 2008), pp.41-49.

implementing a 33% RPS. In their opening comments, NRDC/UCS demonstrate that making a few minor changes to the E3 model's input assumptions would reduce the incremental cost of the 33% RPS/High EE goals case to \$45/tonne relative to a revised reference case.⁹⁵

Furthermore, the emissions reduction measures included in the 33% RPS/High EE goals will result in almost 30 MMT of GHG reductions, representing a crucial contribution to the state's AB 32 emissions limit.⁹⁶ The Commissions have already recognized the essential role of these emissions reduction measures in D.08-03-018:

We agree with several parties, including NRDC/UCS, that the cap-and-trade system need only produce a relatively small portion of the overall emissions reductions in the short term. We recommend that ARB design it as a complement to existing policies and their expansions as noted above. As described above, a large portion of the emissions reductions in the electricity sector will come from mandated investments in energy efficiency and other demand reduction programs, as well as renewable energy goals.⁹⁷

The E3 model does not suggest that there are lower-cost emission reduction measures in the electricity sector than the 33% RPS or aggressive levels of energy efficiency; nor does it imply that there will be cheaper emission reduction measures in other sectors. It is merely a tool to evaluate the cost impact of different scenarios under a variable set of assumptions. Indeed, as NRDC/UCS/GPI have maintained several times in this proceeding, a cap and trade program that is not complemented by significant expansion of existing policies in the electricity sector could fail to overcome the various non-price market barriers faced by energy efficiency and renewable energy, and that expanded regulatory policies to achieve these emissions reductions are essential and should be the foundation of the program. Complementary policies are critical to overcoming the market barriers that energy efficiency and renewable technologies continue to face, even with a cap-and-trade system in place. A higher RPS mandate provides the market certainty that is necessary to spur investment in capital-intensive renewable energy technologies and promote long-term planning in transmission infrastructure. As SMUD

⁹⁵ *Ibid* pp.49-51

⁹⁶ In its opening comments, DRA mistakenly indicates that the 33% RPS/High EE goals case would only result in an additional 8.5 MMTCO₂e of reductions compared to the reference case (see: *DRA Opening Comments*, p.50). In making this assessment, DRA apparently fails to recognize that the 29.6 MMTCO₂e of reductions in the 33% RPS/High EE goals case are *additive to*, rather than inclusive of, the 21.1 MMTCO₂e of reference case reductions presented by E3.

⁹⁷ D.08-03-018, p.39.

correctly notes, “Relying upon incremental market signals, in a market that will not begin until 2012, to incent these high capital infrastructure projects is a plan to fail.”⁹⁸

For this reason, the Commissions should reject SCE’s notion that “If a broad-based cap-and-trade mechanism is implemented, additional EE or renewable mandates will be unnecessary.”⁹⁹ Such statements fail to recognize the importance of complementary policies, implying instead that a cap-and-trade system alone will “direct the market” to find the optimal least-cost mix of emissions reductions. This argument conveniently ignores the long-term planning and market barriers that targeted regulatory programs such as the RPS are designed to address. Indeed, it is unrealistic to expect substantially increased GHG reductions from renewables without establishing a clear goal that will stimulate the necessary investments.

A secondary implication of the misguided argument against expanding core emission reduction measures is that cap-and-trade will allow California to meet its AB 32 goals *without* significantly reducing the direct emissions in the electricity sector, through the potential purchase of emission allowances from other sectors or offsets from other countries. This implication is neither supported by the E3 model nor reflective of reality. To counter these claims, the Commissions should make clear in their forthcoming recommendations to CARB that the state must continue to pursue and expand policies that result in substantial amounts of direct emissions reductions in the electricity sector.

XI. CONCLUSION

We appreciate the Commissions and staffs’ efforts on the staff papers and rulings on allocation, CHP, ERMs, and Modeling for the electricity and natural gas sectors. We urge the Commissions to consider our recommendations described above.

⁹⁸ *SMUD Opening Comments*, p.8.

⁹⁹ *SCE Opening Comments*, p.40.

Dated: June 16, 2008

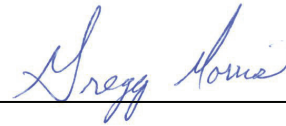
Respectfully submitted,



Kristin Grenfell
Attorney
Natural Resources Defense Council
111 Sutter St., 20th Floor
San Francisco, CA 94104
415-875-6100
kgrenfell@nrdc.org



Cliff Chen
Senior Energy Analyst
Union of Concerned Scientists
2397 Shattuck Avenue, Suite 203
Berkeley, CA 94704
510-843-1872
cchen@ucsusa.org



Gregg Morris
Director
Green Power Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
510-644-2700
gmorris@emf.net

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the **“Reply Comments of the Natural Resources Defense Council (NRDC), the Union of Concerned Scientists (UCS), and the Green Power Institute (GPI) on Allowance Allocation, Flexible Compliance, CHP, Emission Reduction Measures, and Modeling Issues”** in the **matter of R.06-04-009** to all known parties of record in this proceeding by delivering a copy via email or by mailing a copy properly addressed with first class postage prepaid.

Executed on June 16, 2008 at San Francisco, California.



Shari Walker
Natural Resources Defense Council
111 Sutter St., 20th Floor
San Francisco, CA 94104
415-875-6100
Swalker@nrdc.org