

**Responses to Comments**  
**on the**  
**Supplement to the AB 32 Scoping Plan Functional**  
**Equivalent Document**



**Released August 19, 2011**  
**to be considered at the**  
**August 24, 2011 Board Hearing**

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## **PREFACE**

The draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document (Supplement) was released on June 13, 2011 for a 45-day public review and comment period that concluded on July 28, 2011. A total of 109 comment letters were received during the public review period, as well as a number of oral comments from a workshop meeting that was held on July 8, 2011. This document contains the comments received during the public review period, the California Air Resources Board's (ARB) written responses to comments, and the Supplement, as modified.

ARB staff made minor modifications to the Supplement based on responses to comments and other updates. The revised text of the Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (Final Supplement) is presented as Attachment D. To facilitate identifying modifications to the document, modified text is presented with strike-through for deletions and underline for additions. None of the modifications alter any of the conclusions reached in the Supplement or provide new information of substantial importance relative to the Supplement. As a result, these minor revisions do not require recirculation of the document pursuant to the California Environmental Quality Act (CEQA) Guidelines, California Code of Regulations (CCR) section 15088.5 before consideration by the Board.

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- B L91 Attachments (<http://www.arb.ca.gov/lists/ceqa-sp11/123-10-174.pdf>)
- C L106 Attachments (L108) ([http://www.arb.ca.gov/lists/ceqa-sp11/143-ceqa\\_comment\\_complete.pdf](http://www.arb.ca.gov/lists/ceqa-sp11/143-ceqa_comment_complete.pdf))
- D Revised FED Supplement



## 1.0 INTRODUCTION

The California Air Resources Board (ARB) staff prepared and circulated for public review a draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document (Supplement), which contained an expanded environmental analysis of alternatives. ARB's original environmental analysis of the 2008 Scoping Plan was set forth in the California Environmental Quality Act (CEQA) Functional Equivalent Document (2008 FED). This FED was included as Appendix J to the 2008 Scoping Plan, which was released to the public on October 15, 2008 and considered by the Board at a public hearing on December 11, 2008. A court decision (*Association of Irrigated Residents, et al. v. California Air Resources Board, et al.*, San Francisco Superior Court, Case Number CPF-09-509562, May 20, 2011) later determined that the alternatives analysis in the 2008 FED was deficient. Although ARB disagreed with the findings of the court, to remove any doubt about the matter and to be consistent with ARB's interest in public participation and informed decision-making, ARB prepared the Supplement to the 2008 FED and circulated it for public comment for 45 days.

The Supplement provides an expanded analysis of the five project alternatives discussed in Section V of the 2008 FED. The Supplement was released for public review on June 13, 2011. The public comment period concluded on July 28, 2011. ARB received many comments on the Supplement. The comments have been posted in the comment log on the ARB website at: <http://www.arb.ca.gov/lispub/comm/bccommlog.php?listname=ceqa-sp11>. Staff prepared responses to public comments that will be considered by the Board at the August 24, 2011 public meeting. Please note that comment letters 20, 31, and 62 contain multiple attachments with identical comments.

Following consideration of comments received on the Supplement and responses to those comments, ARB revised the Supplement to prepare the Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (Final Supplement) dated August 24, 2011, consistent with the Board Hearing date, and presented later as Attachment D. If approved by the Board, the Final Supplement would supersede and replace the project alternatives section of the 2008 FED found at pages J-74 to J-90.

This document presents verbatim public comments and responds to significant environmental issues raised in public comments that were associated with the alternatives analysis contained in the Supplement. All comments have been reviewed and considered by ARB in the preparation of these responses. In this document, consistent with the definitions in the Supplement, the "2008 Scoping Plan" refers to the plan considered by the Board in December 2008, with final adoption May 11, 2009, and "Proposed Scoping Plan" refers to the plan being brought back to the Board for reconsideration along with the Supplement. (See Section 1.0, 1.1, and 1.2 in the Supplement or the Final Supplement presented as Attachment D to this document for additional details).

## 1.1 CEQA Requirements for Responses to Comments

Responses to public comments are prepared in compliance with CEQA and with ARB's certified regulatory program, which states:

*Public Resources Code (PRC) section 60007. Response to Environmental Assessment*

*(a) If comments are received during the evaluation process which raise significant environmental issues associated with the proposed action, the staff shall summarize and respond to the comments either orally or in a supplemental written report. Prior to taking final action on any proposal for which significant environmental issues have been raised, the decision maker shall approve a written response to each such issue.*

In CEQA, PRC section 21091 also provides direction regarding the consideration and response to public comments. While the provisions refer to environmental impact reports, proposed negative declarations, and mitigated negative declarations, rather than a Functional Equivalent Document (FED), this section of CEQA is applicable to ARB under its certified regulatory program, so it pertains to comments on the Supplement. PRC section 21091(d) states:

*(1) The lead agency shall consider comments it receives ... if those comments are received within the public review period.*

*(2) (A) With respect to the consideration of comments received ..., the lead agency shall evaluate comments on environmental issues that are received from persons who have reviewed the draft and shall prepare a written response pursuant to subparagraph (B). The lead agency may also respond to comments that are received after the close of the public review period.*

*(B) The written response shall describe the disposition of each significant environmental issue that is raised by commenters. The responses shall be prepared consistent with section 15088 of Title 14 of the California Code of Regulations, as those regulations existed on June 1, 1993.*

Title 14 of the California Code of Regulations (CCR) section 15088, a section of the State CEQA Guidelines, states in relevant part that specific comments and suggestions about the environmental analysis that are at variance from the lead agency's position must be addressed in detail with reasons why specific comments and suggestions were not accepted. Responses must reflect a good faith, reasoned analysis of the comments. Title 14 CCR section 15088 (a – c) states:

*(a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The Lead Agency shall respond to comments received*

*during the noticed comment period and any extensions and may respond to late comments.*

*(b) The lead agency shall provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report.*

*(c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice.*

## **1.2 Topics Requiring Substantive Responses**

As a Supplement to the 2008 FED, the only component of the original FED's environmental analysis that was revised and circulated for public review was related to the expanded alternatives analysis. Other environmental impact analysis in the 2008 FED, including the analysis of the 2008 Scoping Plan, was determined to be adequate by ARB and confirmed as adequate by the court in its decision, *Association of Irrigated Residents, et al. v. California Air Resources Board, et al.* Therefore, comments directed at the environmental analysis in the 2008 FED do not require responses.

Substantive responses provided in Chapter 2 of this document are limited to comments that "raise significant environmental issues associated with the proposed action," as required by PRC section 60007(a). Therefore, responses to comments made on the expanded environmental analysis of alternatives presented in the Supplement are provided, consistent with the provisions of PRC section 60007, PRC section 21091, and Title 14 CCR section 15088.

For completeness, this document presents all comments on the Supplement received by ARB during the public comment period. Comments on topics other than significant environmental issues related to the alternatives analysis are considered and noted, and in some cases provided with responses to direct the commenter to the appropriate information; however, substantive responses are not required for CEQA compliance.

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## 2.0 RESPONSES TO COMMENTS

This document addresses all comments received during the public review period of the Supplement. The list of commenters is presented in Table 1.

**Table 1: List of Commenters – Supplement to the AB 32 Scoping Plan Functional Equivalent Document**

#	Name
L1	Undersigned, The
L2	Casey, Edward, Alston & Bird LLP
L3	Johnson, Kenneth
L4	Sandler, Mike
L5	Lossy, Frank, physician in private practice in CA
L6	Saunders, Marshall, Citizens Climate Lobby
L7	Vesser, Barry, Climate Protection Campaign
L8	DeBacker, Mark, Architect, Preservationist, Energy Audit
L9	Thigpen, Kristin
L10	Lista, Cassandra
L11	Roberts, Rose
L12	Linney, Joan
L13	Alcantar, Michael, Alcantar & Kahl, LLP
L14	Carr, Brian
L15	Richter, Daniel
L16	Schwind, Kirsten, Bay Localize
L17	Pulverman, Joshua, Caltrans
L18	Pap, Ruby
L19	Wertheim, Mike
L20	Stoft, Paul
L21	Makovkin, Timothy
L22	Mariposa, Virginia
L23	Kolb, Marcia
L24	Cohen, Jeff, EOS Climate
L25	Loree, Joe
L26	Loy, Gareth

**Table 1: List of Commenters – Supplement to the AB 32 Scoping Plan Functional Equivalent Document**

#	Name
L27	Bardsley, Wendy
L28	Zhang, Yinlan
L29	Allen, John
L30	Schneider, David
L31	Andrews, Michael
L32	Farnum, Benjamin
L33	Burchard, Pete
L34	Berman, Tressa
L35	Sullivan, Joseph, Retired Geological Engineer
L36	Sullivan, Shelly, AB 32 Implementation Group
L37	Frantz, Tom, Association of Irrigated Residents
L38	Mone, Carol
L39	Mauk, Barbara
L40	Kulz, Sharon
L41	Guelff, Jack
L42	Steinberg, Mayoer
L43	Labriola, Kathy, Bay Area Community Land Trust
L44	Tansey, James, Offsetters Clean Technologies, Inc.
L45	Schwind, Janet,
L46	Kaswan, Alice, USF School of Law
L47	Coleman, Brenda, California Chamber of Commerce
L48	Fidanque, Matthew, West Oakland Environmental Indicators Project
L49	Eder, Harvey, Public Solar Power Coalition & self
L50	Toney, Mark, TURN-The Utility Reform Network
L51	Beveridge, Brian
L52	Demeter, James, California Manufacturer
L53	Samati, Ravahn
L54	Eder, Harvey, Public Solar Power Coalition & self
L55	Williams, Laurie and Allan Zabel, Private Citizens & Volunteers CCL
L56	Scripps, Kathy

**Table 1: List of Commenters – Supplement to the AB 32 Scoping Plan Functional Equivalent Document**

#	Name
L57	Lossy, Frank T.
L58	Burr, Kimberly
L59	Bond-Graham, Darwin
L60	Daniels, Lynda
L61	Bockmon, Emily
L62	Fritz, Paul
L63	Berliner, Debra
L64	Holmes, Steve
L65	Stone, Leonard
L66	Lo, Betty
L67	Wu, Diana Pei, Antioch University Los Angeles
L68	Moore, Charles
L69	Arnado, JoElle, ConocoPhillips
L70	Youngmark, Chris, USW
L71	Schonbrunn, David, TRANSDEF
L72	Stockton, Reede, Center for Community, Democracy & Ecology
L73	Rafelski, Lauren
L74	Mo, Melody, Bay Localize
L75	Casey, Edward, Alston & Bird LLP for CA Independent Petroleum Association
L76	Andrew, John, Assistant Deputy Director, DWR
L77	Hedrich, Marianne
L78	Tomaselli, Richard
L79	Miller, Anja
L80	Hodges, Matthew, Valero Companies
L81	Conant, Jeff
L82	Reheis-Boyd, Catherine, WSPA
L83	Ginis, Rachel, Citizens Climate Lobby
L84	Williams, Mike, IWLA
L85	Kline, Timothy, Citizens Climate Lobby
L86	Pistone, Kristina

**Table 1: List of Commenters – Supplement to the AB 32 Scoping Plan Functional Equivalent Document**

#	Name
L87	Kustin, Camille
L88	Hernández Maldonado, Francisco, Ejido Amador Hernández, Ocosingo, Chiapas
L89	Parino, Sofia, Center on Race, Poverty & the Environment
L90	Dunn, Carissa, Metropolitan Water District
L91	Dillard, Joyce
L92	Ravage, Ethan, International Emissions Trading Association
L93	Cuajunco, Kay, Bay Localize
L94	Massen, Dave, Citizens Climate Lobby
L95	Miller, Colin, Concerned Citizen
L96	Keever, Marcie, Friends of the Earth US
L97	DeCarlo, Katie, Ella Baker Center for Human Rights
L98	Eder, Harvey, Public Solar Power Coalition & self
L99	Nowicki, Brian , Center for Biological Diversity
L100	Carlson, Vanessa, UCSD
L101	Carlson, Dawn
L102	Alvarez, Lillian
L103	Reaven, Aaron
L104	Silverstein, David
L105	Tangri, Neil, GAIA
L106	May, Julia, CBE
L107	Larrea, John, California League of Food Processors
L108	Bloch, Adrienne (Attachment to L106)
L109	Southern California Public Power Authority
L110	Public Workshop Transcript, July 8, 2011



L1



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 1 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - Non-REG.

First Name: The  
Last Name: Undersigned  
Email Address: theundersigned@gmail.com  
Affiliation:

Subject: Combination of fees and rebates deserves more attention

### Comment:

Here's an alternative that is worth considering. It could be referred to as feebates, since it calls for a combination of fees and rebates, which I believe works most effectively. Rather than prescribing feebates, though, the proposed overall alternative allows its implementation to a large extent to be decided locally.

1. Fees are imposed on polluting products, as a percentage added to the price paid by the consumer. Obvious products are gasoline, electricity produced from fossil fuel, vehicles and equipment that (comparatively) cause a lot of emissions. Such fees could be collected by the Board of Equalization or by a Fund to be set up for this purpose.

2. The revenues of these fees are then distributed back to the city, county or district where they were collected, provided the respective area manages to reduce emissions locally by a certain percentage, set equally across the state for all areas.

3. Where an area fails to meet the target percentage reduction, part of the revenue will default to the state in accordance with the gravity of the failure. In such cases, revenues will be used for state-wide programs aimed at reducing greenhouse gases.

4. Areas that exceed targets will also be offered the (optional) opportunity to collect fees locally, e.g. as part of feebate programs that make vehicles registration more expensive for the most polluting vehicles and less expensive for the cleanest vehicles.

The provision under 2. will survive under 4., to encourage that revenues are used for effective local programs to electrify transport and offer rebates on clean energy facilities, feed-in tariffs, etc. State-wide set target percentages could be reviewed regularly, say annually. Areas that exceed the target can use their surplus toward their target the following year.

Feebates are most commonly known in the vehicle sector, but they can be equally applied in other sectors. Feebates are attractive because they can be implemented by changing the existing sales tax system, rather than by introducing new taxes. The combination of fees and rebates minimizes leakage. Feebates can also be implemented on a budget-neutral way.

### Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-06-22 01:30:09

1-1

1-2

If you have any questions or comments please contact [Clerk of the Board](#) at (916) 322-5594 .

[Board Comments Home](#)

## L1 Response

---

1-1 The commenter expresses that a “Feebate Program” (i.e., carbon fee coupled with a rebate of collected revenue to specified recipients) is a worthy alternative to consider and provides a description specifically focusing on details of fee collection and revenue distribution. First, the draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document (Supplement) provides an expanded description and analysis of the five alternatives originally presented in the 2008 FED. In accordance with the substantive requirements of the California Environmental Quality Act (CEQA), these alternatives represent a “reasonable range” that could feasibly attain most of the basic project objectives while having the potential to reduce or eliminate significant environmental effects. A range of alternatives analyzed in an environmental document is governed by the “rule of reason,” requiring evaluation of those alternatives “necessary to permit a reasoned choice.” (CEQA Guidelines, California Code of Regulations [CCR] section 15126[f]). The candidate alternatives have to at least potentially meet the objectives and be potentially feasible based on technical, legal and regulatory grounds, to be considered for evaluation in the Supplement.

A Feebate Program is not a full alternative that could meet the project objectives, but a program that could be applied to many different consumer items. A Feebate Program for new light-duty vehicles, for example, is one strategy that can contribute to greenhouse gas (GHG) emission reductions. The California Air Resources Board (ARB) has sponsored research on the potential benefits of a Feebate Program for new vehicles and eliminated it as an option for a number of reasons. First, given the aggressive performance standards proposed for new vehicles, the additional reductions that could result from a Feebate Program are likely to be minimal. Manufacturers would already need to install all available, cost-effective emission-reducing technology, as well as adopt their own internal pricing strategies to comply with the standards. A Feebate Program would replace this internal pricing strategy and would only induce substantial, additional emission reductions if fees and rebates were very high, leading to greater impacts on consumers. Furthermore, a California-only program within a national market could result in more higher emitting vehicles being sold out of state and negating any in-state emission reductions. In terms of implementation, maintaining a revenue-neutral program would likely be a significant challenge, given that vehicle purchase behavior would vary, based on current economic conditions, and fee and rebate levels would need to be set in advance. More importantly, ARB may not have the legal authority to pursue feebates and could face challenges similar to pursuing a carbon fee or tax. In addition to legal

opposition, there may be public opposition because some consumers would have to pay more for new vehicles. Additionally, the administration of a Feebate Program would require ARB to collect revenues and then disperse funds. ARB would require authority from the Legislature to disperse funds and may also require legislation to collect feebate revenues. Consequently, in light of the legal and administrative challenges for minimal emission reductions, ARB did not pursue this alternative.

- 1-2      The commenter expresses that Feebate Programs are most commonly known in the vehicle sector, but can be applied to other sectors and can utilize existing sales tax systems, minimize leakage, and be implemented in a budget-neutral way. Please refer to response 1-1.

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**L2**

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July 1, 2011

**VIA FACSIMILE (916) 445 5025 AND ELECTRONIC MAIL**

California Air Resources Control Board  
1001 "I" Street  
Sacramento CA 95814  
Attn.: Clerk of the Board

Re: Supplement to AB 32 Scoping Plan Functional Equivalent Document

Dear Clerk:

I am sending this letter to provide an initial comment on California Air Resources Board's ("CARB") Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("Supplement") and to request that CARB promptly provide additional information that is necessary for the public to provide informed comments on the Supplement. As confirmed in the attached memorandum from the well known consulting company Environ, the Supplement fails to provide data and other information relative to a number of key aspects of the analysis in the Supplement. CEQA case law has long held that it is prejudicial error for a lead agency to withhold information that precludes "informed decision-making and informed public participation." (*County of Amador v. El Dorado Water Agency* (1999) 76 Cal.App.4th 931, 946.) Indeed, CEQA even requires that the sources of data used in environmental impact reports be "reasonably available for inspection at a public place or public building." (Cal. Public Resources Code Section 21061.)

Accordingly, I request that the information described in the attached memorandum be provided as soon as possible. Further, since no member of the public can provide informed comments on the Supplement without this information, I also request that CARB extend the comment period so it ends 45 days after the date that CARB provides this additional information to the public.

Very truly yours,



Edward J. Casey  
Partner

EJC:amw  
LEGAL02/32722639v1

**ENVIRON**

July 1, 2010

Edward J. Casey, Attorney  
Alston Bird LLP  
333 South Hope Street  
16th Floor  
Los Angeles, CA 90071

**Re: Information Needs for Review of the AB 32 Scoping Plan Supplement FED**

Dear Ed:

We have reviewed the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED) and have identified a few areas where additional information would help us evaluate the FED. Based on our initial review of the FED, it appears to rely upon information that is not contained in the FED. While some calculations could be traced back to the original scoping plan documents and its appendices, we have not been able to find various supporting documentation that more completely describe key elements such as updates to the forecast emissions for 2020 and updates to the reductions from the scoping plan measures and other individual documents. We have several requests for information that would assist in our analysis and ability to comment on the supplemental FED.

1. Table 1.2-3 of the FED provides an estimate of the emissions reductions needed from proposed scoping plan measures not yet in place. Included in Table 1.2-3 are the reductions (58 MMTCO<sub>2</sub>e) that would be obtained from various measures other than the Cap-and-Trade program and Advanced Clean Cars. We have reviewed the list of measures identified in the table contained in the scoping plan proceedings.<sup>1</sup> While some of these 22 measures relate directly to measures reviewed in prior documents (e.g., Low Carbon Fuel Standard, Sustainable Forests, High Speed Rail), most of the measures have been either:
  - Adjusted downward (i.e., the GHG reductions have been reduced) from prior plans (e.g., million solar roofs, medium/heavy duty vehicles, goods movement);
  - Split into components and probably adjusted downward from prior plans (e.g., energy efficiency measures, high GWP gases);
  - Added in (e.g., SB 375, Advanced Clean Cars, Tire Pressure Program); or
  - Eliminated (e.g., Industrial measures).

For many of these measures, it appears that there is little explanation to allow us to understand how these changes were made. It is difficult, to relate these changes to the original estimates previously reported in the Scoping plan.<sup>2</sup> To allow us to assess and comment on this supplemental FED, we would need to more carefully analyze and consider the changes to the prior plans. We request a detailed listing of how the 22 measures relate to the prior plan, how they were changed, and the basis for the change (e.g. recession, already partially implemented).

<sup>1</sup> CARB, 2010. Available at: [http://www.arb.ca.gov/cc/inventory/data/tables/reductions\\_from\\_scoping\\_plan\\_measures\\_2010-10-28.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/reductions_from_scoping_plan_measures_2010-10-28.pdf). Accessed: June 2011.

<sup>2</sup> CARB 2008. Available at <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>

Edward J. Casey

- 2 -

July 1, 2011

2. Appendix F, Compliance Pathways Analysis of the Initial Statement of Reasons for the Cap and Trade Regulation<sup>3</sup>, includes analyses to demonstrate how the staff accounted for the effects of the recession. Appendix F also provides a "compliance pathways analysis" to demonstrate the strategies that covered entities could utilize to comply with a cap-and-trade regulation. Other than saying they accounted for recession, and accounted for the recession in their modeling, the supplement provides few details on how they accounted for recession, let alone calculations. We also cannot verify if they have accounted for the recession to the current date or going forward. Additionally, Appendix F only includes strategies that covered sources could utilize to comply with the cap-and-trade regulation and not those sources in uncapped sectors. To verify and comment on the numbers, we would like to see the specific adjustments used for the calculations of the impacts of the recession such as growth factors, elasticity factors and other indicators for sources under the cap and for those sources not under the cap.

2-3

3. Table 2.7-1, Summary of Emissions Effects from Alternative 5, includes a mix of measures to obtain reductions to meet the 22 MMTCO<sub>2</sub>e target. The only direct regulation included under this alternative was the Advance Clean Car program (3.8 MMTCO<sub>2</sub>e). Volume I of the Appendices for the original Scoping Plan provides an analysis of the GHG reductions from Pavley I and Pavley II.<sup>4</sup> The FED describes elements that would be included in the Advanced Clean Car program but does not include an analysis of the derivation of the emissions and potential reductions from the various elements including in this program. Thus it is not clear if and how Pavley II and other measures are quantitatively incorporated into this estimate. Supporting explanation regarding the derivation of the GHG reductions and the specific measures included in this program would allow us to assess and comment on this FED. Since the Advance Clean Car program is included in two alternatives (Alternative 3 and Alternative 5), it is important to understand the basis of this estimate.

2-4

Please let Steven Messner or I know if you have any questions regarding this matter. I can be reached at (949) 798-3650 or you can reach Steve at (415) 899-0747.

Very truly yours,



Eric Lu, M.S., P.E.  
Senior Manager



Steve Messner  
Principal

EL:js

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cc: Ron Friesen, ENVIRON

<sup>3</sup> CARB, 2010. Available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>. Accessed: June, 2011.

<sup>4</sup> CARB, 2008. Available at: [http://www.arb.ca.gov/cc/scopingplan/document/appendices\\_volume1.pdf](http://www.arb.ca.gov/cc/scopingplan/document/appendices_volume1.pdf). Accessed: June, 2011.

## L2 Response

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2-1           The commenter requests that ARB provide additional data relative to the analysis in the Supplement as specified in the attached report from Environ (comments 2-2 through 2-4) and provide additional time to comment. As indicated under the sources of the information in the tables contained in the Supplement, the numbers are based on updated information made available by ARB in October 2010. On July 22, 2011 ARB posted a document entitled *Status of Scoping Plan Recommended Measures* that provides narrative details about the revised projections for emission and reduction estimates. This additional information is not a revision to the Supplement nor does it trigger the obligation to recirculate the Supplement under CEQA, because this is not significant new information, as defined by CEQA. The posted information clarifies information already included in the Supplement.

2-2           The commenter requests information on how the 22 measures relate to the prior plan, how they were changed, and the basis of the change.

The 2008 Scoping Plan is a “plan” that recommends possible measures and potential estimated GHG reductions. Measures identified in the 2008 Scoping Plan have origins from within ARB as well as from other agencies and public suggestions. At the time the 2008 Scoping Plan was developed, some measures were already well-defined or part of ongoing regulatory processes, and have since been implemented or have reached the level of development that the estimated reductions are considered reasonably foreseeable. Other measures are still under development and/or review, and the estimated reductions that may be realized by 2020 are uncertain, and as such the reductions associated with measures under development are not included in current reduction estimates.

With the 2020 target deadline growing ever closer, it is increasingly important that reduction measures relied upon to achieve the goal be well developed and provide a level of relative assurance that the emission reductions will be achieved. To that end, ARB has identified measures that are approved, ongoing, or reasonably foreseeable as the foundation for 2020 reductions. There are other measures identified in the 2008 Scoping Plan that are under development, but it is uncertain that those measures would be able to achieve the estimated reductions by 2020. For example, since the release of the Supplement in June, the White House in collaboration with ARB announced the intent to pursue standards to reduce GHG from light duty vehicles for model years 2017-2025. In making the changes to some of the emission reduction projections, ARB has taken a conservative approach and recognizes



reductions from measures that have a higher potential for successful implementation by 2020, although even these measures contain an element of uncertainty.

In addition, in October 2010, ARB updated the GHG inventory and estimated reductions from the adopted, ongoing and foreseeable measures to reflect the economic downturn using data from the more recent California Energy Commission (CEC) 2009 Integrated Energy Policy Report (IEPR). The revised 2020 GHG Emissions Forecast, Data Sources, Methods, and Assumptions and revised emission reduction estimates were posted in October 2010 at:

<http://www.arb.ca.gov/cc/inventory/data/forecast.htm>.

Documentation of the calculation of estimated reductions for Scoping Plan measures is presented in the *Climate Change Proposed Scoping Plan Appendices. Volume II: Analysis and Documentation. October 2008. Appendix I.*

Revision of the estimated reductions is described at:

[http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf)

The methodology used to reflect the changed economic conditions for most measures is to multiply the estimated reduction for each measure by the ratio of the emissions from the applicable category in the emissions inventory used during preparation of the 2008 Scoping Plan (based on the 2007 IEPR), by the emissions in that same category identified in the revised emissions inventory based on the 2009 IEPR. Generally, the lower estimate of potential reductions is the result of the economic downturn as reflected between the CEC IEPR referenced during preparation of the 2008 Scoping Plan and the subsequent 2009 IEPR referenced in 2010 to update the estimated reductions. The following list of Scoping Plan measures with adjusted values and explanations summarizes measure status and revisions.

#### **T-1 Pavley**

The 2008 Scoping Plan estimated Pavley 2020 reductions as 31.7 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>E) emissions, of which 27.7 was identified as Pavley (vehicles model-years 2009-2016) and 4.0 as Advanced Clean Cars (vehicles model-years 2017-2025). To estimate the change in reductions that would be expected as a result of the economic downturn, the estimated reduction was multiplied by the ratio of the emissions in the revised baseline for the on-road passenger vehicles category by the emissions in the 2008 Scoping Plan Business As Usual (BAU) for the same category resulting in an estimated reduction of 26.1

MMTCO<sub>2</sub>E.

<http://www.arb.ca.gov/cc/ccms/ccms.htm>

### **T-1 Advanced Clean Cars**

In the 2008 Scoping Plan, the Advanced Clean Cars measure, which focuses on vehicles model-years 2017-2025, was estimated to reduce 4.0 MMTCO<sub>2</sub>E. The estimated reduction has been adjusted to reflect the economic downturn using the same ratio as described for the Pavley regulation (see above). The resulting estimated reduction is 3.8 MMTCO<sub>2</sub>E. For example, since the release of the Supplement in June, the White House in collaboration with ARB announced the intent to pursue standards to reduce GHG from light duty vehicles for model years 2017-2025. The Advanced Clean Car measure is under development.

[http://www.arb.ca.gov/msprog/clean\\_cars/clean\\_cars.htm](http://www.arb.ca.gov/msprog/clean_cars/clean_cars.htm)

### **T-2 Low Carbon Fuel Standard (LCFS)**

In the 2008 Scoping Plan, the Low Carbon Fuel Standard (LCFS) was estimated to achieve 15.0 MMTCO<sub>2</sub>E reductions in 2020. The estimated reduction in the ISOR was calculated as 15.8 MMTCO<sub>2</sub>E. In order to reflect changed economic conditions, the estimated reduction from the regulation was recalculated using the same methodology as the 2008 Scoping Plan but with more recent data, resulting in an estimated reduction of 15.0 MMTCO<sub>2</sub>E.

<http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>

### **T-3 Regional Transportation-Related GHG Targets**

The 2008 Scoping Plan identified 5.0 MMTCO<sub>2</sub>E as a placeholder for what could be achieved by the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill [SB] 375) through sustainable regional transportation and local land use planning. The SB 375 Staff Report identifies 3.0 MMTCO<sub>2</sub>E, which is the aggregate from the regional passenger vehicle GHG reduction targets established for the 18 Metropolitan Planning Organizations (MPOs) approved in 2010.

[http://arb.ca.gov/cc/sb375/staffreport\\_sb375080910.pdf](http://arb.ca.gov/cc/sb375/staffreport_sb375080910.pdf)

### **T-4 Vehicle Efficiency Measures**

Vehicle efficiency measures in the 2008 Scoping Plan include Low Friction Oil, Tire Pressure Regulation, Tire Tread Program, and Solar Reflective Automotive Paint and Window Glazing. In the 2008 Scoping Plan, these measures were estimated to achieve a combined reduction of 4.5 MMTCO<sub>2</sub>E in 2020. Only the Tire Pressure Program has been approved with estimated reductions of 0.6 MMTCO<sub>2</sub>E. The estimated reduction was

adjusted to reflect changed economic conditions by dividing the revised baseline emissions for the on-road passenger vehicles category by the 2008 Scoping Plan BAU of the on-road passenger vehicles category which when rounded to one decimal is estimated to be 0.6 MMTCO<sub>2</sub>E. Low friction oil was implemented by the industry; the reduction estimates are reflected in the forecast used to estimate the baseline. Solar reflective paint and window glazing are being integrated into the Advanced Clean Cars measure. The tire tread program is under development and reductions by 2020 are uncertain.

<http://www.arb.ca.gov/regact/2009/tirepres09/tireisor.pdf>

### **T-5 Shore Power for Ocean-going Vessels**

The 2008 Scoping Plan attributed 0.2 MMTCO<sub>2</sub>E of estimated reductions to the Shore Power for Ocean-going Vessels measure. The ISOR for this regulation estimated potential reductions to range between 0.12 and 0.24 MMTCO<sub>2</sub>E. The estimated reduction of 0.2 MMTCO<sub>2</sub>E identified in the 2008 Scoping Plan is considered representative of this measure. The estimated reduction was adjusted to reflect changed economic conditions by dividing the revised baseline emissions for the ship and commercial boats category by the 2008 Scoping Plan BAU for the ship and commercial boats category which when rounded to one decimal is estimated to be 0.2 MMTCO<sub>2</sub>E.

<http://www.arb.ca.gov/ports/shorepower/shorepower.htm>

### **T-6 Goods Movement**

Goods Movement includes measures to reduce emissions from shipping and port operations including such actions as reducing vessel speed and electrifying port equipment. The 2008 Scoping Plan attributed 3.5 MMTCO<sub>2</sub>E of estimated reductions to these system-wide measures. System-wide efficiency improvements are in progress but are not likely to provide significant GHG reductions by 2020.

<http://www.arb.ca.gov/planning/gmerp/gmerp.htm>

### **T-7 Heavy Duty Aerodynamics**

The Heavy Duty Aerodynamics measure is approved and the ISOR identifies an estimated 1.0 MMTCO<sub>2</sub>E of reductions. The estimated reduction was adjusted to reflect changed economic conditions by dividing the revised baseline emissions for the on-road heavy duty trucks category by the 2008 Scoping Plan BAU for the same category resulting in an estimated reduction of 0.9 MMTCO<sub>2</sub>E in 2020.

<http://www.arb.ca.gov/regact/2008/ghghdv08/ghgisor.pdf>

### **T-8 Medium/Heavy Hybridization**

The 2008 Scoping Plan indicates that the Medium/Heavy Hybridization measure could achieve an estimated 0.5 MMTCO<sub>2</sub>E of reductions. This regulatory measure is under development and reductions by 2020 are uncertain.

<http://www.arb.ca.gov/regact/2008/ghghdv08/ghgisor.pdf>

### **T-9 High Speed Rail**

The 1.0 MMTCO<sub>2</sub>E estimated GHG reduction attributed to High Speed Rail is unchanged from that identified in the 2008 Scoping Plan. This measure is being implemented under an approved bond measure and Federal grant; GHG reductions in 2020 are dependent upon the implementation of High Speed Rail in 2020.

<http://www.cahighspeedrail.ca.gov/>

### **E-1 Energy Efficiency and Conservation**

The 2008 Scoping Plan estimated that 15.2 MMTCO<sub>2</sub>E of reductions could be achieved through improved electrical efficiency and conservation. The estimated potential reductions have been recalculated using the methodology in the 2008 Scoping Plan but with more recent data from the 2009 IEPR to reflect changed economic conditions. The recalculated value is 7.8 MMTCO<sub>2</sub>E. The change in the expected reduction is because the Renewables Portfolio Standards (RPS) was moved to first in the loading order (refer to the RPS measure below). Measures loaded later in the process are credited with fewer reductions than if they were earlier in the loading order. Achievement of these emission reductions is dependent on continued funding and implementation of efficiency programs.

#### **CR-1 Energy Efficiency and Conservation**

The 2008 Scoping Plan estimated that 4.3 MMTCO<sub>2</sub>E of reductions could be achieved through switching residential and commercial use of natural gas to electricity. The estimated reduction was adjusted to reflect changed economic conditions by dividing the revised baseline emissions for the residential and commercial use of natural gas category by the 2008 Scoping Plan BAU for the same category resulting in an estimated reduction of 4.1 MMTCO<sub>2</sub>E in 2020.

#### **CR-2 Solar Water Heating**

The reduction attributed to Solar Water Heating in the 2008 Scoping Plan is 0.1 MMTCO<sub>2</sub>E. The estimated reduction was adjusted to reflect

changed economic conditions by dividing the revised baseline emissions for the residential and commercial use of natural gas category by the 2008 Scoping Plan BAU for the same category resulting in a small reduction which when rounded to one decimal is estimated to be 0.1 MMTCO<sub>2</sub>E in 2020. The Solar Water Heating measure is being implemented and funded by the CPUC as a component of the California Solar Initiative, Thermal Development Program.

<http://www.cpuc.ca.gov/PUC/energy/Solar/thermhstory.htm>

## **E-2 Increasing Combined Heat and Power**

The 2008 Scoping Plan identified an estimated 6.7 MMTCO<sub>2</sub>E of potential reductions. Based on the percentage of power supplied by Publicly Owned Utilities (POUs) and Independently Owned Utilities (IOUs), 1.9 MMTCO<sub>2</sub>E would be achieved by POUs and 4.8 MMTCO<sub>2</sub>E of reduction would be achieved by IOUs. The California Public Utilities Commission (CPUC) recently approved a settlement designed to increase the amount of Combined Heat and Power (CHP) used by IOUs. The settlement identifies a 4.8 MMTCO<sub>2</sub>E GHG emission reduction goal by 2020. Although approved by the CPUC, the settlement is not final. Due to accounting differences between the 2008 Scoping Plan and the settlement, actual reductions may differ in 2020.

## **E-3 Renewables Portfolio Standard (RPS, 12%-20% by 2020)**

In the 2008 Scoping Plan, renewables were estimated to achieve an estimated 21.3 MMTCO<sub>2</sub>E of GHG reductions in 2020, of which 7.9 MMTCO<sub>2</sub>E would be achieved by the RPS (12%-20%) and 13.4 MMTCO<sub>2</sub>E would be achieved by the Renewable Electricity Standard (RES, 20%-33%). Estimated RPS reductions in 2020 have been updated to reflect changed economic conditions based on the 2009 IEPR demand forecast and are 12.0 MMTCO<sub>2</sub>E. The estimated reduction from this measure increased as a result of the revised "loading order". Several Scoping Plan measures affect the electricity sector and share credit for the resulting reductions. Measures implemented earlier in the loading order achieve greater emission reductions than if they were applied later in the loading order. During preparation of the 2008 Scoping Plan, energy efficiency measures were considered first and the RPS measure was last in the loading order. However, the RPS measure has moved into the baseline, and the baseline is calculated before Scoping Plan measures. Consequently, a greater portion of the shared reductions are assigned to the RPS, and fewer to the energy efficiency measures. The RPS program is administered by CPUC.

<http://www.cpuc.ca.gov/PUC/energy/Renewables/>

### **E-3 Renewable Electricity Standard (RES, 20%-33% by 2020)**

The RES measure was estimated to provide 13.4 MMTCO<sub>2</sub>E of reductions in the 2008 Scoping Plan. However, the Staff Report (ISOR) prepared in 2010 estimates reductions to be 12.0 MMTCO<sub>2</sub>E. This measure reflects economic conditions in 2010 and does not require revision. Reductions associated with unbundled Renewable Energy Credits (RECs) were subtracted from the ISOR value, yielding a value of 11.4 MMTCO<sub>2</sub>E. This measure is being implemented by the CEC and CPUC under SBX1-2, signed by Governor Brown in April 2011.

<http://www.energy.ca.gov/renewables/>  
<http://www.arb.ca.gov/regact/2010/res2010/res10isor.pdf>  
[http://leginfo.ca.gov/pub/11-12/bill/sen/sb\\_0001-0050/sbx1\\_2\\_bill\\_20110412\\_chaptered.pdf](http://leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110412_chaptered.pdf)

### **E-4 Million Solar Roofs**

The 2008 Scoping Plan estimated that the Million Solar Roofs measure could reduce an estimated 2.1 MMTCO<sub>2</sub>E emissions in 2020. The estimated reduction has been recalculated using the same methodology and electricity forecasting model as that presented in the 2008 Scoping Plan but with an updated grid emission factor calculated from the 2009 IEPR, resulting in an estimated reduction of 1.1 MMTCO<sub>2</sub>E in 2020. The Million Solar Roofs measure is being implemented and funded by the CEC and CPUC as a component of the California Solar Initiative program.

[http://www.energy.ca.gov/ghg\\_emissions/index.html](http://www.energy.ca.gov/ghg_emissions/index.html)  
<http://www.cpuc.ca.gov/PUC/energy/Solar/aboutsolar.htm>

### **H-1 Motor Vehicle A/C: Refrigerant Emissions from Non-Professional Servicing**

The 2008 Scoping Plan estimated that this measure could reduce an estimated 0.3 MMTCO<sub>2</sub>E of reductions. The estimated reduction was adjusted to reflect changed economic conditions by dividing the revised baseline emissions from the ozone depleting substances substitutes category by the 2008 Scoping Plan BAU for the same category resulting in estimated reductions of 0.2 MMTCO<sub>2</sub>E.

### **H-2 SF<sub>6</sub> Limits in Non-Utility and Non-Semiconductor Applications**

The 2008 Scoping Plan estimated that this measure could reduce an estimated 0.3 MMTCO<sub>2</sub>E of reductions. The Staff Report (ISOR) for this measure reduced the estimated potential reductions to 0.1 MMTCO<sub>2</sub>E. Sulfur hexafluoride (SF<sub>6</sub>) from Non-Utility and Non-Semiconductor Applications are not in the ARB inventory and therefore cannot be tracked, so potential reductions are considered uncertain.



### **H-3 Reduction of Perfluorocarbons in Semiconductor Manufacturing**

This measure was estimated to achieve 0.2 MMTCO<sub>2</sub>E in the 2008 Scoping Plan and Staff Report (ISOR). The revised baseline emissions from the semiconductor manufacturing category are the same as estimated in the 2008 Scoping Plan BAU for the same category, resulting in unchanged reductions of 0.2 MMTCO<sub>2</sub>E.

<http://www.arb.ca.gov/regact/2009/semi2009/semiisor.pdf>

### **H-4: Limit High GWP Use in Consumer Products**

The 2008 Scoping Plan estimated that this measure could reduce an estimated 0.3 MMTCO<sub>2</sub>E of reductions. The Staff Report (ISOR) estimates that this measure has the potential to reduce estimated emissions by 0.2 MMTCO<sub>2</sub>E. High Global Warming Potential (GWP) use in consumer products is minimally affected by changes in economic conditions and the expected reduction is estimated as 0.2 MMTCO<sub>2</sub>E.

<http://www.arb.ca.gov/regact/2008/cp2008/cpisor08.pdf>

### **H-5 High GWP Reductions from Mobile Sources**

This measure totaled 3.3 MMTCO<sub>2</sub>E of estimated reductions in the 2008 Scoping Plan and included Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems, Air Conditioner Refrigerant Leak Test during Vehicle Smog Check, Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers, and Enforcement of the Federal Ban on Refrigerant Release from Motor Vehicle A/C Servicing. The use of low GWPs in mobile air conditioning would be incorporated into the Advanced Clean Cars measure. The remaining regulatory measures are under development and reductions by 2020 are uncertain.

### **H-6: High GWP Reductions from Stationary Sources**

This measure includes refrigerant management, foam recovery and destruction, SF<sub>6</sub> leak reduction, the use of alternative suppressants in fire protection, and early retirement of residential refrigerators. The 2008 Scoping Plan estimated that these measures could achieve an estimated 10.9 MMTCO<sub>2</sub>E of reductions. The Refrigerant Management Program and the SF<sub>6</sub> leak reduction measure are adopted and the accompanying Staff Reports (ISORs) identify estimated reductions of 7.2 MMTCO<sub>2</sub>E and 0.1 MMTCO<sub>2</sub>, respectively. These estimated reductions were adjusted to reflect changed economic conditions by dividing the revised baseline emissions from ozone depleting substances substitutes category by the 2008 Scoping Plan BAU for the same category resulting in estimated reductions of 5.8 MMTCO<sub>2</sub>E by the Refrigerant Management Program and 0.1 MMTCO<sub>2</sub>E by the SF<sub>6</sub> leak reduction measure. The remaining

components of H-6 are under evaluation and potential reductions are uncertain at this time.

<http://www.arb.ca.gov/regact/2009/gwprmp09/isorref.pdf>

### **H-7 Mitigation Fee on High GWP Gases**

The 2008 Scoping Plan indicated that this measure could reduce an estimated 5.0 MMTCO<sub>2</sub>E of reductions by 2020. Implementation of a mitigation fee on high GWP gases is not considered feasible at this time.

### **I-1 Energy Efficiency and Co-Benefits Audits for Large Industrial Sources**

In the 2008 Scoping Plan, the Energy Efficiency and Co-Benefits Audits for Large Industrial Sources measure is described as a tool to identify potential reductions but not the instrument that would require changes. This measure has never been assigned a reduction value. ARB is initiating a process to ensure that large industrial sources subject to the regulation be required to take all cost-effective actions identified under those audits. The audit results, due to ARB by the end of 2011, will inform the development of regulatory requirements staff intends to propose to the Board in 2012. Staff plans to initiate a separate public process in Fall 2011 to discuss metrics and actions to implement this commitment.

<http://www.arb.ca.gov/cc/energyaudits/energyaudits.htm>

### **I-2 Oil and Gas Extraction GHG Emission Reduction**

The 2008 Scoping Plan indicates that this measure could achieve an estimated 0.2 MMTCO<sub>2</sub>E of reductions from sources not covered under the proposed Cap-and-Trade Regulation. This measure is under development and reductions by 2020 are uncertain.

<http://www.arb.ca.gov/cc/oil-gas/oil-gas.htm>

### **I-3 GHG Leak Reduction from Oil and Gas Transmission**

The 2008 Scoping Plan indicates that this measure could achieve an estimated 0.9 MMTCO<sub>2</sub>E of reductions from sources not covered under the proposed Cap-and-Trade Regulation. This measure is under development and reductions by 2020 are uncertain.

<http://www.arb.ca.gov/cc/gas-trans/gas-trans.htm>

### **I-4 Refinery/Flare Recovery System Improvements**

The 2008 Scoping Plan indicates that this measure could achieve an estimated 0.3 MMTCO<sub>2</sub>E of reductions from sources subject to the



proposed Cap-and-Trade Regulation. This measure is under development and reductions by 2020 are uncertain.

### **I-5 Removal of Methane Exemption from Existing Refinery**

The 2008 Scoping Plan indicates that this measure could achieve an estimated 0.01 MMTCO<sub>2</sub>E of reductions from sources subject to the proposed Cap-and-Trade Regulation. This measure is under development and reductions by 2020 are uncertain.

### **F-1 Sustainable Forests**

The 2008 Scoping Plan estimated that sustainable forest practices could achieve 5.0 MMTCO<sub>2</sub>E of reduction through sequestration. The currently recognized reduction is unchanged from that identified in the 2008 Scoping Plan. <http://www.arb.ca.gov/cc/forestry/forestry.htm>

### **RW-1 Landfill Methane Control**

The 2008 Scoping Plan estimated the landfill methane control measure could achieve estimated reductions of 1.0 MMTCO<sub>2</sub>E. The Staff Report (ISOR) estimated the potential reduction to be 1.5 MMTCO<sub>2</sub>E. <http://www.arb.ca.gov/regact/2009/landfills09/isor.pdf>

### **RW-2 Increasing the Efficiency of Landfill Methane Capture**

The 2008 Scoping Plan does not quantify potential reductions that could be achieved through increasing the efficiency of landfill methane capture. This measure is under development and reductions remain uncertain.

Please also refer to responses 2-1, 75-2, and 75-7.

2-3

The commenter requests additional information on specific adjustments used for the calculations of the impacts of the recession (e.g., growth factors, elasticity factors and other indicators). References within this comment to the Appendix F, Compliance Pathways Analysis of the Initial Statement of Reasons for the proposed Cap-and-Trade Regulation do not apply to the Supplement. The proposed Cap-and-Trade Regulation is a separate rulemaking process that requires preparation of an ISOR. The Proposed Scoping Plan is a non-regulatory document that recommends measures to achieve GHG emission reductions, many of which are regulatory in nature. Additional detail and a more detailed environmental analysis are made available during the regulatory development. It is unclear if the commenter is requesting information about Appendix F of the ISOR for the proposed Cap-and-Trade Regulation or the Supplement.

The CEC IEPR is the basis for the ARB emissions inventory forecast. The IEPR provides a detailed description of the methods, and assumptions used in development of CEC forecasts. The revised ARB 2020 GHG Emissions Forecast, and Data Sources, Methods, and Assumptions documents are posted at:

<http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Descriptions of the revisions to estimate measure reductions are described in the response to Comment 2-2 above as well as on the ARB webpage at:

[http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf)

Please also refer to response 2-1.

2-4

The commenter indicates that the Supplement describes elements that would be included in the Advanced Clean Cars program, but does not include an analysis of the derivation of the emissions and potential reductions from the various elements included in the program. All of the key elements of the Advanced Clean Cars program are described in the 2008 Scoping Plan under the respective measures where they were originally formulated. Detailed documentation of the calculation of estimated reductions for measures is presented in the document entitled the *Climate Change Proposed Scoping Plan Appendices. Volume II: Analysis and Documentation. October 2008. Appendix I*. The expected estimated reduction that may be achieved by the Advanced Clean Cars measure is unchanged from that identified in the 2008 Scoping Plan except for the adjustment to reflect the economic downturn. This is a conservative estimate as the addition of new elements could increase reductions. In order to minimize the risk of double-counting benefits of closely related improvements, these potential reductions are uncertain. More detailed information may become available with continuing development of the regulation. Please also refer to response 2-1.

**Comments on ARB's June 13, 2011 Supplement to the AB 32 Scoping Plan Functional  
Equivalent Document**

Submitted by Kenneth C. Johnson on July 5, 2011

The California Superior Court has found that "ARB abused its discretion in certifying the FED as complete," in part because "the Scoping Plan fails to provide meaningful information or discussion about the carbon fee (or carbon tax) alternative in the scant two paragraphs devoted to this important alternative." But the plan – and ARB's June 13, 2011 supplemental FED – gives even less attention to an equally important policy alternative, a price floor operating in the context of cap-and-trade.

Plaintiffs in the court action have argued that a carbon fee could be more effective than cap-and-trade at complying with the maximum-reduction mandate of Health and Safety Code § 38560. But cap-and-trade operating with a price floor would be expected to achieve emission reductions *no less* than that of a similarly-administered carbon fee.

ARB's original FED rejected the carbon fee alternative primarily because "a carbon fee does not provide certainty in terms of the amount of emission reductions that will be achieved," whereas cap-and-trade would provide such certainty. But cap-and-trade operating with a price floor would achieve emission reductions *no less* than that of cap-and-trade without a price floor.

Thus, a price floor deserves special attention because it could resolve concerns relating to environmental stringency and statutory compliance that have been raised by both the plaintiffs and ARB. The supplemental FED makes mention of a 2008 CBO study that includes a price floor among the policy alternatives considered, and which "explores ways in which policymakers could preserve the structure of a cap-and-trade program, but still achieve some of the advantages of a tax." (See supplemental FED, page 39.) It also discusses one existing program, RGGI, which employs a price floor. (See pages 42-43.) But ARB fails to include a price floor in its Range of Alternatives (pages 17-19).

3-1

In the context of RGGI, a price floor has been instrumental in keeping allowance prices from falling below the floor level, which is currently set at \$1.89 per CO<sub>2</sub> allowance. (See [http://rggi.org/market/co2\\_auctions/results](http://rggi.org/market/co2_auctions/results).) California's program, as currently constructed, would not prevent prices from falling substantially below \$1.89.

3-2

In 2008 ARB had estimated that cap-and-trade would achieve 34.4 MMT of the requisite emission reductions necessary to reduce emissions from a 596 MMT BAU projection in 2020 to the 427 MMT target. But the BAU projection has been revised downward to 507 MMT, an 89 MMT difference; thus the prospect of a long-term collapse of emission prices is a credible and realistic possibility. (It is notable that in the RGGI's June 2011 auction less than one-third of the available allowances were sold, even at the floor price of \$1.89.)

3-3

If California achieves the 2020 cap with emission allowances selling well below \$1.89, would its program be considered to have complied with ARB's mandate under Health and Safety Code § 38560 to "... achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions ..."? According to ARB's current interpretation, yes. ARB recognizes the statutory requirement to at least achieve the 427 MMT target in 2020, and to do so in a manner that favors low-cost reduction strategies. But it does not recognize any statutory requirement to seek emission reductions beyond the minimum required to achieve the 2020 target even if such further reductions would be feasible and cost-effective.

3-4

While ARB has broad discretionary authority in interpreting the statute, it should not adopt an interpretation that renders a core statutory requirement of AB 32 meaningless and ineffectual. The qualifier "maximum" in § 38560, which applies to "emission reductions," is clearly intended to have meaning. § 38560 is clearly intended to at least potentially influence emission levels achieved under AB 32, but it would not under ARB's current cap-and-trade-based approach. A price floor, which is based on a cost-effectiveness threshold that is consistent with the legislative policy objectives of AB 32, would reasonably incentivize further emission reductions to the extent that such reductions are feasible and cost-effective according to § 38560.

3

The Scoping Plan employs one mechanism, banking, that could motivate at least short-term emission reductions beyond the declining cap limit in the event that allowance prices are low. However, banking is no substitute for a price floor because market traders will not generally act to seek maximum emission reductions according to § 38560. They will only act to hold unused allowances, and prevent price collapse, if high prices are anticipated in the near future. In the face of long-term, systemically low emission prices, banking will not operate to prevent price collapse.

3-5

The legislature intended that ARB implement the AB-32 legislation “in a manner that minimizes costs and maximizes benefits for California’s economy” (HSC § 38501(h)), but there is no requirement that costs and benefits be optimized according to the myopic, short-term valuation standard of arbitrage traders. Considering that the 2020 emission target was based on a 550-ppm atmospheric CO<sub>2</sub> stabilization target<sup>1</sup> (compared to the 350 ppm requisite limit indicated by more recent climate science<sup>2</sup>), a policy that achieves only minimal emission reductions rather than the maximum reductions required by § 38560 will only achieve short-term economic gains at the expense of much greater long-term costs and forfeiture of long-term economic benefits.

3-6

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<sup>1</sup> Climate Action Team Report to Governor Schwarzenegger and the Legislature (March 2006), pages 37-38.  
[http://www.climatechange.ca.gov/climate\\_action\\_team/reports/2006report/2006-04-03\\_FINAL\\_CAT\\_REPORT.PDF](http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF)

<sup>2</sup> “Target atmospheric CO<sub>2</sub>: Where should humanity aim?” Hansen et al. (2008)  
<http://arxiv.org/abs/0804.1126v3>

### **L3 Response**

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- 3-1           The commenter expresses that special attention should be given to the use of a price floor in a cap-and-trade program. We believe that the commenter is referring to what is often called an “auction reserve price”, which sets a minimum price for the sale of allowance at auction.

This comment does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB’s certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

Nonetheless, ARB notes that although not specifically mentioned in the description of Alternative 2 in the Supplement, the concept of an auction reserve price is mentioned in the 2008 Scoping Plan (see p. 34) and is incorporated in the proposed Cap-and-Trade Regulation. ARB notes that a price floor is a proposed design feature of the program, and the commenter advocates a price floor for a carbon tax or fee that sets a price on carbon. ARB staff’s proposal is to set an auction reserve price, (section 95911(b) (6) in the proposed Cap-and-Trade Regulation) in its auction system in the proposed Cap-and-Trade program, which would be \$10.00 per metric ton in 2012 with an annual escalation of 5 percent plus the rate of inflation as measured by the consumer price index for all urban consumers, and as published by the U.S. Bureau of Labor Statistics. The two numbers in combination are expected to be larger than inflation, thus increasing the floor annually. The reserve price would increase to \$11 for the second compliance period. A price floor and reserve price are not the same, because a reserve price allows secondary market transactions below the reserve price. However, the reserve price mechanism would correct over time for initial over-allocation by reducing the number of allowances auctioned. Eventually the market price would rise to the reserve price. The specific attributes of any cap-and-trade regulation adopted by ARB would be decided in the separate proposed Cap-and-Trade rulemaking.

- 3-2        The commenter refers to RGGI in regards to keeping allowance prices from falling below the price floor. ARB set its auction reserve price much higher than did RGGI. In addition, ARB set a schedule for increases in the reserve price, while RGGI adjusts its reserve price based on secondary market prices. Please also refer to response 3-1.
- 3-3        The commenter indicates that the economic downturn may cause a long-term collapse of emission prices. If market prices do collapse below the reserve price, auction participants would not bid the reserve price at auction. This would reduce the number of allowances being sold into the market. Market price would then rise as allowances are purchased and retired, until the market price is as high as the reserve price. Please also refer to response 3-1.
- 3-4        The commenter states that ARB should not set a price on carbon that is ineffective. ARB conducted extensive literature reviews of other carbon markets and their performance, and ARB believes that setting a carbon price of \$10 would provide a stable long-term carbon price to encourage investment in clean technologies. Please also refer to response 3-1.
- 3-5        The commenter indicates that banking would motivate at least short-term emission reductions beyond the declining cap limit in the event that allowance prices are low. ARB agrees that banking is not a substitute for a price floor, but banking and the auction reserve price mechanism serve the same purpose. Please also refer to response 3-1.
- 3-6        The commenter refers to the legislative intent of AB 32 to reduce GHG emissions while minimizing cost and maximizing benefits for California's economy. ARB set its target for 2020, as required by AB 32, and the commenter is critical that ARB is not thinking long term or beyond the minimum mandate of AB 32. A cap-and-trade regulation is one of the measures in the Proposed Scoping Plan, and is one of the alternatives evaluated in the Supplement. ARB stresses that, although specific measures are often oriented to achieving the AB 32 mandate, the Proposed Scoping Plan does create a framework for longer-term planning. Please also refer to response 3-1.

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**L4**

**Michael J. Sandler  
19 Tern Court  
San Rafael, CA 94901**

For the Public Record

July 7, 2011

To: California Air Resources Board (CARB)

Re: Supplement to the AB 32 Scoping Plan Functional Equivalent Document

Thank you for accepting these comments on the Supplement to the AB 32 Scoping Plan Functional Equivalent Document. I am submitting these comments as a private citizen, not on behalf of any organization. Since 2006 I have attended public hearings on AB32 market mechanisms. To paraphrase some of my earlier comments made at the beginning of the Scoping Plan process, (submitted Jan 15, 2008 on behalf of the Climate Protection Campaign), market mechanisms are a contentious issue among some groups, but if we want to save the climate, there is no choice between regulatory approaches or market mechanisms. We will need both. We need to provide incentives throughout the economy to reduce emissions. This can be accomplished effectively through a price on carbon, but it must be designed correctly.

There is no single type of "cap and trade." The specific design elements of the program will determine the environmental impacts and the emissions reductions. The following design elements can result in fewer environmental impacts and a more equitable outcome:

- **An upstream system**
- **100% auction of permits**
- **Compensating consumers with a dividend**
- **Carbon fees to fund important programs**
- **Limited offsets**
- **A price floor on allowances**

**Auctioning permits:** Many of the problems with windfall profits in previous systems including the ETS and RECLAIM can be avoided by auctioning, not giving away permits. Auctioning incentivizes early action.

**Returning revenues to households as a dividend:** Revenues from an auction (or carbon fee) should be used to compensate residents for higher energy prices. Without such a dividend, political pushback could kill the whole program. The regressive impact on poor people when energy and fuel prices rise is an Achilles heel that must be addressed up front. It is an issue of economic justice.

4-1

4-2

4-3

*Mike Sandler Comment to ARB 7-7-11*

Please consider the expert advice of the Economic and Allocations Advisory Committee (EAAC).<sup>1</sup> The EAAC recommends that “the largest share (roughly 75%) of allowance value should be returned to California households.” The report states that “roughly 75% of this value should be returned to households either through lump-sum payments...” and “roughly 25% of this value used to finance socially beneficial investments and other public expenditures” (pg. 70).

The allowance value rebates should be separated from utility bills, and arrive in a separate envelope. It is important for consumers to see the value they are receiving and to connect it to a carbon pricing system. If the rebate is only a line item on a utility bill, it will be opaque to consumers, and not serve its remediating function alongside a visible carbon price that encourages conservation and efficiency. The recent withdrawal of New Jersey from the Regional Greenhouse Gas Initiative (RGGI) is a cautionary tale for what could happen if allowance value is used for opaque efficiency programs that are invisible to most consumers. Funds that were supposed to be set aside for energy and environmental uses were raided to plug state budget deficits. Because consumers did not see a direct connection to the use of revenues, the lack of consumer support failed to prevent New Jersey’s new Governor from withdrawing his state from the program a few months ago. A per capita dividend could help California avoid this fate.

The dividend should be equal for all people. This relates to our equal ownership of the shared Commons. Larger users of the electricity do not own more of the Commons, they should compensate those who use less.

**Environmental justice considerations:** When it comes to market mechanisms to fight climate change, some advocacy groups believe that the trading of permits benefits big polluters, who accumulate them, creating "hot spots" of pollution. They believe that low-income and disadvantaged communities would continue to suffer while the emission reductions take place in wealthier areas first. They also point out flaws in past market mechanisms, especially the European Emissions Trading System, which gave away permits for free to large polluters and is linked to the CDM, a shady offset scheme, and RECLAIM, the Southern California criteria pollutant trading system where some power plants gamed the system to delay emission reductions. They are also rightfully skeptical of the claims of some trading proponents whose free market ideology does not match up with the facts that giveaways of free permits enrich polluting corporations and utilities, and offsets have the potential for financial shell games and manipulation. However, some of these groups have romanticized command and control regulations. Unlike criteria pollutants, there is no quick regulatory fix for CO<sub>2</sub>. Regulations only, without a carbon price, could be very expensive. We still need regulations. The climate is in dire straits. But we can’t give away checks for free.

The specifics of carbon market design elements that could address these advocacy groups’ specific objections. Dislike giveaways? Well, CARB could auction 100% of permits. Dislike offsets? Ban 'em. What about inequality in the use of allowance value? A Cap & Dividend<sup>2</sup>, or Carbon Share<sup>3</sup>, approach addresses this directly.

<sup>1</sup> <http://climatechange.ca.gov/eaac/>

<sup>2</sup> [www.capanddividend.org](http://www.capanddividend.org)

<sup>3</sup> [www.carbonshare.org](http://www.carbonshare.org)

Mike Sandler Comment to ARB 7-7-11

**Environmental justice and human rights:** The Declaration of Independence states: *We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.*

University of Massachusetts professor James Boyce writes<sup>4</sup>: *Pollution burdens should be distributed fairly, as advocated by the EJ movement, rather than concentrated in particular communities... [and] polluters should pay for their use of the limited waste-absorptive capacities of our air and water... In keeping with the principle that the environment belongs in common and equal measure to us all, the money the polluters pay should be distributed fairly to the public, as we are the ultimate owners of the air and water.*

Even if they don't have access to a car or electricity yet, the poorest people in Africa have a right to their portion of the limited global emissions allowed under a global cap. Groups such as EcoEquity in the U.S., the Ireland-based Foundation for the Economics of Sustainability (FEASTA), and CSE India advocate for distributing shares or revenues from payments from upstream emitters to all individuals. California can start us down the path to equal ownership of this atmospheric Commons. Everyone gets the same dividend. Everyone gets the same Share. People get paid as they gain understanding that we are all involved in climate protection together.

The insider politics of giving away pieces of the allowance revenue pie to special interests failed to get a climate bill through in Congress in 2009. But an equal rights/Commons-based approach could unify diverse constituencies and get us out of the current zero sum game. Everyone gains from being part of a society where each person is treated fairly. CARB can provide a template for national and international climate policy by providing equal dividends or shares to all Californians.

These comments are my own and do not reflect those of any organization with which I am affiliated.

Sincerely,

Mike Sandler

4-5

<sup>4</sup> <http://triplecrisis.com/the-environment-as-our-common-heritage/>

## L4 Response

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- 4-1           The commenter advocates that particular design elements be incorporated into the proposed Cap-and-Trade program recommended in the Proposed Scoping Plan. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade program, but any specific measure, including a cap-and-trade program, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, comments about particular components of specific emission reduction measures (such as specific design features of a cap-and-trade regulation) do not raise a "significant environmental issue associated with the proposed action" (see CCR section 60007[a]) because the proposed action (i.e., the Proposed Scoping Plan) does not include adoption of the particular design components of specific measures.
- The proposed Cap-and-Trade program recommended in the 2008 Scoping Plan was proposed as a rule in October 2010 (<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>) and will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of that regulation, including an allowance allocation and a price floor (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). A separate environmental analysis in a FED was prepared for that proposed regulation and circulated for public review and comment. The alternatives analysis in that FED includes design variations. In developing Alternative 2, ARB considered the work that staff had done in the rulemaking for the proposed Cap-and-Trade Regulation referenced above. Like the separate proposed Cap-and-Trade Regulation under development in that separate rulemaking, Alternative 2 does contain most of the design features suggested by the commenter. For instance, as the Supplement notes, Alternative 2 includes a limit on the amount of offsets that an individual covered entity can use for compliance (see page 45 of Supplement). Please refer to responses 3-1 and 3-2 regarding price-floors.
- 4-2           The commenter expresses that problems with windfall profits can be avoided by auctioning permits. The Supplement discusses the use of auctions on page 48. Please also refer to response 4-1.
- 4-3           The commenter expresses that revenue from an auction should be returned to households as a dividend. Auctioning of permits and compensating consumers with a dividend are some suggested design features that could be implemented with a cap-and-trade program. The

administration of a dividend would require ARB to collect money and then disperse revenues. ARB can collect, but it is less clear if ARB can disperse the funds without authorization from the Legislature. Please also refer to responses 1-1 and 4-1.

- 4-4 The commenter refers to ARB's Cap-and-Trade proposed rulemaking (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). The sources covered by the proposed Cap-and-Trade program are also covered by stringent criteria pollutant and air toxics regulations that have already been adopted by ARB and the local air districts. These regulations would continue to result in continued and significant reductions in air pollution emissions, exposure and health-based risk. Further, assuming that the commenter's reference to financing mechanisms from a carbon fee is a reference to use of fee revenues to abate GHG and related emissions in impacted communities, a cap-and-trade program provides a similar ability to raise revenues for this purpose through the auctioning of allowances. Please also refer to response 4-1 and 4-3.
- 4-5 The commenter shares information and expresses that ARB can provide a template for national and international climate policy by providing equal dividends and shares to all Californians. ARB has reviewed this comment, and determined that it does not state a specific concern or question regarding the adequacy of the environmental analysis of the Alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record. Please also refer to responses 4-1 and 4-3.

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L5



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 5 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Frank  
Last Name: Lossy  
Email Address: flossy322@comcast.net  
Affiliation: physician in private practice in CA

Subject: Better alternatives to current proposals re Carbon Permits

Comment:

Dear CARB,

Specific carbon market designs can address objections raised by certain groups. Instead of giveaways, CARB could auction 100% of permits. Rather than unlimited offsets, CARB can limit them.

Inequities in the use of allowance value can be addressed with a Cap & Dividend or Carbon Share approach that returns revenues back to all Californians equally. Please incorporate these elements into the environmental analysis.

Sincerely,

Frank T. Lossy, M.D. and Barbara Steinberg, LCSW

5-1

5-2

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-07 23:45:44

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## **L5 Response**

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- 5-1           The commenter suggests incorporating specific design elements in a cap-and-trade program to address concerns such as auctioning 100 percent of permits. Please refer to responses 4-1 and 4-2 in regards to advocating for particular design elements to be incorporated into the cap-and-trade program design elements and to auctioning permits, respectively.
- 5-2           The commenter expresses that revenue from an auction should be returned to households as a dividend. Auctioning of permits and compensating consumers with a dividend are some suggested design features that could be implemented within a cap-and-trade program. Please refer to responses 1-1, 4-1, and 4-3 in regards to suggested alternatives, advocating for particular design elements to be incorporated into the cap-and-trade program design elements, and to returning revenues back to Californians, respectively.



L6



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 6 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Marshall  
Last Name: Saunders  
Email Address: mlsaun@aol.com  
Affiliation: Citizens Climate Lobby

Subject: AB32 Cap and Trade

Comment:

Dear CARB,

In 2006, I became alarmed about the climate and warming of the globe. In 2007, I began to be a strong proponent of Cap and Trade, urging my friends and partners in Citizens Climate Lobby to write to the Congress of the United States in support of Cap and Trade. I had not thought it through at that time and I was trusting "Big Green", that is to say, Environmental Defense Fund, Natural Resources Defense Council and Union of Concerned Scientists. However, the more I studied Cap and Trade, the more I began to realize that it is an unworkable scheme and I even believe it to be unfixable. It would create volatility in energy prices, would be complex, difficult to administer, and wide open for fraud and manipulation. I have read widely about Cap and Trade over the last four years and I'm convinced that especially the offset portion would be a shell game for big polluters and Wall Street traders. I have a strong fear that if California adopts a Cap and Trade scheme, other states would follow (trusting as I did) and real solutions to the climate crisis would be postponed a decade or more, time we certainly do not have.

I urge you to employ a much simpler system of reducing greenhouse gases. That is to say, a Fee and Dividend whereby producers of fossil fuel, for example, would be charged a fee when the fossil fuel comes out of the ground or through a port of entry into California. All the revenue would be given to citizens of California. This would allow them to pay for increased energy costs. Fee and Dividend has the additional advantages of simplicity, comparative ease of administration, fairness, return of the increased energy prices to the people not the polluters, and the avoidance of an invitation for fraud.

Sincerely,  
Marshall Saunders

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-13 12:40:50

6-1

6-2

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## L6 Response

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6-1 The commenter indicates that a cap-and-trade program would create volatility in energy prices, be complex and difficult to administer, and be wide open for fraud and manipulation. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade program, but any specific measure, including a cap-and-trade program, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, comments about particular components of specific emission reduction measures (such as specific design features of a cap-and-trade regulation) do not raise a "significant environmental issue associated with the proposed action" (see CCR section 60007) because the proposed action (i.e., the Proposed Scoping Plan) does not include adoption of the particular design components of specific measures.

The proposed Cap-and-Trade program recommended in the 2008 Scoping Plan was proposed as a rule in October 2010 (<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>) and will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of that regulation, including an allowance allocation and a price floor. Also, the proposed Cap-and-Trade Regulation includes features, which are designed to help maintain price stability in the program, such as reserve price and an allowance price containment reserve. Please refer to the website: (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). A separate environmental analysis in a FED was prepared for that regulation and circulated for public review and comment. The alternative analysis in that FED includes design variations for the proposed Cap-and-Trade program.

6-2 The commenter advocates a Fee-and-Dividend program whereby producers of fossil fuel would be charged a fee when the fossil fuel comes out of the ground or through a port of entry into California, and the revenue would be given to citizens of the State. The commenter expresses that revenue from an auction should be returned to households as a dividend. Auctioning of permits and compensating consumers with a dividend are some suggested design features that could be implemented with a cap-and-trade program. The administration of a dividend would require ARB to collect money and then disperse revenues. ARB can collect, but ARB cannot disperse the funds without authorization and appropriation from the Legislature. Please refer to responses 1-1, 4-1,

and 4-3 in regards to suggested alternatives, advocating for particular design elements to be incorporated into the cap-and-trade program design elements, and to returning revenues back to Californians, respectively, and also to response 6-1.

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L7



## Comment Log Display

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COMMENT 7 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Barry  
Last Name: Vesser  
Email Address: bvesser@climateprotection.org  
Affiliation: Climate Protection Campaign

Subject: Comment on CEQA for AB 32

Comment:

Equity and disproportionate impact issues have been raised by the environmental justice community. Specific carbon market designs can address many of these legitimate objections to the Cap and Trade rule as it was adopted in December of 2010. Instead of giveaways to polluting industries, CARB could auction 100% of permits. Rather than unlimited offsets, CARB can strictly limit the number of offsets to a minimum. Inequities in the use of allowance value can be addressed with a Cap & Dividend approach that returns revenues back to all Californians equally. Please incorporate these elements into the environmental analysis.

Thanks for your work on this important issue.

Barry Vesser  
Climate Protection Campaign

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-13 15:20:47

7-1

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## **L7 Response**

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- 7-1            The commenter advocates a Cap-and-Dividend approach that returns revenues back to all Californians and suggests auctioning 100 percent of permits and limiting offsets. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1, and 6-2.

L8



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 8 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Mark  
Last Name: DeBacker  
Email Address: landmarc@sonic.net  
Affiliation: Architect, Preservationist, Energy Audit

Subject: Oppose AB32 Cap and Trade provisions

Comment:

Please do not let Cap and Trade Provisions move forward.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-14 11:29:39

8-1

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## **L8 Response**

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- 8-1           The commenter does not support a cap-and-trade program. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.



L9



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 9 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Kristin  
Last Name: Thigpen  
Email Address: kristint@sonic.net  
Affiliation:

Subject: AB 32

Comment:

Dear CARB,

I want you to know that I care deeply about this subject. We need Cap and Dividend to move California forward on GHG reduction on a scale and speed that makes a difference. Specific carbon market designs can address objections raised by groups critical of the impacts of AB 32's Cap & Trade program. We must stop giving passes to polluting industries. CARB should auction 100% of permits. Rather than unlimited offsets, CARB can strictly limit them. Inequities in the use of allowance value can be addressed with a Cap & Dividend approach that returns revenues back to all Californians equally. It's time for action. Please incorporate these elements into the environmental analysis.

Sincerely,

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-14 11:29:27

9-1

If you have any questions or comments please contact [Clerk of the Board](#) at

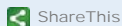
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## **L9 Response**

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- 9-1            The commenter advocates a Cap-and-Dividend approach that returns revenues back to all Californians and suggests auctioning 100 percent of permits and limiting offsets. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1, and 6-2.

L10



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 10 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Cassandra  
Last Name: Lista  
Email Address: clista@sonic.net  
Affiliation:

Subject: Cap & Trade

Comment:

Dear CARB,  
Specific carbon market designs can address objections raised by groups critical of the impacts of AB 32's Cap & Trade program. Instead of giveaways to polluting industries, CARB could auction 100% of permits. Rather than unlimited offsets, CARB can strictly limit them. Inequities in the use of allowance value can be addressed with a Cap & Dividend approach that returns revenues back to all Californians equally. Please incorporate these elements into the environmental analysis.

Sincerely,

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-14 13:32:35

10-1

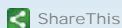
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### **L10 Response**

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- 10-1      The commenter advocates a Cap-and-Dividend approach that returns revenues back to all Californians and suggests auctioning 100 percent of permits and limiting offsets. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1, and 6-2.

L11



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 11 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Rose  
Last Name: Roberts  
Email Address: rose@farmstewards.com  
Affiliation:

Subject: AB 32 Cap & Trade

Comment:

Dear CARB,

There are problems with the Cap & Trade program as described in AB 32. Please take this opportunity to make changes that will improve this program, making it more transparent, equitable, and effective, and address objections raised by groups (on both sides of the political divide) that are critical of the impacts of AB 32's Cap & Trade program.

Please consider making the following changes:

- 1) Instead of giveaways to polluting industries, CARB could auction 100% of permits. The goal is to reduce emissions, not facilitate them!
- 2) Rather than unlimited offsets, CARB can strictly limit them. The goal is reduction of GHG emissions!
- 3) Inequities in the use of allowance value can be addressed with a Cap & Dividend approach that returns revenues back to all Californians equally. Instead of choosing which competing special interest groups should receive the revenue, return it to all Californians, which will raise trust & support for the measure and stimulate local economies.

Please incorporate these elements into the environmental analysis.

Sincerely,

Rose M. Roberts

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-15 08:29:14

11-1

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### **L11 Response**

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- 11-1      The commenter advocates a Cap-and-Dividend approach that returns revenues back to all Californians and suggests auctioning 100 percent of permits and limiting offsets. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1, and 6-2.

L12



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 12 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Joan  
Last Name: Linney  
Email Address: joan\_linney@ymail.com  
Affiliation:

Subject: Cap and Dividend plan satisfies objections

Comment:

reBoard Item ceqa-sp11  
Cap and Dividend can most certainly be designed to address the objections raised by groups concerned about the effects of AB 32. It will still help us meet California's greenhouse gas reduction goals and make the transition away from costly, dwindling fossil fuel sources to renewable energy which is much less expensive in the long run.  
1) Start by auctioning 100% of permits for fossil fuel pollution at the source. This is the lowest cost method for the state-no loopholes to monitor, way less costly paperwork.  
2) Return 100% of the revenue to taxpayers equally--empowering everyone to cope with inevitable rises in energy prices in the way that makes the most sense for each individual.

I hope you'll incorporate "Tax and Dividend" into the environmental analysis.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-15 12:53:38

12-1

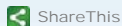
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### **L12 Response**

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- 12-1      The commenter advocates a Cap-and-Dividend approach that returns revenues back to all Californians and suggests auctioning 100 percent of permits and limiting offsets. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1, and 6-2.





ALCANTAR & KAHL, LLP

L13

July 19, 2011

Mary Nichols  
Chair  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Re: Joint CHP Parties' Comments to CARB's Supplement to Scoping Plan  
Functional Equivalent Document**

Dear Ms. Nichols:

These comments are issued on behalf of the Energy Producers and Users Coalition<sup>1</sup> (EPUC), the Cogeneration Association of California (CAC)<sup>2</sup>, and the California Cogeneration Council (CCC)<sup>3</sup>, collectively the Joint CHP Parties. The Joint CHP Parties fully support the Scoping Plan's goals of achieving 6.7 MMTCO<sub>2</sub>E of greenhouse gas reductions by 2020 through increased reliance on combined heat and power (CHP) resources. The June 13, 2011 Supplement to the Scoping Plan Functional Equivalent Document (Supplement) provides additional information on the fulfillment of targets, taking note of the CPUC-adopted QF/CHP Settlement. The revisions unfortunately misconstrue the Settlement, concluding that it will result in the addition of 3,000 MW of new CHP. As explained below, the Settlement does not assure the installation of any new CHP in California and may even result in a reduction in the size of the existing CHP fleet.<sup>4</sup> These comments recommend clarifications to the Supplement to accurately reflect the details of the QF/CHP Settlement. Most importantly, these comments highlight CARB's critical role in fostering the development of new, incremental California CHP resources.

13-1

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

<sup>2</sup> 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

<sup>3</sup> CCC is an *ad hoc* association of natural gas-fired cogenerators located throughout California. CCC projects serve on-site electrical and thermal loads at industrial, commercial, and institutional facilities across the state and are located in the service territories of California's three major investor-owned electric utilities. CCC member projects are "qualifying facilities" (QFs) that sell power to the IOUs under the provisions of the Public Utilities Regulatory Policies Act (PURPA) of 1978. The CCC represents a significant share of the distributed combined heat and power (CHP) projects now operating in California.

<sup>4</sup> It is noteworthy that current utility filings in the CPUC's Long Term Procurement Proceeding (R. 10-05-006) do not reflect the procurement of any new, incremental CHP capacity.

Background

Members of EPUC and CAC own and operate approximately 2,000 megawatts (MWs) of existing combined heat and power (CHP) generation in California. CCC members own and operate more than 30 different CHP projects in California that collectively generate about 1,300 MWs. The Joint CHP Parties are signatories to the Qualifying Facility and Combined Heat and Power Program Settlement Agreement (QF/CHP Settlement). The CPUC approved the QF/CHP Settlement in December 2010 (Decision 10-12-035). The effective date of the Settlement is subject to some additional conditions, but all the QF/CHP Settlement parties anticipate a July 18, 2011 effective date. Implementation actions are ongoing, and key actions will take place in the last quarter of 2011 and first quarter of 2012, including the initiation of a CHP-only competitive solicitation.

It is crucial to appreciate and incorporate accurately the CHP capacity procurement and GHG reduction attributes of the QF/CHP Settlement in its Supplement. CARB's plan regarding the 6.7 MMTCO<sub>2</sub>E of GHG reductions from CHP is a pivotal driver for the procurement of any new California CHP resource under the QF/CHP Settlement. As clarified herein, the only promised procurement of CHP under the QF/CHP Settlement is to maintain, for a period of time, existing capacity levels associated with current CHP project development. Moreover, there is no promise to procure the same existing CHP resources; the Settlement targets 3,000 MW of capacity to sustain existing CHP capacity levels, which approximates the expiration of CHP contracts. New and incremental CHP resource development is dependent upon CARB's forward-looking Scoping Plan directives regarding the 6.7 MMTCO<sub>2</sub>E GHG reductions from new and incremental CHP resources.

13-2

Concerns with the Supplement's Clarity Regarding the QF/CHP Settlement

CARB's Supplement reflects several details of the QF/CHP Settlement; unfortunately, these details are imprecise and imply a misunderstanding of the features of the settlement. The Supplement addresses shortcomings in the FED's analysis of project alternatives arising from litigation challenging CARB's earlier analysis of alternatives for the Scoping Plan. In CARB's analysis of alternatives to a cap-and-trade program, the Supplement, specifically on pages 27 and 69, contains ambiguous statements related to the CHP procurement and emission reduction targets from the QF/CHP Settlement. In summary, the Supplement warrants clarification of the following points:

1. The 3,000 MW target in the QF/CHP Settlement related to existing CHP capacity is distinct from the 6.7 MMTCO<sub>2</sub>E of GHG reductions from CHP procurement for new and incremental CHP facilities contemplated by the CARB Scoping Plan.
2. The Settlement apportions the responsibilities for the 6.7 MMTCO<sub>2</sub>E of incremental reductions of GHG resulting from CHP resources between Investor Owned Utilities (IOUs), energy service providers (ESPs), community choice

13-3

aggregators (CCAs) and Publicly Owned Utilities (POUs) to meet the Scoping Plan's CHP emission reduction target.

3. Encouragement of new CHP will be driven by the Scoping Plan's 6.7 MMTCO<sub>2</sub>E CHP emission reduction target.

#### Accounting for GHG Reductions and MW Targets

The QF/CHP Settlement includes several tiers of procurement and emission reduction targets to ensure CHP retention and expansion. The QF/CHP Settlement divides these targets between two program periods (the First and Second Program Periods) and between two different procurement metrics or standards, i.e., MWs of capacity and MMT of GHG reductions. It is important to understand at the outset that the QF/CHP Settlement is a "settlement." As a settlement it reflects material tradeoffs and concessions to arrive at certain integrated results. It is not reasonable to unravel selected features of the settlement from the integrated whole and reach conclusions related to any singular component. In short, it is a mistake to rely on the QF/CHP Settlement for conclusions regarding the MW procurement or GHG reductions of the state's desired CHP resources. These important policies remain the domain of agency determinations, like the Scoping Plan.

The starting point for CHP procurement under the QF/CHP Settlement is the established target of 3,000 MW of CHP by July 17, 2015 (the First Program Period). The 3,000 MW target applies to IOUs (and ESPs and CCAs serving former IOU customers). As noted, the 3,000 MW procurement target is a settlement figure agreed to in order to sustain the existing amount of CHP capacity. It does not reflect the procurement of incremental CHP capacity. The goal of this target is to secure existing GHG benefits from existing CHP; i.e., the estimated 1.9 MMTCO<sub>2</sub>E of GHG emission reductions.

The second point for CHP procurement under the QF/CHP Settlement is to reflect the incremental 6.7 MMTs of GHG reduction from CHP resources. The QF/CHP Settlement adopts a December 31, 2020 emissions reduction target of 4.8 MMTCO<sub>2</sub>E from the IOUs (and related ESPs and CCAs). This allocated portion of the incremental 6.7 MMTs of GHG reduction from CHP reflects CARB's Scoping Plan CHP measure. In addition to the IOU (and related ESPs and CCAs) 4.8 MMTCO<sub>2</sub>E target, publicly-owned utilities are responsible for securing the remaining 1.9 MMTCO<sub>2</sub>E for a total Scoping Plan objective to reduce emissions by 6.7 MMTCO<sub>2</sub>E.

Absent independent action by the CPUC, the QF/CHP Settlement will only promote the procurement of new, incremental CHP resources if CARB's Scoping Plan sustains the IOU GHG reduction target of 4.8 MMTCO<sub>2</sub>E. The Joint CHP Parties anticipate the procurement of new CHP and the associated GHG savings will occur in the Second Program Period, and is dependent upon CARB and the CPUC maintaining and affirming the state's commitment to the CARB Scoping Plan CHP measure. Accordingly, CARB's role in the development of new CHP for California is critical.

13-3  
Cont'

13-4

Specific Clarifications to the Supplement

For all of these reasons CARB should clarify the Supplement to accurately reflect pertinent terms of the QF/CHP Settlement. Two passages warrant revisions in the Supplement, at pages 27 and 69.

Page 27 discusses Alternative 1, the no project alternative. This scenario assumes existing conditions and CARB's existing efforts. As currently drafted the section does not acknowledge the objective to retain existing *and* procure incremental GHG reductions from new CHP. The passage should also point out the allocation of GHG emission reductions from CHP to ESPs and CCAs. The following specific edits and modifications would clarify and improve the current discussion in the Supplement:

Page 27

The California Public Utilities Commissions (CPUC) recently promulgated a Decision to approve a settlement on CHP that had been negotiated by utilities and CHP proponents. The settlement requires investor owned utilities (IOUs), electrical service providers (ESPs), and community choice aggregators (CCAs) to reduce emissions from the electrical sector by retaining existing CHP and contracting with new CHP to secure their allocated portion of the 6.7 MMTs of GHG reductions from CHP. The ~~subject utilities IOUs, ESPs and CCAs~~ have until 2020 to meet the their allocated share of the overall target, meaning the Settlement's 4.8 MMTCO<sub>2</sub>E emission reduction targets. One of the purposes of the settlement was to develop a method for CPUC jurisdictional utilities to achieve their portion of the Proposed Scoping Plan CHP measure. The electricity demand forecast in the 2011 Integrated Energy Policy Report being prepared by the California Energy Commission will include GHG reductions from CHP.

13-5

Page 69 of the Supplement discusses Alternative 3, the direct regulations scenario, to harmonize the discussion with the QF/CHP settlement. The passage should incorporate the following modifications to clarify procurement targets and other policy objectives from the settlement.

Page 69

Progress has been made recently to ~~increase~~ encourage the development and installation of efficient CHP. The CPUC has adopted a ~~measure that is expected to increase CHP at IOUs by 3000 MW, which is expected to decrease GHG emissions by 4.8 MMTCO<sub>2</sub>E~~ settlement that establishes a State CHP Program designed to preserve resource diversity, fuel efficiency, GHG emissions reductions, and other benefits and contributions of CHP.<sup>5</sup> Through July 17,

13-6

<sup>5</sup> CPUC Decision (D.) 10-12-035, at 2.

2015, a large portion of the GHG emission reduction benefits of the existing CHP fleet will be retained through the procurement of approximately 3,000 MW of existing CHP. Consistent with the 2008 Scoping Plan, the CHP Program also establishes an incremental GHG emission reduction target of 4.8 MMTCO<sub>2</sub>E for the IOUs, ESPs, and CCAs that requires the installation of 3000 MW of new CHP by 2020. Assuming the IOUs represent approximately three-quarters of electricity sales, ARB staff estimates that POUs could contribute an additional reduction of 4.6-1.9 MMTCO<sub>2</sub>E, resulting in a total reduction of 6.7 MMTCO<sub>2</sub>E and the installation of 4,000 MW of new CHP.

The Joint CHP Parties are available to discuss these and other CHP issues with CARB staff. Please do not hesitate to inquire or seek additional clarification regarding matters raised in these comments.

Respectfully submitted,

Beth Vaughn  
Executive Director  
California Cogeneration Council

Michael Alcantar  
Executive Director and Counsel  
Cogeneration Association of California

Evelyn Kahl  
Seema Srinivasan  
Counsel for the  
Energy Producers and Users Coalition

13-6  
Cont'

### **L13 Response**

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- 13-1      The commenter recommends clarifications to the Supplement to accurately reflect the details of the qualifying facilities (QF)/ CHP settlement. ARB and CPUC staff conferred on the status of the recently approved settlement to increase the amount of CHP operated by IOUs in the State. Although CPUC has approved the settlement, it is not final. The settlement identifies a 4.8 MMTCO<sub>2</sub>E GHG emission reduction goal by 2020. That value is reflected in the Status of Scoping Plan Measures on the ARB webpage ([http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf)).
- 13-2      The commenter provides background information regarding the recommended clarifications. Please refer to response 13-1.
- 13-3      The commenter provides clarification. Comment noted and appreciated.
- 13-4      The commenter provides several points related to tiers of procurement. Comment noted.
- 13-5      ARB agrees with the sentiment of the comment, and the document has been revised accordingly.
- 13-6      ARB agrees with the sentiment of the comment, and the document has been revised accordingly.

L14



## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 14 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Brian  
Last Name: Carr  
Email Address: brian.carr21@verizon.net  
Affiliation:

Subject: A Fee and Dividend Plan Deserves Serious Consideration

Comment:

I urge the Board to give more than perfunctory consideration to a fee & dividend plan as a means of implementing AB 32. There are many reasons, but I will note just two, neither of which was considered in the Supplement to the Scoping Plan.

Unlike a cap and trade plan, fee and dividend will not have a negative impact on the state's economy. Cap and trade acts like a tax on energy and could have a depressive effect on an economy that is already in a precarious state. A fee and dividend plan that rebates all of the fees collected to the people avoids this problem, and gives consumers the freedom to spend their dividends as they wish. We can expect that many will opt for alternative forms of energy that will become more affordable as investors direct their funds to less expensive alternative technologies. The advantages of fee and dividend over cap and trade to the economy are compelling and should not be ignored in a state with high unemployment and uncertain economic prospects.

The second point is that fee and dividend is far more politically viable than cap and trade. Because it is revenue neutral and rebates the fees to the people, politicians who on principle oppose a cap and trade tax, will be open to a plan that will put a check in every voter's mailbox. Cap and trade has failed in Congress, and there is no reason to believe its future chances are any brighter. By adopting fee and dividend, California could be a model for other states, and, eventually, the nation. We all understand that AB 32 will not work if the idea does not spread to other states and countries. Fee and dividend has the best chance of being adopted elsewhere, and therefore, of achieving our goal.

Unfortunately, it appears CARB has not seriously considered a fee and dividend approach where gradually increasing fees on fossil fuels are rebated, 100%, to the people of California. It deserves that consideration.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-19 16:07:36

14-1

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### **L14 Response**

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14-1            The commenter advocates a Fee and Dividend approach. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1 and 6-2.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomm>

L15

sp1...



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BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 15 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Daniel  
Last Name: Richter  
Email Address: [darichter@gmail.com](mailto:darichter@gmail.com)  
Affiliation:

Subject: Revenue-Neutral Fee and Dividend.

Comment:

Abstract:

The goal of the cap and trade system in the ARB scoping plan is to reduce our greenhouse gas (GHG) emissions. The ARB must now attempt to lower our emissions during tough economic times. An incrementally increasing, revenue-neutral carbon fee assessed upstream with 100% of proceeds returned evenly to Californians as a monthly check can lower our emissions less expensively than cap-and-trade while simultaneously helping the economically vulnerable. Seeing such a "green check" arrive in the mail each month also holds the potential to precipitate a paradigm shift in the way the Californian public views and acts with regard to the causes of climate change. For all these reasons, I urge the ARB to implement such a revenue-neutral fee and dividend in the place of cap and trade.

Effectiveness of a carbon fee vs. cap and trade:

In a 2008 study (1), the Congressional Budget Office (CBO) found that a carbon tax was more efficient (i.e. achieved the same reductions in emissions at a lower cost) than any iteration of a cap-and-trade system considered ("Summary Table 1" in this document is particularly helpful). This included an inflexible cap system, and various iterations of a flexible cap with a safety valve. True, this analysis was made for the United States as a whole. But since California accounts for 12% of the US population (2) and a roughly comparable portion of US GDP (3), I make the assumption that lessons applicable to the US are also applicable to California.

Salient highlights from this report include:

- A tax could achieve a long-term emissions targets at roughly a fifth the cost of an inflexible cap.
- A tax is comparatively simple to implement, as it could build on already existing infrastructure for levying and collecting existing taxes.
- A tax avoids year-to-year fluctuations in price, significantly aiding businesses in long-term planning.
- Because it has a single price in any given year, a tax is simpler to harmonize internationally, or to assess at our borders for interstate or international commerce.

The next most efficient incarnation in this report, a cap-and-trade system with a price ceiling and a price floor, is essentially a tax. If there is a high price limit, and a low price limit, why not take the average price and skip all the bureaucracy associated with setting up, monitoring, and regulating the exchange?

Benefits of returning the proceeds evenly to all Californians:

It is widely acknowledged that the poor spend a higher percentage of their income on fossil carbon, but less than the rich on carbon overall (4, 5, 6). Indeed, this makes intuitive sense. The poor tend to take public transportation more often, travel by air less, and tend to own fewer Hummers. This means the poor would be disproportionately affected by a price on carbon. In other words, a carbon price on its own is regressive. It is a good idea at any time to make sure that our most vulnerable citizens do not bear the brunt of a price on carbon. It is especially true in these tough economic times with bloated unemployment numbers and cuts to government safety nets. It is therefore desirable that any carbon pricing mechanism be progressive, not regressive.

If we accept that a price on carbon should be progressive and not

15-1

15-2

15-3

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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regressive, what is the best way to do this? Of 5 policies considered, Butraw (4) found 3 policies progressive (expansion of the Earned Income Credit, and direct return of the money as taxable or non-taxable income) and 2 regressive (reducing income or payroll taxes). The CBO (5) found similar results. The Carbon Tax Center (6) has a readable and relatively condensed analysis of this with thought-provoking numbers.

Of these progressive options, I urge the ARB to adopt returning 100% of the proceeds as either a taxable or non-taxable dividend each month directly to California households. Firstly, a monthly dividend will save poorer Californians from having to bear the costs of higher carbon prices the entire year before getting relief. Instead, they would be able to keep up with the higher bills, and have some extra money left above their costs. Extra money in the hands of the poor is more likely to generate revenue than money put in the hands of the rich, as it is more likely to be spent on things such as clothes and food rather than saved. It may be considered a type of unemployment insurance, which generates \$1.62 in economic activity for every dollar spent (7). Thus, not only will returning the proceeds from the fee in this way help the poor while reducing our emissions at minimal cost to the government, it may also stimulate the economy.

Eliciting a paradigm shift:

What may prove to be the most important piece of this proposal is the potential of this monthly "green check" to precipitate a paradigm shift in the way Californians think and make decisions about their own carbon emissions. When people see that check every month, they will very quickly realize that by changing their behavior, they can "get under" the fee. That is, by embracing lower-carbon activities, they will be making money.

This monthly check thus adds a carrot to the end of the stick that is higher carbon prices. Recall the significant change in behavior we all witnessed during the gas price spikes of 2008. The high gas prices were all stick and no carrot, but still people made significant changes in the way they acted and what they purchased. The carrot of more money in their pocket on top of the higher carbon prices that we know can change behavior can only speed our journey to lower carbon emissions.

Conclusions:

In summary, an incrementally increasing, revenue-neutral carbon fee assessed upstream with 100% of proceeds returned evenly to Californians as a "green check" is a superior policy to cap-and-trade. Due to its price stability and ability to piggy-back on top of existing government infrastructure, it imposes lower costs on businesses and government for the same emissions reductions. It helps the poor at a time when they need all the help they can get. By putting money in their hands, it is likely to actually stimulate the economy while still cutting carbon. Finally, by returning the money as a monthly "green check", it offers every Californian "carrot" incentives to change their habits on top of the "stick" incentives imposed by any price on carbon. Perhaps more than anything, this will place California in the lead both in the nation and in the world in the race to regain a stable climate.

Thank you for reading my comment.

References:

1. Congressional Budget office. "Policy options for reducing CO2 emissions". 2008. URL: <http://www.cbo.gov/ftpdocs/89xx/doc8934/02-12-Carbon.pdf>
2. United States Census Bureau. "State and County QuickFacts". Last accessed: 7/24/11. URL: <http://quickfacts.census.gov/qfd/states/06000.html>
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4. D. Butraw, R. Sweeney and M. Walls. "The Incidence of U.S. Climate Policy: Where You Stand Depends on Where You Sit". 2008. Resources for the future. URL: <http://www.rff.org/documents/RFF-DP-08-28.pdf>
5. The Congressional Budget Office. "Trade-Offs in Allocating Allowances for CO2 Emissions". 2007. Economic and Budget Issue Brief. URL: [http://www.cbo.gov/ftpdocs/80xx/doc8027/04-25-Cap\\_Trade.pdf](http://www.cbo.gov/ftpdocs/80xx/doc8027/04-25-Cap_Trade.pdf)
6. The Carbon Tax Center. "Demographics". Last updated: 3/22/11. Last accessed: 7/24/11. URL: <http://www.carbontax.org/issues/softening-the-impact-of-carbon-taxes/>
7. The Economist magazine. "The Struggle to Eat". Issue: July 14th, 2011.

Attachment:

15-3  
Cont'd

15-4

15-5

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## **L15 Response**

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15-1      The commenter expresses that revenue from an auction should be returned to households as a dividend. Auctioning of permits and compensating consumers with a dividend are some suggested design features that could be implemented with a cap-and-trade program. The administration of a dividend would require ARB to collect money and then disperse revenues. ARB can collect, but ARB cannot disperse the funds without authorization and appropriation from the Legislature.

The Supplement describes various design features of a carbon tax or fee and evaluates the potential environmental impacts of one design option and evaluates how that option meets the objectives of the Proposed Scoping Plan. For the purposes of this analysis, ARB had to select one variation of a carbon tax or fee to evaluate. Some commenters have noted that a carbon fee is an attractive option because of its simplicity. Others have criticized ARB's characterizations of a fee design because it does not incorporate features that could address leakage or other project objectives, however, these features would make a fee more complicated to develop and administer.

The commenter describes some benefits of a carbon tax, including its simplicity to implement and price certainty. ARB acknowledges these features, but notes that a fee lacks one essential feature: the certainty associated with a firm emissions cap. This means that a fee does not assure meeting the AB 32 limit on emissions in 2020. As noted in the Supplement, there are significant challenges to adopting a fee in California.

With regard to expenditures of funds, whether they are fee or tax revenue or auction revenue from a cap-and-trade program, as described in the Supplement, ARB does not have the authority to appropriate funds. In California, only the Legislature has this authority. It should be noted that ARB, in Resolution 10-42 agreed that the potential uses of allowance revenue received by the Economic and Allowance Allocation Committee represents good use of allowance value.

These uses include financing public and private investments toward:

- Low-cost GHG emission reductions, including investments in energy efficiency, public transit, transportation and land-use planning, and research development and deployment;
- Adaptation to climate change;

- Environmental remediation in any communities found to experience increased exposure to co-pollutants as result of any possible fossil-fuel burning stemming from AB 32 implementation;
- Economic opportunities and environmental improvements in disadvantaged communities; and
- Green job training.

Regarding effectiveness, the commenter offers findings from a 2008 Congressional Budget Office (CBO) study that compares an “inflexible cap” (with no cost containment measures such as an allowance reserve) to a tax.

The 2008 CBO study refers to the economic efficiency of a cap-and-trade program versus taxes and not to environmental effectiveness. However, as the report itself states “(o)ther criteria could be of interest to policymakers in determining how best to address concerns about climate change. For example, the efficiency criterion addresses how well policies might function to minimize the cost of reducing emissions over a period of several decades; however, policymakers may choose to place more emphasis on providing certainty about the amount of emissions at specific points in time.” ARB would further add that it is not just amount of emissions at *specific points in time* that distinguishes a cap from a tax, as CBO suggests, but overall emissions over the entire time period covered by the gap. Calling a tax more efficient than a cap presupposes either that the total emissions would be roughly the same with a tax as it would be with a cap or that the tax would be set at a price that accurately reflects the marginal damages imposed by another ton of emissions in the atmosphere.

The 2008 CBO study finds that an inflexible cap is less efficient than a tax. California’s proposed cap is not an “inflexible” model but rather an approach that includes such features as an allowance reserve, intertemporal banking and offsets, which provide for greater price certainty and cost containment. These flexible models of cap-and-trade address many of the efficiency and volatility concerns expressed by CBO.

As noted on pages 39-40 of the FED, another study, published in the Oxford Review of Economic Policy in 2008 (Stavins 2008), finds that the most efficient approach for the short to medium term in the U.S. in regard to addressing climate change would be a cap-and-trade system (also, see the study in the Harvard Environmental Law Review (Stavins 2007). The study finds that the integrity of a domestic program could be maximized (and its costs and risks minimized) by:

- targeting all fossil-fuel-related carbon dioxide (CO<sub>2</sub>) emissions through an upstream, economy-wide cap;
- setting a trajectory of caps over time that begins modestly and gradually becomes more stringent, establishing a long-run price signal to encourage investment;
- adopting mechanisms to protect against extreme price uncertainty; and
- including linkages with the climate-policy action of other countries, which the author believes is much more feasible with a series of negotiated quantitative targets (caps) than with harmonized taxes. Indeed, the CBO study's stated efficiency advantages of a tax are premised on the notion that a tax could be coordinated among major emitting countries in an attempt to minimize the cost of achieving a global target for emissions. Such coordination is far from reality at the state, federal and international levels

A cap-and-trade system for California is designed in such a way as to satisfy conditions 2-4 of the cost effectiveness criteria that Stavins (2008) identifies.

As noted above, the 2008 CBO study refers to the Federal level and not to the feasibility of a carbon tax in California. As described in the Supplement, the challenges surrounding approval of a carbon tax could make this approach infeasible as a practical matter.

- |      |                                |
|------|--------------------------------|
| 15-2 | Please refer to response 15-1. |
| 15-3 | Please refer to response 15-1. |
| 15-4 | Please refer to response 15-1. |
| 15-5 | Please refer to response 15-1. |

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 16 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Kirsten  
Last Name: Schwind  
Email Address: [kirsten@baylocalize.org](mailto:kirsten@baylocalize.org)  
Affiliation: Bay Localize

Subject: Carbon Tax and Site Regulation instead of Cap and Trade

Comment:

Dear CARB,

Bay Localize works to reduce reliance on fossil fuels and build community resilience in the Bay Area. We recognize California's Global Warming Solutions Act, AB 32, as an important step toward addressing climate change. However, when it passed we were disappointed that it included a cap-and-trade program. There are number of serious problems with this model, and we are particularly concerned about the opportunities for the system to be gamed. Due to corporate influence, the European Union's first cap-and-trade system actually produced windfall profits for polluters, and failed to seriously reduce emissions.

A stronger plan would combine two of the approaches identified by CARB:

- Carbon Tax. This is a much more transparent approach to pricing carbon. Also, it creates a steady multi-year revenue stream for the state, which can use it to close the budget gap, re-fund our public transportation systems, schools, and social services, and invest in green energy and climate adaptation.

- Regulate specific pollution sources. We recognize a carbon tax does not guarantee less emissions. That's why we support combining this policy with strict regulation of the biggest polluters, such as oil refineries, making sure to clean up the environment for the communities that live around them.

Thank you for your fair consideration of all perspectives in this decision. We have asked our members to contact you on this issues as well. We look forward to an even stronger AB 32 that truly protects California's air for all communities and funds clean energy solutions.

Sincerely,

Kirsten Schwind  
Program Director

Bay Localize  
436 14th St, Ste 1216  
Oakland, CA 94612  
510-834-0420  
[www.baylocalize.org](http://www.baylocalize.org)

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 15:33:41

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## **L16 Response**

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- 16-1      The commenter supports a carbon tax and direct regulations. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.
- 16-2      Please refer to response 15-1.

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**L17**

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July 25, 2011

Jeannie Blakeslee  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Notice of Public Availability of a Supplement to the AB 32 Scoping Plan Functional  
Equivalent Document (SCH No. 2008102060)**

Dear Ms. Blakeslee:

The California Department of Transportation (Caltrans) appreciates the opportunity to comment on the Notice of Public Availability of a Supplement to the AB 32 Scoping Plan Functional Equivalent Document. The Scoping Plan outlines the State's strategy to reduce greenhouse gas (GHG) emissions to 1990 levels by 2020, as required by the Global Warming Solutions Act of 2006 (AB 32; Stats. 2006, Chapter 48). The supplement to the scoping plan appears to focus on regulations for statutory GHG regulations through carbon trading among stationary sources, and mobile sources are addressed only in terms of developing better vehicle fuel standards.

The Department's Local Development-Intergovernmental Review (LD-IGR) Program is your partner in stewardship of the public interest, our part of which are the present and future mobility needs of California. We offer the following comments at this time:

1. Our System Planning functions will utilize SB 375, Sustainable Communities Strategies that include Complete Streets, and Smart Mobility strategies. In addition, Caltrans is also cognizant of Environmental Justice goals to ensure that underserved areas are also addressed.
2. SB 375 requires the Air Resource Board to set per-capita GHG reduction goals for each MPO region to achieve via Sustainable Communities Strategies (SCS) which include Complete Streets, Smart Mobility, and Smart Growth strategies. This information is available for all MPOs, however, not for RTPAs. It is important to note that some RTPAs are choosing to create an SCS with their RTPs even though they are not required to by SB 375.

Please let me know if I can be of any assistance. My telephone number is 916.653.0808, and I can be reached via e-mail at: [josh.pulverman@dot.ca.gov](mailto:josh.pulverman@dot.ca.gov).

17-1

*"Caltrans improves mobility across California"*

Jeannie Blakeslee  
California Air Resources Board  
July, 25 2011  
Page 2

Sincerely,



Joshua Pulverman  
Statewide Local Development-Intergovernmental Review Coordinator  
Office of Community Planning

- c: State Clearinghouse, Governor's Office of Planning and Research (OPR)  
Gary Arnold, Branch Chief, District 4 Local Development-Intergovernmental Review  
Noreen A. Rodriguez, District 4 System Planning  
Rodney Tavitas, HQ Office of Regional and Interagency Planning  
Terry Parker, HQ Office of Community Planning

### **L17 Response**

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- 17-1      The commenter expresses the opinion that the Supplement appears to focus on GHG regulation through carbon trading among stationary sources, while mobile sources are addressed only in terms of developing better vehicle fuel. The commenter notes that SB 375 Sustainable Communities Strategies will be utilized by their Department, and that SB 375 requires ARB to set per-capita GHG reduction goals for each MPO region to achieve, via Sustainable Communities Strategies. ARB has reviewed the comment and appreciates the offer of assistance, as a partner in stewardship of the public interest.

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**COMMENT 18 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Ruby  
Last Name: Pap  
Email Address: [rubyapap@yahoo.com](mailto:rubyapap@yahoo.com)  
Affiliation:

Subject: please reconsider carbon tax!

Comment:

I support the carbon tax, not the cap and trade system. This will be much easier to implement for California, and much more likely to be effective in reaching our climate goals. Thank you.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 17:30:08

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### **L18 Response**

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18-1        The commenter suggests a carbon tax for ease of implementation and effectiveness. Please refer to response 15-1.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 19 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Mike  
Last Name: Wertheim  
Email Address: mikew@hyperreal.org  
Affiliation:

Subject: forest protocol is flawed  
Comment:  
I believe the ARB should be doing everything possible to safeguard the state's watersheds. The current forestry protocols under cap-and-trade defeat this goal by rewarding clearcutting.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 18:09:47

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## L19 Response

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19-1      The commenter suggests specific changes to the forestry protocol aspect of the proposed Cap-and-Trade Regulation. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but any specific measure, including a cap-and-trade regulation, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, comments about particular components of specific emission reduction measures (such as specific design features of a cap-and-trade regulation) do not raise a "significant environmental issue associated with the proposed action" (see CCR section 60007(a) [emphasis added]) because the proposed action (i.e., the Proposed Scoping Plan) does not include adoption of the particular design components of specific measures.

The Cap-and-Trade program recommended in the 2008 Scoping Plan was proposed as a rule in October 2010 (<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>) and will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of that regulation as proposed, including the offset protocols (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>).

In any event, as part of this proposed Cap-and-Trade Regulation referenced above, ARB staff developed and proposed the Compliance Offset Protocol for U.S. Forest Projects (Forest Offset Protocol). The protocol does not provide any incentive to harvest (regardless of method) or to clear-cut an area; rather there is a strong disincentive to harvest because it reduces the ability to generate offset credits. The strongest incentive provided by the protocol is to increase the carbon in standing live trees, and increasing rotation ages (which decreases harvest frequency and intensity) is expected to be one of the most common improved forest management activities.

In addition, the ARB Forest Offset Protocol requires forest offset projects to comply with all federal, state, and local regulations governing timber harvest and forest management, and includes some additional environmental safeguards to help assure the environmental integrity of Forest Offset Projects. In California, all projects must comply with the Z'Berg-Nejedly Forest Practice Act, which was enacted in 1973 to ensure that logging, including even-age management, is done in a manner that would preserve and protect fish, wildlife, forests and streams. The Forest

Offset Protocol includes requirements for projects to demonstrate sustainable long-term harvesting practices, limits on the size and location of even-aged management practices, requirements for natural forest management which require all projects to utilize management practices that promote and maintain native forests comprised of multiple ages and mixed native species at multiple landscape scales.

Under the Forest Offset Protocol, harvesting, including clear-cut harvesting, does not generate offset credits. The Forest Offset Protocol requires projects to maintain or increase the standing live carbon stocks in the project area. Credits are only generated by increasing standing live carbon stocks. While harvesting may occur, the protocol accounts for harvesting as a decrease in standing live carbon stocks that must be compensated for by an increase in sequestration in the rest of the forest project lands. Offset credits would not be issued if, over any consecutive 10 year period, the data reports indicate a decrease in the standing live carbon stocks. If such a decrease does occur it may be considered an intentional reversal requiring the replacement of all credits issued for the reversed carbon.

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**COMMENT 20 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Paul  
Last Name: Stoft  
Email Address: p.stoft@gmail.com  
Affiliation:

Subject: DESTROYING FORESTS

Comment:

Dear Chairman Nichols:

While the ARB is considering alternatives to the cap-and-trade program, please also correct the major flaws in your agency's forestry protocol.

As it stands now with the current cap-and-trade forestry protocol, California will be rewarding timber companies for despoiling the land and emitting large volumes of CO2.

The protocol allows forest clearcuts (a.k.a even-aged management) that can dramatically impair water quality and quantity in affected watersheds. The clearcuts you permit to qualify as "offsets" potentially impact the health and well-being of millions of Californians, as well as future generations.

Please correct the forestry protocol to allow "offset" projects to include only uneven-age forests which not only sequester CO2 but preserve wildlife habitat and other values.

Sincerely,

Paul Stoft ScD

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 18:45:42

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**L20 Response**

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20-1            The commenter expresses that there are major flaws in the Forest Offset Protocol. Please refer to response 19-1.

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## Comment Log Display

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**COMMENT 21 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Timothy  
Last Name: Makovkin  
Email Address: [paragon007@comcast.net](mailto:paragon007@comcast.net)  
Affiliation:

Subject: A.B. 32  
Comment:  
Dear Chairman Nichols:

As your agency implements the provisions of A.B. 32, the board should be doing everything possible to safeguard the state's watersheds. Unfortunately, the current forestry protocols under cap-and-trade defeat this goal by rewarding forest clearcutting.

While you are considering alternatives to the cap-and-trade program, as required by recent litigation under CEQA, please also correct the major flaws in the forestry protocol.

It appears that the ARB regards California's forests as a net carbon sink, always sequestering more CO2 than they release. But this clearly overlooks the possibility that individual timber companies ♦ especially those doing clearcutting ♦ may be net emitters of CO2 from their forestlands.

Please hold timber companies accountable for the CO2 they release. You can do this by eliminating the provision in the forestry protocol that allows even-aged harvests (i.e. clearcuts) in projects qualifying as "offsets" under cap-and-trade.

Sincerely,

Timothy A Makovkin

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 18:43:16

21-1

21-2

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### **L21 Response**

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- 21-1        The commenter expresses that the Forest Offset Protocol rewards clearcutting and has major flaws. Please refer to response 19-1.
- 21-2        The commenter suggests eliminating the provision in the Forest Offset Protocol that allows even-aged harvests. Please refer to response 19-1.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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### Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 22 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Virginia  
Last Name: Mariposa  
Email Address: [vmariposa@cox.net](mailto:vmariposa@cox.net)  
Affiliation:

Subject: This shouldn't even have to be proposed!

Comment:

We tried to take care of the environmental depredation as far back as the Nixon administration, and people have chosen to follow their selfish interests time and time again. To hell with them!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 20:07:53

22-1

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## **L22 Response**

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- 22-1      The commenter expresses an opinion about environmental policy. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 23 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Marcia  
Last Name: Kolb  
Email Address: mbkolb@hotmail.com  
Affiliation:

Subject: fix cap-and-trade  
Comment:

As you reconsider the alternatives to cap-and-trade in meeting the goals of A.B. 32, please also reconsider your board's decision to allow even-aged forest management (i.e. clearcutting) to be allowed in forestry "offset" projects.

The ARB's cap-and-trade program should not reward landowners for clearcutting their forests, directly or indirectly. Clear-cutting is an out-dated forestry practice that is harmful to water-sheds and detrimental to a healthy forest ecosystem. It should not be part of our efforts to control carbon emissions.

23-1

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 20:14:07

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### **L23 Response**

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23-1      The commenter suggests reconsideration of the Forest Offset Protocol to allow projects that use even-aged harvesting and that the clearcutting should not be rewarded. Please refer to response 19-1.

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San Francisco  
California 94105  
USA

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NEW FRONTIERS IN C

L24

July 25, 2011

Clerk of the Board  
Air Resources Board  
Sacramento CA

RE: *Supplement to the AB 32 Scoping Plan Functional Equivalent Document*

Dear Sir or Madam:

EOS Climate is developing projects in the U.S. and globally for collection and destruction of ozone-depleting substances (ODS) that remain in older equipment and building infrastructure. We have pioneered ODS destruction as a verifiable emission reduction for greenhouse gas (GHG) markets, originating ISO-14064 conforming methodology, and deploying state-of-the-art technologies and creating an integrated system for collection, aggregation, processing, and destruction of ODS from older equipment. This system is designed to deliver a stable supply of the highest quality GHG emission reductions for both voluntary and compliance markets.

We congratulate the California Air Resources Board (ARB) staff for assembling a comprehensive program for California to meet the AB 32 targets while containing costs, providing flexibility, and maximizing the benefits to the economy and environment. We are offering comments on the issues raised in the June 13, 2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("the FED Supplement").

#### **A Price on Carbon is Needed to Meet the AB 32 Goals**

The suite of regulatory mandates issued or proposed under AB 32 is largely designed to expand deployment of currently available technologies and practices, and take into account currently understood technical, economic, and other practical limits. Even if these mandates can achieve the desired results, they are limited to specific sectors and are not expected to be enough to meet either the 2020 or longer-term targets.

As noted in the FED Supplement, there is consensus that some form of carbon pricing is needed to mobilize long-term investments in a broad array of transformative technologies and infrastructure. Only a price on carbon emissions would encourage both deployment of renewable and low-carbon power sources and technologies that would not have to pay the carbon price, and also discourage fossil fuel generation of energy, which would. This double-down effect makes a price on carbon the most effective policy solution to reduce/stabilize greenhouse gas emissions and transition California's economy to low carbon sources of energy.

#### **Cap-and-Trade is the Best Policy to Establish a Price on Carbon**

Cap-and-trade has been identified as the economically most efficient, and environmentally most certain, approach to bridge the gap that specific regulatory mandates cannot fill. The central

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24-1

strength of a cap- and-trade system is that it provides incentives for low carbon technologies across the entire economy, while insuring that the “hard” caps are met (unlike a tax) at the lowest cost. A recent study found that a tradable permit system compared to a carbon tax, incentivizes earlier action, at lower cost.<sup>1</sup>

While many in the academic economic community believe that carbon taxes are just as efficient in achieving these objectives, carbon taxes do not adhere to hard, enforceable caps, and emissions can continue to rise in a growing, or less efficient economy. Only a hard cap ensures adherence to emission reduction targets while providing flexibility in how those targets are met.

### **Cap-and-trade cannot be substituted with a higher RPS**

More aggressive regulations could theoretically be imposed on paper, e.g., an RPS of 40% instead of the current target of 33% by 2020. While we expect that renewable power will contribute a large proportion of the emission reductions, in principle rules that mandate specific and possibly overly ambitious technology targets could actually stifle innovation over time and drive up the costs of the overall program.<sup>2</sup> Further, there is no guarantee that the targets will be achieved, based on numerous examples of RPS targets slipping or being rolled back over time.

Cap-and-trade programs, by contrast, have demonstrated virtually 100% compliance with targets, as companies struggling to meet their targets can buy surplus reductions in the market from other companies that outperform. A properly designed and operating cap and trade system would create incentives for greater deployment and improvements in all forms of low carbon technologies, including renewable power.

On a more fundamental level, replacing cap-and-trade with new regulatory requirements would introduce regulatory uncertainty just as AB 32 is poised to go into effect. Private investment in California clean technologies -- drawn to the State by the prospects of a robust price on carbon -- would freeze, or be driven out of state. As voiced by many California business leaders during the Proposition 23 debate and more recently, the full AB 32 program including cap-and-trade provides incentives for renewable energy, transportation fuels, batteries, building materials, and dozens of other sectors that are the engines of California’s economic revitalization.

### **Cap-and-trade works when properly designed**

The original US cap-and-trade system to address acid rain has had a 20-year record of success. This program, as any cap-and-trade system, created incentives that turned pollution reductions into marketable assets, harnessing private capital and driving technological and process innovations down to and beyond required levels. The Midwestern and Eastern power plants covered under the EPA acid rain cap-and-trade program achieved full compliance, and even exceeded the targets for sulfur dioxide emission reductions, at a cost that was 70-80% below the original estimates from EPA and OMB.

In contrast, the first phase of the European Union Emissions Trading System, which ran from 2005-2008, had limited effectiveness due to over-allocation of permits. This was a regulatory design flaw because the Europeans had not been able to do a hard verification of emissions from capped entities before setting their targets. This was corrected for the second phase, now

<sup>1</sup> Chen and Tseng (2011) Inducing Clean Technology in the Electricity Sector: Tradable Permits or Carbon Tax Policies? Energy Journal 32:6-20.

<sup>2</sup> Morris, J. (2009) Combining a Renewable Portfolio Standard with a Cap-and-Trade Policy: A General Equilibrium Analysis. Cambridge: Massachusetts Institute of Technology.

underway through 2012. California will not repeat this mistake because ARB has had a mandatory emissions reporting requirement in place since 2007; the requirement will form the basis for setting (and adjusting) the AB 32 allowance targets. ARB will mitigate any additional potential for price volatility through a price containment reserve account with a price floor.

Other “failures” of the European experience with cap-and-trade, such as breaches into computerized accounts and sale of stolen allowances, are likewise a result of design flaws, botched execution, or having 27 different systems for each of the EU members. Several U.S. states have operated renewable energy credit (REC) and voluntary emission reduction (VER) registries without any instances of fraud or theft. We have every confidence that ARB has learned the lessons from the EU, and will create a secure system with careful policing and oversight, allowing for a fair, efficient, and cost-optimizing market.

Finally, unlike the new institutions in the EU and elsewhere developed to implement the Kyoto Protocol, the California Air Resources Board is a strong and experienced regulator, with extensive enforcement powers. California is learning not only from the EU experience, but also from analyses of federal GHG emission trading legislation, the Western Climate Initiative (WCI), the Regional Greenhouse Gas Initiative, the British Columbia carbon tax, and the US acid rain program.

#### **Cap-and-trade can provide advantages for California’s economy**

AB 32 provides California the impetus to lead an inevitable national and global transition to a clean energy economy. In a recent article titled “Cap-and-trade is the way forward” the Silicon Valley Leadership Group<sup>3</sup> states that:

“Since 2006, AB32 has spurred more than \$9 billion in investment in clean energy, helping spawn 12,000 businesses and thousands of new patents. According to the Wall Street Journal, California is home to seven of the top 10 clean-tech businesses in the United States and, according to the New York Times, five of the top 10 cities for clean-tech jobs are in California. As a result, Silicon Valley Leadership Group members Sunpower, Applied Materials, Serious Materials and Solaria are creating jobs in R&D, design, production, sales and installation. In fact, clean tech is one of the leading bright spots in our economy.”

The best, and we think, the only way to insure that this trend continues, and that California reaps economic advantages, is by incorporating a cap-and-trade system:

- Cap-and-trade insures that the emission targets are met at the lowest cost, with maximum flexibility to capped emitters.
- Under cap-and-trade, all sectors of the economy, not just electricity generation or transportation - are incentivized to innovate and deploy low carbon technologies and processes, which will allow California to maintain its competitive edge.
- Cap-and-trade is the only mechanism by which California can link to GHG initiatives in other regions and countries, such as WCI, or bilateral agreements with states and provinces in Mexico, Brazil, China, and Indonesia. Eighty-nine countries now have some form of carbon emission target, including emerging economies. Linking to initiatives outside the state will help spread any economic burden with other like-minded regions and also helps California gain economic value via exchange of technologies and services with these different programs.

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<sup>3</sup> Mike Mielke, SF Chronicle, June 1, 2011  
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- In addition to driving innovations and investments in clean technology businesses, an AB 32 emissions trading system will add economic value to California by creating a new financial center here for North American GHG markets.

### **Cap-and-trade does not penalize at-risk populations**

The question of whether cap-and-trade is regressive has gained traction based on the assumption that cap- and-trade unto itself will raise energy prices. Most analyses have estimated that in the near-term, implementation of AB 32 will increase energy costs, but that over the long-term, Californians will save money as a result of efficiency improvements and as costs for clean energy technologies achieve parity with power from fossil fuels. None of these analyses identify cap-and-trade as the source for the short- term increases in costs. Just the opposite, it is widely acknowledged that cap-and-trade minimizes the costs of climate mitigation.

Under either a carbon tax or cap-and-trade, “carbon revenue” can be returned, with legislative approval, to middle- and low-income households who bear the brunt of higher fuel and electricity costs (“cap-and- dividend” has been proposed at the federal level). The ARB and the California Public Utilities Commission have designed the cap-and-trade program precisely with this objective in mind, ensuring that the State’s utilities receive free allocation of allowances that they are restricted to using specifically to offset any increased cost of fossil fuel generation sold by capped power generators.

Another concern is that if some firms and facilities with high costs can purchase permits, rather than reduce their emissions, this will create heavily polluted “hot spots” in low-income and minority communities. At a fundamental level, power plants, refineries, and other capped emitters will not be able to increase their emissions of conventional pollutants which are already subject to extensive air, water, and waste permits under federal, state, county, and district laws and regulations. If current limits on conventional pollutants need to be re-evaluated, AB 32 is not the relevant arena. Regarding the potential for CO2 hot spots related to AB 32 cap-and-trade, a recent study of the acid rain program, the most established cap-and-trade system in the U.S., provides relevant data.<sup>4</sup> The study analyzed trading records for all facilities participating between January 1995 and March 2009 and found that the program did not concentrate SO2 emissions in poor communities, and that actually poor communities with high percentages of African-American and Hispanic residents experienced fewer imports of SO2 than did other areas.

Of course, doing nothing about climate change will have broad impacts on public health in California -- infectious and respiratory disease, heat illness, water shortages -- hitting the elderly, children, and those in lower income groups the hardest.<sup>5</sup>

### **California’s cap-and-trade system will be enforceable to achieve real environmental results**

Monitoring, reporting, and verification are at the heart of cap-and-trade. Each ton of a large emitters' GHG footprint, as well as each and every offset, must be independently verified by

<sup>4</sup> Rinquist, E. (2011). "Trading Equity for Efficiency in Environmental Protection? Environmental Justice Effects from the SO2 Allowance Trading Program," *Social Science Quarterly* 92:297-323.

<sup>5</sup> Public Health Impacts of Climate Change in California: Community Vulnerability Assessments and Adaptation Strategies. California Department of Public Health and the Public Health Institute (2007).



accredited environmental auditors. Emitters will be subject to significant penalties for either exceeding their caps or inaccurate reporting.

We expect that ARB will continue to take an active role in design and enforcement of the program. A properly designed cap-and-trade system requires relatively routine administrative oversight (in contrast, a carbon tax requires periodic review and adjustments of the tax level to insure that emission reductions targets are being met, subject to legislative approvals and likely political interference). Once regulations and guidelines are in place, accredited third parties are incentivized to maintain a functioning, transparent market and will manage much of the day-to-day operations. In addition, through the Climate Action Reserve, California has access to a world class, specialized network of third-party verifiers and a training/certification system that can provide program support for AB 32 as appropriate. Finally, much of the concern around speculative trading and market manipulation in the carbon market will be addressed by the broader reforms to commodities and derivatives regulations being undertaken at the federal level under the recently passed Dodd-Frank legislation.

We believe that ARB's recent decision to delay compliance obligations until 2013 will fully insure proper development of the market infrastructure and oversight mechanisms.

**Offsets do not allow emitters to pay their way to compliance so they can continue to pollute**

Offsets will serve a relatively minor role in achieving the AB 32 target. The ARB regulations allow capped sources to use offsets to meet up to 8 percent of their compliance obligations, thus limiting the room for maneuver around the caps.

Offsets represent GHG reductions that have multiple benefits:

- Offset credits are generated from sources or sinks of emissions not directly covered under the cap- and-trade program. This incentivizes technology and economic change in sectors such as agriculture, forestry, and appliance recyclers.
- Offsets provide additional low-cost abatement options to covered entities and prevent unanticipated cost increases and adverse impacts on the economy.
- Offsets reward early actions undertaken by proactive companies and organizations, and help prime the market with a steady supply of compliance credits at the start of the program.

**Offsets represent real GHG reductions and do not “dilute” the cap**

There are approximately 160 offset types that have been approved under the Kyoto Protocol's Clean Development Mechanism; by contrast, the 2010 ARB regulations list only four offset types as eligible under AB 32. The ARB has identified these as representing GHG reductions that are most certain to be real, permanent, additional, and enforceable.

ARB's offset regulations have rigorous requirements governing quantification protocols, monitoring and reporting, independent verification. In the small likelihood that a project, after approval, is found to have inadequate documentation, ARB has rules governing invalidation of the credits. ARB and the offsets industry are considering additional layers of protection such as a “compliance buffer account” or some other form of insurance for any credits that are invalidated.

24-1  
Cont'd

We have particular familiarity with destruction of ozone-depleting substances (ODS) for which EOS Climate originated the ISO 14064-2 methodology that was adopted by the Climate Action Reserve (CAR). As for the other project types – forestry and agricultural methane - both CAR and ARB conducted extensive peer- and public-reviews of the protocols. All projects under CAR have been, and under AB 32 will be, subject to rigorous end-to-end tracking and continuous monitoring, and rigorous third party verification and certification.

Without a price on carbon, chlorofluorocarbons and other ODS refrigerants are recycled back into old leaky, inefficient refrigeration and air conditioning equipment, or vented, either way reaching the atmosphere within a few years. Instead, we are creating incentives to accelerate retirement of the older equipment, and accelerate deployment of more advanced, efficient, climate-friendly technologies for use in commercial, residential, and industrial applications. Our projects demonstrate that these offsets represent real, permanent GHG reductions - through destruction of ODS – and that a price on carbon directly drives technological change to a more sustainable, cleaner infrastructure, with multiple co- benefits.

### Summary

The recent report to Congress on “America’s Climate Choices” by the National Research Council recommended that the US adopt an economy-wide carbon pricing mechanism to limit future climate change. The report also concluded that the cap-and-trade system is more compatible and transparent in meeting and monitoring progress with an emissions budget, and “is likely to be more durable over time since those receiving emission allowances have a valued asset that they will likely seek to retain.”<sup>6</sup>

Specific to California, Robert Stavins, Director of Environmental Economics at Harvard’s Kennedy School of Government, recently wrote, “beyond helping the state meet its emissions-reduction targets at the lowest cost, [cap-and trade] offers a promising way to reduce economic burdens on low-income and minority communities.”<sup>7</sup>

Under a cap-and-trade system, any technology, company, individual, or investment strategy that reduces greenhouse gas emissions and that can be verified will be incentivized. We are confident that the program that ARB has established will have the highest levels of performance, transparency, enforcement, and integrity. For California, a cap-and-trade system can directly harness the entrepreneurial energy of the State’s companies and people and channel them towards searching for emissions reductions and developing the next generation of clean technologies. In doing so, California will mobilize the next wave of innovations across all sectors of the low carbon economy.

We applaud the efforts by ARB to continue to provide leadership for the nation and rest of the world to integrate practical considerations and the best science to establish effective climate policy. We would be glad to provide additional information as needed.

Sincerely,

Jeff Cohen,  
Senior Vice President, Science & Policy

<sup>6</sup> Limiting the Magnitude of Future Climate Change, National Research Council (2010).

<sup>7</sup> Stavins “Why the lawsuit against California’s climate law is misguided”. Carbon Market North America, June 3, 2011.

## **L24 Response**

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24-1      The commenter supports a cap-and-trade program, and indicates that putting a price on carbon encourages both the deployment of renewable and low-carbon power sources and technologies that would not have to pay the carbon price. Further, the commenter indicates, among other things, that cap-and-trade works when properly designed, and can provide advantages for California's economy, and does not penalize at risk populations.

ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 25 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Joe  
Last Name: Loree  
Email Address: jlore@hotmai.com  
Affiliation:

Subject: Please reform the cap-and-trade forestry protocol to ban clearcuts

Comment:

Dear Chairman Nichols,

As you reconsider the alternatives to cap-and-trade in meeting the goals of A.B. 32, please also reconsider your board's decision to allow even-aged forest management (i.e. clearcutting) to be allowed in forestry "offset" projects.

The ARB's cap-and-trade program should not reward landowners for clearcutting their forests, directly or indirectly.

As you know, even-aged management releases enormous quantities of CO2. In essence, the currently adopted forestry protocol gives license to landowners to degrade water quality and reduce its quantity across vast regions of the state while releasing tons of CO2 into the atmosphere.

For the sake of all Californians, and especially for the generations who will be coming of age at a time of increasing climate uncertainty, please fix the forest protocol to prevent clearcutting, including "leakage" of even-aged management practices to areas outside the approved-project boundaries.

Sincerely,  
Joe Loree

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 21:15:34

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25-1

## **L25 Response**

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25-1      The commenter suggests reconsideration of the Forest Offset Protocol to allow projects that use even-aged harvesting and that the clearcutting should not be rewarded. Please refer to response 19-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 26 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Gareth  
Last Name: Loy  
Email Address: [dgl@garethloy.com](mailto:dgl@garethloy.com)  
Affiliation:

Subject: cap-n-trade encourages clear cutting forests?

Comment:

I understand that the current cap-and-trade plan was adopted last year by ARB as part of A.B. 32, the Global Warming Solutions Act of 2006, and originally was scheduled to be put into operation in January 2012 but, thankfully, has been delayed.

The delay in implementation to January 2013, which resulted from a court ruling, gives me a chance to impress upon the ARB the need to rectify its cap-and-trade scheme's glaring forest-clearcutting loophole.

The ARB's cap-and-trade program perversely rewards landowners for clearcutting their forests. In essence, the ARB's forest protocol could give money to landowners who degrade and diminish water quality and quantity across potentially vast regions of the state.

Everyone knows that forest clearcuts dramatically impair water quality and quantity in affected watersheds. They potentially impact the resources, amenities and pocketbooks of millions of Californians.

Please take this opportunity to do what's best for forests, and the future of California, and sever the linkage between cap-and-trade and clear cutting.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-25 21:24:47

26-1

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**L26 Response**

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26-1      The commenter expresses concerns that the Forest Offset Protocol rewards clearcutting. Please refer to response 19-1.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 27 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Wendy  
Last Name: Bardsley  
Email Address: [wendy@mutantfactory.com](mailto:wendy@mutantfactory.com)  
Affiliation:

Subject: Global Warming Solutions Act, AB 32  
Comment:  
Hello,

A stronger plan would combine two of the approaches identified by CARB:

Carbon Tax. This is a much more transparent approach to pricing carbon. Also, the revenues go to the state, which can use it to close the budget gap, re-fund our public transportation systems, schools, and social services, and invest in green energy. We the People need that money more than Chevron does ♦ make polluters pay!

Regulate specific pollution sources. A carbon tax makes it more expensive to pollute, but does not always guarantee less pollution. That ♦s why it ♦s a good idea to combine this policy with strict enforcement of clean air laws with the biggest polluters, such as oil refineries, making sure to clean up the environment for the communities that live around them.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 10:22:40

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27-1

### **L27 Response**

---

27-1      The commenter suggests that a carbon tax is a more transparent approach to pricing carbon. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomm>

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**COMMENT 28 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Yinlan  
Last Name: Zhang  
Email Address: yinlanz@yahoo.com  
Affiliation:

Subject: carbon tax over cap and trade

Comment:

Setting aside politics and the heavy lobbying efforts from industry and opportunists aiming to get rich from the carbon trade, your competent and highly trained staff know that the most effective path for meaningful carbon reduction is not cap and trade but a carbon tax. The potential abuses in a cap and trade program are so many and the program would require such significant resources to monitor and enforce that it could be rendered meaningless. However politically unsavory a carbon tax would be, you cannot dispute that it would be the most effective way of achieving the goals of ab32 and the board should not abandon its consideration based on political pressures but should fully evaluate it on its merits alone.

Sincerely

Yinlan Zhang

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 10:17:33

28-1

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## **L28 Response**

---

28-1      The commenter suggests consideration of a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 29 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: John  
Last Name: Allen  
Email Address: Johnaallen@gmail.com  
Affiliation:

Subject: I prefer a carbon tax  
Comment:  
I prefer a carbon tax

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 10:44:40

29-1

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## **L29 Response**

---

29-1      The commenter expresses preference for a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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### Comment Log Display

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COMMENT 30 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: david  
Last Name: schneider  
Email Address: ds6956@earthlink.net  
Affiliation:

Subject: Safeguard State's Watershed

Comment:

The current forests protocols do not do this.

They reward clear cutting.

Please safeguard state's watershed

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 11:04:56

30-1

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### **L30 Response**

---

30-1      The commenter expresses concerns that the Forest Offset Protocol rewards clearcutting. Please refer to response 19-1.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 31 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Michael  
Last Name: Andrews  
Email Address: [norcalkook@gmail.com](mailto:norcalkook@gmail.com)  
Affiliation:

Subject: Eliminate Cap and Trade

Comment:

A stronger plan would combine two of the approaches identified by CARB:

Carbon Tax. This is a much more transparent approach to pricing carbon. Also, the revenues go to the state, which can use it to close the budget gap, re-fund our public transportation systems, schools, and social services, and invest in green energy. We the People need that money more than Chevron does ♦ make polluters pay!

Regulate specific pollution sources. A carbon tax makes it more expensive to pollute, but does not always guarantee less pollution. That ♦s why it ♦s a good idea to combine this policy with strict enforcement of clean air laws with the biggest polluters, such as oil refineries, making sure to clean up the environment for the communities that live around them.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 11:16:53

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31-1

### **L31 Response**

---

31-1            The commenter suggests that a carbon tax is a more transparent approach to pricing carbon. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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### Comment Log Display

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COMMENT 32 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Benjamin  
Last Name: Farnum  
Email Address: [scouterben@sbcglobal.net](mailto:scouterben@sbcglobal.net)  
Affiliation:

Subject: Flaws in forest protocols  
Comment:  
I would like to strongly urge the ARB to correct the major flaws in  
the forest protocols. Thank you, Ben Farnum

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 11:24:33

32-1

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**L32 Response**

---

32-1      The commenter suggests that ARB correct major flaws in the Forest Offset Protocol. Please refer to response 19-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.**

**COMMENT 33 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Peter  
Last Name: Burchard  
Email Address: peterdb@sonic.net  
Affiliation:

Subject: Stop rewarding clearcutting of forests

Comment:

Dear Air Resources Board,

As someone who lived on the Klamath River for seven years during the height of logging there in the 1970s, I know the devastation of clearcuts to watersheds, the working of nature for overall health of the earth, and beauty. It is simply wrong for your forestry protocols to reward clearcutting under cap-and-trade. Selective logging and crop alternatives to wood could easily eliminate the need for clearcutting. Please do everything possible to safeguard the state's watersheds, a goal undermined by rewarding clearcutting.

33-1

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 11:24:42

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**L33 Response**

---

33-1        The commenter expresses concerns that the Forest Offset Protocol would reward clearcutting. Please refer to response 19-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 34 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - Non-Reg.

First Name: Tressa  
Last Name: Berman  
Email Address: [tressa@baylocalize.org](mailto:tressa@baylocalize.org)  
Affiliation:

Subject: Cap and Tax

Comment:

While Cap and Trade seems like a good idea, it is really only the 'Cap' part that will help us meet global goals to reduce carbon emissions and increase energy efficiency. Rather than 'trade' to keep caps constant, it makes more sense to TAX those that pollute, and re-invest the tax revenues into clean, green energy alternatives. I am in favor of strong laws that enforce corporate polluters, wherever they may be doing business on the planet.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 12:41:03

34-1

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### **L34 Response**

---

34-1        The commenter suggests implementing a carbon tax. Please refer to response 15-1.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 35 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Joseph  
Last Name: Sullivan  
Email Address: joesully2@prodigy.net  
Affiliation: Retired Geological Engineer

Subject: AB-32  
Comment:  
AB32 Supports a Hoax

In September 2006 Assembly Bill AB32, titled the Global Warming Solutions Act, aimed at reducing greenhouse gas emissions, principally carbon dioxide (CO2), to 1990 levels by 2020, was approved. This stems from a contention of the Intergovernmental Panel on Climate Change that global warming results mainly from burning fossil fuels, pumping carbon dioxide into the atmosphere. However 31,487 scientists, including me, a Geological Engineer for over half a century, petitioned the government to reject that contention, recognizing it as a hoax perpetrated by those who will benefit financially worldwide from expenditures of billions of dollars to reduce carbon dioxide. They depend on the ignorance of the general public regarding historical geology and climatology to foster this hoax. Reducing CO2 will not effect climate change.

Harold Lewis, famous Professor of physics emeritus at the University of California recently resigned from the top professional association for physicists saying "the money flood" has corrupted science and calls global warming a "scam" with the trillions of dollars driving it that has corrupted so many scientists. "It is the greatest and most successful pseudoscientific fraud I have ever seen in my long life as a physicist."

The Intergovernmental Panel on Climate Change (IPCC) is the so-called authority on climate change, yet Vice Chair Yurri Izrael in April 2007 wrote, "the panic over global warming is totally unjustified; there is no serious threat to the climate." IPCC reports are not those of its scientists, but are policymakers' summaries produced by a committee of 51 government appointees, many of who are not scientists. Some of its 2500 scientists have resigned in protest against IPCC summaries, in which these political appointees alter their own scientists' reviews. The latest example of this type activity occurred in 2009 when computer hackers broke into the computers of the British Hadley Institute, hailed for research of global warming, and it was discovered the Institute manipulated data to cover up evidence that went against their beliefs in man-made global warming. Admitted was that we are not seeing global warming, but rather global cooling. The same evidence appears in graphs showing the start of the cooling trend. From 1850 to 1950 CO2 levels increased significantly, but the temperature rose only 0.1 degree Celsius. The earth has been cooling and is likely to do so for the next couple of decades. CO2 makes up only 38 one-hundredth of one percent of the earth's total gases in the atmosphere. That 0.038 percent, which Global Warming advocates want to reduce by a smidgen at a cost of trillions of dollars worldwide, is being advocated at a time when the earth is cooling.

The Earth warms and cools in 100,000 year cycles. Our planet has mostly been much hotter and humid than today, with far more carbon dioxide (CO2) than today. Earth's atmosphere now contains about 380 ppm CO2 (0.038%). Compared to former geological times, our present atmosphere is CO2 impoverished. In the last 600 million years only one other geological period witnessed CO2 levels less than 400 ppm. To the consternation of global warming proponents, the late Ordovician Period 550 million ago was an Ice Age while at the same time CO2 concentrations were nearly 12 times higher than today, 4400 ppm. According to the greenhouse theory, it should have been

35-1

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=ceqa-sp1...>

exceedingly hot.

What really affects our climate? During Earth's formation it was impacted at a low angle by Theia, a protoplanetary mass a little smaller than Mars. The impact knocked off part of the earth's forming mantle, which later formed part of the moon. Theia's impact is responsible for the earth's 23.5-degree axial tilt, which created the Earth's seasons. After the impact the remaining mantle fractured, and parts drifting on the earth's semi-molten surface formed tectonic plates. The plates collided with each other many times and the present set, making up our continents, are still in motion. The earth's tilt; changes in the way it orbits the sun; variation of the sun's radiation as it burns up; volcanic eruptions; changes in oceans flows; and melting snow and ice control the earth's climate. Large numbers of earthquakes occur every year, a reminder that earth is a cracked dynamic sphere, whose parts are constantly in motion, and are all involved in climatic conditions. Considering these factors human attempts to control the Earth's climate are a pipe dream

Joe Sullivan  
Geological Engineer

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 14:14:26

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35-1  
Cont'd

### **L35 Response**

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- 35-1      The commenter states that global warming is a hoax. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

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**L36**



July 26, 2011

TO: The Honorable Mary Nichols, Chair  
California Air Resources Board

FR: AB 32 Implementation Group

RE: Revised Functional Equivalent Document

*Submitted electronically*

Thank you for the opportunity to submit comments on the California Air Resources Board's (CARB) revised Functional Equivalent Document (FED) and the recent FED workshop.

The AB 32 Implementation Group is a coalition of business and taxpayer groups working for effective implementation of AB 32. Our goal, has been, and continues to be to serve as a constructive voice in the implementation of AB 32 and ensure that the greenhouse gas emission reductions required by the statute are achieved while maintaining the competitiveness of California businesses and protecting the interests of consumers and workers.

Since the AB 32 Scoping Plan was adopted in 2008, major regulations have been promulgated including cap-and-trade, low carbon fuel standard and a renewable energy standard. Nevertheless, the Scoping Plan was developed as blueprint for action that should be periodically reviewed and updated to incorporate new information and to make appropriate adjustments to fulfill AB 32 targets. Despite CARB's attempts to design regulations to achieve AB 32 goals in a cost-effective manner, it is inescapable that it will cause additional costs to be borne by the California economy and we should continue to look for ways to minimize costs and protect jobs in the state. Therefore, we believe it is appropriate to re-affirm important elements of the Scoping Plan and adopt updates that reflect new information.

As we have conveyed in earlier comments on the Scoping Plan, we believe that a well-designed market mechanism should be included in the measures to achieve AB 32 goals. Market mechanisms such as cap-and-trade can minimize the costs of compliance by providing flexibility for compliance entities and allow for the use of lower cost emission reductions outside the capped sector. We've argued that a successful cap-and-trade program for California should include free allocation of allowances and should link to other states and nations to minimize emissions and economic leakage.

36-1

*AB 32 Implementation Group FED Comments*  
*July 26, 2011*  
*Page 2 of 2*

Since the Scoping Plan was adopted in 2008 the landscape for climate policy has significantly changed. The economy has suffered a serious decline and the members of the Western Climate Initiative are not ready to join a cap-and-trade program. As a result, CARB should review all elements of the Scoping Plan to ensure that a California-only program will meet the economic and emission reduction goals of AB 32. Going forward this will require vigilant oversight of the program to measure and prevent economic impacts and industry leakage.

36-1  
Cont'd

Despite this challenge, at this time we believe that a mix of measures, including market mechanisms, is more beneficial than an option that includes only command-and-control, for a few reasons:

Without a market mechanism such as a cap-and-trade program we would have no ability to link with other states and nations in broader programs. As a global issue, greenhouse gas emissions will not be contained unless there is a unifying policy that treats industry fairly across jurisdictional boundaries. A command-and-control regulation promulgated by CARB can only affect in-state companies.

The FED does not include specifics on the command-and-control regulations that would achieve the same emission reductions as from market mechanisms, and it is speculation how those regulations would impact various industry sectors. But assuming that market mechanisms will not impose excessive burdens (such as extracting revenue through auctioning of allowances in a cap-and-trade program and not returning those revenues as necessary to prevent leakage of emissions) a command-and-control scenario would likely be more burdensome in comparison.

36-2

We also believe that the FED should revisit the Scoping Plan treatment of fuels-under-the-cap. The Scoping Plan proposed inclusion of transportation fuels in the cap-and-trade program beginning in 2015, largely due to the expectation that Western Climate Initiative states would address fuels this way in their state programs. Since California is already implementing the Low Carbon Fuel Standard, and no WCI states are prepared to link to California, we recommend that the leakage impacts of a California-only fuels-under-the-cap (on top of the LCFS) be re-examined in the FED.

Thank you for considering our comments. Should you have any questions or need anything further, please feel free to contact Shelly Sullivan at (916) 858-8686.

cc: James Goldstene  
Virgil Welch  
Jeannie Blakeslee  
Christina Morkner-Brown

### **L36 Response**

---

- 36-1      The commenter indicates that it is appropriate to re-affirm important elements of the Scoping Plan and adopt updates to reflect new information. In accordance with requirements of CEQA, ARB released the supplemental environmental analysis for public review and comment without recirculating the original environmental analysis provided in the 2008 FED. As described in the Supplement at page 1, what is referenced as the “Proposed Scoping Plan” is the Plan that the Board will reconsider. The Supplement describes the Plan as it was developed in 2008 (called the “2008 Scoping Plan”), and the changes that have occurred since the Plan was last brought to the Board. The Proposed Scoping Plan includes updated 2020 emission projections and emission reductions from measures adopted since 2008. See pages 6 through 12 of the Supplement. ARB also provided further details on the updated data in the Status of Scoping Plan Recommended Measures available at: [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). A full update of the Scoping Plan is planned for 2013 in accordance with the requirements of AB 32.
- 36-2      The commenter expresses support for a Scoping Plan that includes a market mechanism. Comment noted. The commenter further asserts that a direct regulation approach would be more burdensome than stated in the Supplement. Although not directly stated, this comment appears to be directed at the potential economic costs to the regulated industry associated with Alternative 3. A CEQA analysis is not required to evaluate economic impacts of a proposed action unless there are indirect, potentially significant impacts on the physical environment resulting from economic consequences. No further analysis or revisions are required in response to this comment. The potential economic implications of an alternative; however, are relevant to the Board’s consideration of a broad range of factors in choosing one alternative over another. Therefore, the comment is noted.
- The commenter further requests that ARB reconsider the inclusion of “fuels-under-the-cap.” The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but each measure must be developed and adopted through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, this comment about a particular component of the proposed Cap-and-Trade Regulation proposed as a rule in October 2010 is properly addressed under that separate rulemaking action. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency’s

rationale for choosing the design of the regulation as proposed, including the inclusion of fuels (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). That regulation is still under development and is scheduled to be considered for final adoption in October 2011. No further response is required because commenter does not raise any specific significant environmental issue with regard to the alternatives analysis. Please also refer to responses 4-1 and 36-1.



**L37**

Tom Frantz  
Association of Irrigated Residents  
30100 Orange St  
Shafter, CA 93263

July 26, 2011

Mary Nichols, Air Resources Board Chairperson  
James Goldstene  
California Air Resources Board  
Sacramento, CA  
Via email:

**Re: Draft alternatives analysis-- the negative impacts of AB 32 and related carbon trading schemes in the San Joaquin Valley**

Dear Chairperson Nichols and Mr. Goldstene:

These comments are a discussion of how AB 32 is having negative effects on air quality in the San Joaquin Valley (SJV). It illustrates a type of Wild West scramble for carbon credits and so-called “renewable energy” without regard to resulting air pollution and often without a lifecycle analysis of carbon footprints. The result is little or no change from the current situation of business as usual including the local expansion of fossil fuel burning power plants. The reader will learn how the AB 32 promise of reduction of co-pollutants is being broken and ignored, resulting in pollutant increases in many cases, lost opportunities in others, and inappropriate, unjust use of carbon credits and underestimated carbon footprints harming environmental justice communities throughout the San Joaquin Valley.

Since the approval of the AB 32 Scoping Plan in 2008 there have been many new and polluting energy projects proposed and begun in the SJV and they have all been justified in some way as critical elements in California’s goal to reduce green house gases. From Ceres to Arvin along Hwy 99 and from Grayson to Buttonwillow along I-5 these projects have located themselves mostly next to or upwind of low-income communities which already bear the ravages of horrendous pollution in a valley with the worst air in the United States.

These projects go by “green” sounding names like biofuel refineries, renewable energy biomass incinerators, sewage sludge gasification plants, clean energy carbon capture and sequestration projects, biodigestors, and new, ultra-efficient, natural gas power plants and steam generators for enhanced oil recovery. In every case, often by starting with a questionable baseline, these projects claim to lower the carbon intensity of our energy but in reality they add significant amounts of criteria air pollutants to the SJV air basin. Ironically, the promise of AB 32 was that these so-called “renewable energy” projects would complement and not undermine the state’s efforts to improve air quality.

37-1

The AB 32 language from Part 5, Section 38570 of the Health and Safety Code says:

*(b) Prior to the inclusion of any market-based compliance mechanism in the regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:*

*(1) Consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution.*

*(2) Design any market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.*

What follows are brief examples of how AB 32 and its related programs at the CEC and PUC are causing a degradation of air quality in the SJV both directly and indirectly. These examples should not be seen as an exhaustive list but simply illustrative of what is and can happen when one pollutant (CO<sub>2</sub>) is controlled and manipulated at the expense of other air pollutants such as those which more immediately affect people's lives and health.

**Example One – Biofuel and Biogas is not Renewable Energy and Impacts the Community with Air Pollution:** Just outside the community of Pixley, in Tulare County, sits the Calgren Ethanol Plant which in early 2011 was the only operating corn ethanol plant in California even though several others have been built and others have permits to build. This facility receives corn from the Midwest by train and trucks out the ethanol to refineries and wet distillers grains to dairies. It produces 55 million gallons of ethanol and 400,000 tons of wet distillers grains annually. These operations require up to 3,000 mmbtu/day or 3m cubic ft of natural gas per day to operate and add an estimated 30 tons of NO<sub>x</sub>, 30 tons of VOC, and 10 tons of PM emissions to valley air annually. It claims to be part of the solution of reducing green house gases and part of the Low Carbon Fuel Standard. They have initiated a project, with CEC subsidies, to use biogas from dairies as part of their plant energy supply. The claim is made that this biogas will lower their carbon footprint even further.<sup>1</sup> The problem is burning biogas will not lower NO<sub>x</sub> emissions and other pollutants for the community of Pixley and the Southern SJV region. This biogas project is claimed to lower the carbon footprint of the ethanol because it is assumed that the biogas is 100% renewable. Without a life-cycle analysis of how the biogas is produced, including the huge reliance of dairies on cheap fossil fuel for every aspect of their operations, no such claim should be made. There is more on this topic in example six below.

**Example Two – Conversions from Coal to Biomass as a Fuel for Cogeneration is Unsustainable, Yet Qualifies for Carbon Credits:** The Mt. Poso Cogeneration plant in Northern Kern County makes steam for oil extraction and electricity for the grid using coal imported from out of state by rail and delivered by truck from a depot approximately

<sup>1</sup> Cow power helps fill your gas tank. Recorder Online. April 26, 2010. Available at: <http://www.recorderonline.com/news/fill-45051-tank-help.html>

20 miles distant. They also burn tires and petroleum coke. This plant's significant pollution drifts directly towards Arvin, the most polluted city in the United States and one of the poorest. Mt Poso is converting its fuel supply to biomass which qualifies it for renewable energy contracts.<sup>2</sup> Since they are making steam for enhanced oil production, there will most likely be some kind of carbon credit attributed to the oil extraction process as well even though it is very polluting. Because there is insufficient agricultural biomass for currently operating biomass incinerators in the Valley, any new incinerators such as Mt. Poso will force biomass fuel to come from outside the Valley. It is estimated that Mt. Poso will need 400,000 tons of biomass fuel annually and this fuel will either directly or indirectly (because of fuel displaced from other incinerators in the valley) come from an average one-way distance of 150 miles. This type of fuel source is less efficient than coal in terms of transportation energy because it requires more trucking. Mt. Poso, with this conversion, will increase NOx and particulate matter emissions in the Valley while they get credits for producing renewable energy and lower the carbon footprint of oil extraction activities.

**Example Three – Biomass Sector is Growing Unsustainably and Without**

**Accountability:** Existing biomass incinerators in the San Joaquin Valley consume approximately 1.5 million tons of biomass fuel annually. There are proposals for new biomass facilities and conversions, such as Mt. Poso, which can quickly double or triple the amount of biomass needed. One of the largest ones, owned by Covanta, sits just outside the low-income communities of Delano and McFarland in Kern County. Originally, these plants were built to prevent agricultural biomass from being burned in the open fields which was worse for air pollution than controlled burning of the biomass in an incinerator. Less than half of the biomass burned in recent years has come from agricultural sources and the rest comes from urban landfills throughout the state (See Table 7-3 below). Table 7-3 is from the April 14, 2010 SJV Air Pollution Control District draft staff report concerning the open burning rule. With credits now being given away freely for production of so-called "renewable energy," proposals are being made to increase these types of plants far beyond the amount of agricultural based fuel supply. These projects are not sustainable. There is no consideration of the GHG emissions from trucking the biomass long distances, or what is really in this biomass and how it was produced (life-cycle analysis), the co-pollutants and environmental justice impacts and whether it would be significantly more efficient, in terms of the carbon, to recycle or compost this biomass instead of incinerating it.

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<sup>2</sup> Mt. Poso Cogeneration Company. <http://mtposo.com/>

37-1  
Cont'd

Table 7-3 Average Annual Historical BDT Fuel Use (2005-2009)

Biomass Facility	Annual BDT Agricultural Material Burned (tpy)	Annual BDT Urban Waste Burned (tpy)	Total Annual BDT Burned (tpy)
A	49,584	12,227	61,811
B	125,838	49,321	175,159
C	330,362	141,583	471,945
D	21,147	63,442	84,589
E	41,028	88,655	129,683
F	8,660	83,367	92,027
G	117,202	106,590	223,793
H	21,992	50,674	72,666
I	81,198	81,189	162,378

7-7

Chapter 7: Biomass Power Plants  
Draft Staff Report  
Recommendations on Agricultural Burning

**Example Four – Sewage Sludge Incinerators are Not Renewable Energy and are Unsustainable yet** Lost Hills, a low-income farmworker community in Kern County, found out by accident in the fall of 2010, that the county had approved a massive sewage sludge incinerator in their area without adequate outreach. This project proposes to generate up to 13 MW of renewable electricity annually by incinerating 800,000 tons of a combination of sewage sludge and biomass.<sup>3</sup> This “fuel” will be trucked from LA over 150 miles and the profit is all in the tipping fees. The trucking by itself uses more energy than will be produced. Kern County and Lost Hills will get plenty of additional air pollution from both the incinerator and the trucks and PG&E has a contract to purchase and profit off of the so-called “renewable energy”.

**Example Five:** The infamous Hydrogen Energy California (HECA) project, destined for Kern County, continues its ponderous and ever changing way through the permit process at the CEC. It will capture some CO<sub>2</sub> and produce Hydrogen for supposed “low carbon energy production.” But, burning the hydrogen as fuel actually produces more NO<sub>x</sub> than burning natural gas. There will also be lots of particulate emissions. The fuel (pet coke) will all be trucked into the San Joaquin Valley from LA after they use coal for the first two years which is delivered by rail and truck. The definition of low-carbon energy is up in the air. Because of the energy needed to clean, compress, and inject the CO<sub>2</sub> plus emissions from many other project sources, it is likely that HECA cannot make energy

<sup>3</sup> [http://www.co.kern.ca.us/planning/pdfs/eirs/liberty/liberty\\_bos\\_sr\\_121410.pdf](http://www.co.kern.ca.us/planning/pdfs/eirs/liberty/liberty_bos_sr_121410.pdf)

The proposed addition of a gasification facility would provide the capacity to gasify 657,000 tons of biosolids annually, as well as 133,000 tons of biomass feedstock, in three bubbling fluidized bed reactors. The proposed bubbling fluidized bed’s will be fitted with heat recovery boilers producing steam used to drive three steam turbine generators, each producing 6.5 megawatts gross of electricity, for a total of approximately 19.5 megawatts gross of renewable electricity. The plant load will require 6.0 megawatts for operations, allowing up to 13.5 megawatts net of renewable electricity to be exported to the grid through an adjacent existing 70 kilovolt power line owned by Pacific Gas and Electric Company (PG&E). The proposed project would generate 300 tons of flyash waste a year,

37-1  
Cont'd

any more efficiently than a natural gas plant in terms of GHG emissions and we know it is worse for air pollution. Yet, the state's Blue Ribbon Panel on Carbon Capture and Storage strongly recommends that carbon credits be issued for projects like this.<sup>4</sup> The projection is that ten more of these plants could be placed in the same general area in Kern County because there is room for the CO<sub>2</sub> underground in enhanced oil production operations.

**Example Six:** PG&E currently has a plan whereby its customers can mitigate their GHG emissions from electricity use by paying into a fund that builds biodigesters on manure lagoons at dairies in order to create renewable energy in the form of methane capture. The first such digester project using these carbon credits seems to be undergoing construction this year in Kern County.<sup>5</sup> It was mentioned earlier that the Calgren Ethanol Plant in Pixley has a similar project. There is a potential for many of these kinds of projects to be built, both in the San Joaquin Valley and elsewhere, once major fossil fuel refineries and power plants are required to purchase and sell carbon credits. Instead of reducing their emissions they will pay for construction of a digester at a fossil fuel dependent milk factory. The use of the biogas in boilers or engines will actually add to San Joaquin Valley air pollution. If the dairy industry instead, were forced to pay a price that truly reflected their heavy dependence on fossil fuel they would either build the digesters themselves or the manure from their cows would go directly to fertilize crops (replacing imported fossil fuel based fertilizer) and not be left to rot in lagoons producing methane in the first place.

**Example Seven:** The CEC decided to approve a 600 MW natural gas power plant near the low-income communities of Avenal and Kettleman City in November of 2009. It was justified through a claim that its operation would reduce GHG emissions on a system wide basis (meaning the electrical grid of the Western United States). Its production was predicted by CEC staff to displace electricity from out of state coal plants and to displace ocean cooled plants along California's coastline.<sup>6</sup> What was not mentioned were the criteria air pollutants this plant will add to the San Joaquin Valley and the related environmental injustice issues while air pollution is being decreased elsewhere, like at Huntington Beach or Morro Bay. Our local air district is currently approving 22 separate 85MMbtu steam generators for Aera Energy and others for other oil extraction companies. Our air is getting worse as the last drop of local oil is extracted yet AB 32 assures us fossil fuel use will be declining at great benefit to the environment.

**Example Eight:** Finally, a mention has to be made of the use of an inappropriately low GHG emission rate for new projects using electricity in the SJV. The Hydrogen Energy

<sup>4</sup> *Carbon Capture and Storage Can Help Reduce California GHG Emissions: Expert Panel releases findings and recommendations.* January 20, 2011. Available at: [http://www.energy.ca.gov/releases/2011\\_releases/2011-01-20\\_carbon\\_capture.html](http://www.energy.ca.gov/releases/2011_releases/2011-01-20_carbon_capture.html)

<sup>5</sup> *PG&E's Climatesmart™ Program Makes Landmark Purchase of Dairy Farm Greenhouse Gas Emission Reductions to Help Fight Climate Change.* June 1, 2009. Available at: [http://www.pge.com/about/news/mediarelations/newsreleases/q2\\_2009/090601.shtml](http://www.pge.com/about/news/mediarelations/newsreleases/q2_2009/090601.shtml)

<sup>6</sup> *Avenal Energy, Application for Certification (08-AFC-1), Kings County.* California Energy Commission. December 2009. page 105. Available at: <http://www.energy.ca.gov/2009publications/CEC-800-2009-006/CEC-800-2009-006-CMF.PDF>

California (HECA) project, mentioned earlier for its air pollution related to carbon capture, is obviously required to calculate its total GHG footprint. The applicant used a figure supplied by the San Joaquin Valley Air Pollution Control District that is inappropriately low for an emission factor related to the electricity used by the project. The actual document is not available online so a relevant table from the document is in Table-d.1 below.<sup>7</sup>

Table-d.1  
EOR Project Electricity Consumption and GHG Emissions

GHG Emissions from Project Power Consumption (Tonne/Year)				
Horsepower Require for the Project X PG&E Factor	Electrical Hp/Hr	MWh per Year	GHG (Kg/MWh)	GHG CO2e
0.524 CO2e Lb/KWh	116,000.00	758,055.36	237.68	180,176.63
<b>Note:</b>  The GHG factor is the CPUC verified and SJVAPCD approved GHG emission factor for electrical power consumption for the PG&E grid within the San Joaquin Valley.				

The result is that HECA and other similar polluting projects in the region have a low baseline, a distinct advantage if they locate in the southern end of the San Joaquin Valley because they seemingly get to use a lower than average GHG emission factor compared to elsewhere in the state. This makes it easier for a project like HECA to meet any “cap” on carbon emissions and undermines the goals of AB 32.

To summarize, the environmental justice and air pollution impacts on the San Joaquin Valley by so-called “renewable energy” and “low carbon” projects have gone unstudied despite documentation of the additional impacts that these AB 32 related policies have on already adversely impacted low-income communities of color and the regional air pollution problem. The Air Resources Board must correct this in the alternatives analysis of the Scoping Plan and ensure it has used resources towards a good faith effort for outreach and maximizing public participation.

Sincerely,

Tom Frantz, President  
Association of Irrigated Residents

<sup>7</sup> Hydrogen Energy California Power Plant Project Docket Number 08-AFC-08. Log #59634, 2/07/11, letter from Michael Carroll to Melissa Jones, page 4. Available at: [http://www.energy.ca.gov/dockets/docket\\_redesign.php?docketNo=08-AFC-08.html](http://www.energy.ca.gov/dockets/docket_redesign.php?docketNo=08-AFC-08.html)

37-1  
Cont'd



### **L37 Response**

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37-1 The commenter indicates that many new and polluting energy projects have been proposed and begun in the San Joaquin Valley. The projects identified by the commenter include biofuel refineries, renewable energy biomass incinerators, sewage sludge gasification plants, clean energy carbon capture and sequestration projects, biodigesters and new, ultra-efficient natural gas power plants and steam generators for enhanced oil recovery. The commenter conclude that these projects are related to AB 32 and have increased, or could in the future increase local co-pollutant emissions resulting in disproportionate localized air impacts.

ARB recognizes that as California moves to a low-carbon future, every effort must be made to ensure that the strategies improve the quality of life for all of the State's residents. ARB recognizes that new projects and facilities could result in local impacts. However, California's comprehensive air quality and environmental protection laws minimize the possibility of significant increases in localized air pollutants associated with new energy projects. California's clean air statutes and regulations require sources to mitigate their impact to attain State and federal clean air standards. The local air pollution control districts and/or air quality management districts (air districts) have primary responsibility for adoption and implementation of stationary and area-wide source emission control measures. ARB has primary responsibility for mobile sources. A brief discussion of key existing air quality laws that minimize potential adverse impacts is presented below. The projects referenced in the comment letter are subject to some or all of these laws and regulations.

The federal Clean Air Act (CAA) of 1970, as amended in 1977 and 1990 (42 USC §7506(c)), establishes National Ambient Air Quality Standards (NAAQS) for air pollutants that pose a threat to human health and welfare. California has adopted more stringent air quality standards for most of the federal criteria pollutants under the California Clean Air Act (CCAA) of 1988. Similar to the federal standards, the California standards have been designed to protect the health of the most sensitive persons with a margin of safety.

New Source Review (NSR) is a title applied to programs regulating the new construction of, and /or modifications to, industrial sources which emit, or will emit, air pollutants. NSR requirements under State law are codified in Division 26 of the California Health and Safety Code. Specific to NSR, each local air district is to include in its attainment plan, a stationary source control program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors for all new or

modified sources that exceed particular emission thresholds. Each of the 35 air districts in California has its own NSR program and issues permits to construct and operate. The permit requirements are dependent on the California AAQS or NAAQS designation (attainment, nonattainment, and unclassifiable areas), and the amount and type of pollutants that the source will emit. In addition, most new and modified stationary sources are required to use Best Available Control Technology (BACT). In addition, all the air districts have either a policy or regulation that addresses toxic air pollutants for new and modified sources. The CEQA review of local projects may identify and require mitigation for mobile and other emission sources.

CEQA requires that where a project will have significant impacts, the lead agencies (in this context, cities and counties and air districts) must consider alternatives (including, where appropriate, alternative locations that would have fewer impacts) and require feasible mitigation to reduce those impacts to less than significant levels. Mitigation for a given project could include additional pollution control technologies, off-site measures and mobile source mitigation that would reduce cumulative pollution in the area affected. Further analysis of what may be appropriate for specific, future energy-related projects must be analyzed in response to a specific proposal.

The AB 32 Scoping Plan identifies measures that could be used to reduce GHG emissions on a statewide basis, and accordingly, the Supplement is programmatic in its analysis of measures that ARB may consider in future rulemaking. None of the measures would supersede local air quality regulations standards. Also, any projects built to implement a measure, such as a renewable energy project, must comply with federal, state, and local air quality regulations. In addition, approval of individual projects and facilities, including location and siting, are under the purview of local governments which have land use authority.

It is significant to note that the type of projects identified by the commenter may or may not be pursued under any of the alternatives identified, including the No Project alternative. In these cases, the applicable statutes and regulations identified above still apply. Should ARB pursue a cap-and-trade regulation, ARB is committed to assess the potential localized air quality impacts through adaptive management.

ARB notes that the Scoping Plan is a framework document outlining the regulatory course that ARB expects to pursue to achieve the GHG limits imposed by AB 32. The Scoping Plan does not commit ARB to adopting any regulation. Regulations would be considered and adopted following their respective review and approval processes, during which the details



and elements of each will be developed. Please refer to responses 4-1 and 106-4. The same holds true for adaptive management. Specific adaptive management programs that may accompany future regulations must wait to be developed as part of the process for those regulations. The Scoping Plan does not, nor cannot, predetermine what adaptive management would look like for these future regulations.

On the issue of public participation raised by the commenter, the ARB process to consider new policies and regulations, such as the AB 32 Scoping Plan, maximizes public participation through noticing, outreach, and workshops. The Supplement provides an expanded analysis of the alternatives evaluated in the Scoping Plan. Both the 2008 Scoping Plan and the Supplement were released in compliance with the noticing requirements in the CRP and CEQA. Public participation and outreach efforts took place to solicit public comments.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L38**

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**COMMENT 38 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Carol  
Last Name: Mone  
Email Address: cemone@reninet.com  
Affiliation:

Subject: Cut polluting emissions at source!

Comment:

The California Air Resources Board should not use forest carbon projects to offset emissions from California industries. This does nothing to improve Californians' quality of life and can adversely affect others such as the Lacandon Indians in southern Chiapas. Emissions need to be cut at the source. These tradeoff schemes are very similar to the selling of indulgences, in my opinion. It does not solve the problem.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 15:30:43

38-1

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### **L38 Response**

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38-1        The commenter expresses the opinion that ARB should not use the Forest Offset Protocol for international forest projects. This is not allowed under the current proposed protocol or the currently proposed Cap-and-Trade Regulation. The Forest Offset Protocol is part of the proposed Cap-and-Trade rulemaking. Please refer to responses 4-1 and 19-1 regarding the proposed Cap-and-Trade program design and the Forest Offset Protocol, respectively.

The comment also pertains to a program called Reducing Emissions from Deforestation and Forest Degradation (REDD). The commenter's comments about REDD do not directly relate to the adequacy of the environmental analysis contained in the Supplement. REDD is not part of the proposed project.

REDD as part of a cap-and-trade program would have to be developed under a separate rulemaking process and brought before the Board for approval. The rulemaking process to include REDD would have a full public process and environmental review. Please also refer to response 81-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 39 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Barbara  
Last Name: Mauk  
Email Address: [kariit@bluebottle.com](mailto:kariit@bluebottle.com)  
Affiliation:

Subject: REDD+ Impacts in Chiapas, Mexico

Comment:

The way the people and communities of Chiapas, Mexico - and in particular the people of Amador Hernandez - are being intimidated and threatened by cutting off medical services is abominable. I demand that the California Air Resources Board not use forest carbon projects to offset emissions from California industries. I demand emissions be cut at the source - where it rightfully should be! And I hope you will do everything in your power to reinstate medical services to the people in Amador Hernandez and anywhere else it has been taken away in that area. For shame!

39-1

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 16:41:47

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### **L39 Response**

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39-1           The commenter expresses the opinion that ARB should not use the Forest Offset Protocol for international forest projects. This is not allowed under the current proposed protocol or the currently proposed Cap-and-Trade Regulation. The Forest Offset Protocol is part of the proposed Cap-and-Trade rulemaking. Please refer to responses 4-1 and 19-1 regarding the proposed Cap-and-Trade program design and forestry protocols, respectively.

The comment also pertains to REDD. The commenter's comments about REDD do not directly relate to the adequacy of the environmental analysis contained in the Supplement. REDD is not part of the proposed project. REDD as part of a cap-and-trade program would have to be developed under a separate rulemaking process and brought before the Board for approval. The rulemaking process to include REDD would have a full public process and environmental review. Please also refer to response 81-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 40 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Sharon  
Last Name: Kulz  
Email Address: s\_kulz@yahoo.com  
Affiliation:

Subject: AB32  
Comment:  
The incremental reduction and capping of pollution is a positive step. However, skip the trading credits. Trading pollution credit is tantamount to selling indulgences (as in Middle Ages church) whilst re-arranging the chairs on the Titanic.

I support AB32 WITHOUT the Trading.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-26 19:21:59

40-1

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#### **L40 Response**

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- 40-1      The commenter supports an emissions cap on sources, but does not support a trading program. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 41 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Jack  
Last Name: Guelff  
Email Address: jguelff@yahoo.com  
Affiliation:

Subject: Why carbon credits?

Comment:

It seems to me that the carbon credits set up a system to kick the can down the street.

Why not a system of solar credits, where the polluter pays a fee that is used to rebate the residence or business that installs a solar energy system that either directly supplies energy in raw form (to heat) or converts it to electricity (to use for cooling, etc.)

Sample out of the stack or immediate area to determine pollution level and levy fee accordingly.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 06:12:20

41-1

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### **L41 Response**

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41-1      The commenter suggests a carbon fee that is used to rebate those who install solar energy systems. Please refer to responses 1-1, 4-1 and 15-1 in regards to feebates, design elements, and a carbon tax, respectively.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 42 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Mayoer  
Last Name: Steinberg  
Email Address: whitnyb@aol.com  
Affiliation:

Subject: We need alternatives to Cap and Trade

Comment:

Dear Board,  
as a California voter I am hoping that you will consider  
alternatives to cap and trade. It is great that the State is  
looking at how to decrease greenhouse gases, but my concern is that  
cap and trade has not worked in Europe and the offsetting leaves  
openings for scams that create incentives for false offsets. My  
fear is that cap and trade will not actually reduce emissions  
overall, but create a false distraction that make it seem like we  
are tackling the problem, when we are not.  
Please consider a Carbon Tax that will be open and direct in  
pricing carbon. Also, the revenues of this should come to the  
State to create a green economy and close our budget gap.  
I am also concerned that cap and trade will continue the injustice  
to residents of areas close to the big polluters such as Chevron in  
Richmond. We need stricter enforcement of the Clean Air laws, and  
a way to clearly make the polluters pay for the cleanup of the  
environment in the areas where they are located. thank you.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 09:10:53

42-1

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## **L42 Response**

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42-1        The commenter indicates that cap-and-trade has not worked in Europe and requests consideration of a carbon tax as an alternative. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

ARB agrees; however, that there may be lessons to be learned from the European Union (EU) Emissions Trading Scheme (ETS). A recent press release claims that cap-and-trade has failed to reduce GHG emissions in Europe. The claim appears to be misguided given that the EU ETS are all reporting substantial GHG emission reductions. The claim comes from recent work that shows that the carbon embedded in international trade flows has increased substantially since 2020. Some initial analyses have tried to examine the net balance of embedded carbon in trade flows, which show that for the key European countries and the EU as a whole, the net trade impact is a net increase in embedded GHG emissions in trade flows. While domestic emissions are declining in these countries, the net embedded emissions in trade flows more than compensate for the domestic reductions.

Note that this circumstance does not mean that cap-and-trade is a failure in Europe. The emissions covered by cap-and-trade are declining. The emissions not covered by cap-and-trade are increasing. Cap-and-trade is not inducing the increase in the embedded carbon as is evidenced by even larger increases in net embedded carbon estimated for the U.S. (which has no cap-and-trade, and little in the way of climate initiatives at this time).

The studies of embedded carbon explicitly make the point that cap-and-trade is not inducing this embedded carbon issue. So, the claim that cap-

and-trade is a failure in Europe is not really true. Information about the EU experience relating to both successes and challenges is being considered in the separate rulemaking for the proposed Cap-and-Trade Regulation.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 43 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Kathy  
Last Name: Labriola  
Email Address: [anarchofeminist@yahoo.com](mailto:anarchofeminist@yahoo.com)  
Affiliation: Bay Area Community Land Trust

Subject: No Cap and Trade!  
Comment:  
Dear Board,  
I am outraged that the recent bill included a Cap and Trade Program. This is a scam the gives polluters windfall profits and just allows more and more pollution rather than solving the problem. Please eliminate this cap and trade option and put some real controls on polluters!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 09:46:01

43-1

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### **L43 Response**

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- 43-1      The commenter opposes cap-and-trade. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. Also, please refer to responses 1-1, 4-1, and 5-1.





25 July 2011

**RE: ARB Cap and Trade “Alternatives”**

Honorary Mary Nichols, Chairman  
Air Resources Board  
1001 I Street,  
PO Box 2815  
Sacramento,  
CA 95812

**To Whom It May Concern:**

California has long led the nation in driving policy that is both good for the economy and the environment. On issues as diverse as energy efficiency and sustainable forest management, California has set aggressive standards while creating opportunities for innovation. Many other states and nations have followed California's lead. History bares out this leadership: while average U.S. per capita electricity consumption has increased by 60% since 1973, California per capita use has remained almost flat, growing by only 14% during the same period.<sup>1</sup> Similarly, the state has been a nexus for economic growth and innovation, launching revolutionary industries ranging from film and entertainment, biotech, micro processing and the Internet to being the leading agricultural economy in the country.

The 2006 Global Warming Solutions Act (AB 32, Chapter 488, Statutes of 2006) is another milestone in California's impressive history of environmental and economic wins. At a time when America's international standing has been degraded by a lack of commitment and leadership at the Federal level during the United Nations climate negotiations, California once again led the way. Cap and trade is an essential, central feature of the Global Warming Solutions Act. Indeed, it is the confluence of environmental and economic priorities, without which the Act will either fall short of its environmental goals or constrain the state's economic engine. Cap and trade offers the prospect of leveraging the state's economic assets of knowledge, investment capital and innovation to achieve critical carbon reduction goals that will pave the way for the nation and world.

**About Offsetters Clean Technologies, Inc.**

As Canada's leading provider of carbon-management solutions, Offsetters helps organizations and individuals understand, reduce and offset their climate impact. In 2005, Dr. James Tansey saw a growing demand amongst colleagues and corporations in BC for a dependable source of high-quality offsets; Offsetters was created to serve that need. James is a respected professor at the University of British Columbia who continues to publish on a range of research topics, including social enterprise, climate change and social impacts and acceptability of new technologies. Based in Vancouver, we've grown to a team of 25 with expertise in greenhouse gas measurement, climate change science and policy, renewable energy and energy efficiency, and carbon finance. Offsetters was the official carbon offset supplier to the 2010 Winter Olympic Games, the first in history to be carbon neutral.

Offsetters is investing in California, having opened its first U.S. office in the San Francisco Bay Area in early 2011. The launch of Cap and Trade in California will enable Offsetters to continue to expand its California based team, and broaden its portfolio of California and other U.S. based carbon offset projects.

**International competition**

44-1



As the U.S., Canada and other nations procrastinate on national and global climate policy, California and its Western Climate Initiative (WCI) partners are in a unique position to help create the second-largest carbon market in the world, leading the way for other regional initiatives. As the largest economy among its WCI partners, it is important for California to maintain its pole position with WCI members such as British Columbia (BC), with whom the state has a \$6 billion annual trade relationship. California is in negotiations with BC over a range of issues, including energy importing and transmission lines. A failure to move forward with a regional cap and trade system may put political capital with BC and other WCI partners at risk. Moving forward with Cap and Trade will help to maintain WCI leadership in California, ensuring growth in policy, market and technical expertise and the ensuing jobs that these functions represent.

California has also been the world leader in venture capital, with investors powering wave after wave of technology start ups. In the clean tech and renewable energy industries, where we believe markets will dwarf the high tech sectors of the past, California faces vigorous competition. The U.S. has fallen to third place among nations for clean tech investment, trailing China and Germany<sup>ii</sup>. As California vies amidst competition from other nations, for companies and investment from the \$5.2 trillion global clean energy sector, the successful launch of the world's second largest cap and trade market will be a boon.

#### Economic growth

Too many people are focused on the 'cap' and not enough people focus on the 'trade' portion of the system. Cap and trade drives economic growth and job creation by enabling investment in carbon reducing technologies and projects. As a global company, Offsetters Clean Technologies believes that supply chains are created by these investments that would otherwise not exist. Livestock methane carbon offset projects, for example, activate a supply chain that includes:

- Farm owners
- System engineers and architects
- Anaerobic digestion equipment suppliers
- Organic material supply vendors (i.e. food manufacturers)
- Biogas system suppliers
- Electric utilities (if gas is used to generate electricity or is upgraded for use in natural gas pipelines, it may also be used for on-site electricity generation or as a diesel replacement for use in farm vehicles)
- Carbon offset developers and marketers
- End power users and offset buyers

Forest conservation projects across California generating carbon offsets will create much-needed employment in face of a forestry sector hard hit by the global recession. Forest owners such as Native American tribes with few alternative revenue streams to logging can develop much needed new revenue. At a time when both global and local forests are under constant threat, carbon offsets represent the only market-based incentive for forest conservation. Benefits to conservation forestry include not only GHG reduction, but also biodiversity and watershed preservation.

As cap and trade is implemented, many large final emitters will be better positioned to create surplus allowances for sale into the market. Investment in these carbon-reducing projects means jobs for Californians and potential revenue for capped emitters.

A cap and trade system provides investment dollars in clean tech jobs, further supporting California's fastest growing sector. From 1995 to 2007, clean energy jobs grew 15% in California, while overall statewide job growth was only 1%<sup>iii</sup>.

#### Cost containment

44-1  
Cont'd



A cap and trade system with a robust carbon offset provision increases flexibility and competition among carbon reducing options, thus decreasing costs and reducing the possibility of leakage. For regulated large final emitters, the price on carbon will be lower under a cap and trade scheme than under the current carbon tax.

The GHG reduction goals of the AB 32, the Global Warming Solutions Act can be reached, while also providing the time and place flexibility of cap and trade.

#### Best alternative

Alternatives 3 and 4 as presented in the "Supplement to the AB 32 Scoping Plan", in addition to presenting the likely pitfall of leakage, also fail to create the tangible economic rewards that a cap and trade system enables. Turning emission reductions into marketable assets is a proven tool for achieving both environmental and economic goals. Indeed, the U.S. acid rain cap and trade program of the 1990's achieved 100 percent compliance in reducing sulfur dioxide emissions. This program proved that a well-designed cap and trade system can be successful at reasonable cost. In fact, prior to acid rain legislation, the EPA estimated that the program would cost \$6 billion annually once it was fully implemented (in 2000 dollars). The Office of Management and Budget has estimated actual costs to be \$1.1 to \$1.8 billion -- just 20 to 30 percent of the forecasts.<sup>iv</sup>

The time to implement cap and trade is now. California has a chance to extend its environmental and economic leadership and create a way forward for the region, nation and world. Faltering now by failing to act or by adopting an inferior alternative to cap and trade will cost jobs, political will and the environment. As British Columbia's leading carbon management team, and on behalf of our California based staff, we fully support the cap and trade program and urge the Air Resources Board to move forward with its swift implementation.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "James Tansey".

Dr. James Tansey  
Offsetters | [www.offsetters.ca](http://www.offsetters.ca) | 604 562 4546 | [james@offsetters.ca](mailto:james@offsetters.ca)

<sup>i</sup> California Energy Commission (<http://www.energy.ca.gov/2009publications/CEC-200-2009-015/CEC-200-2009-015.PDF>)

<sup>ii</sup> Pew Clean Tech Investment 2010

<sup>iii</sup> Next Ten, *California Green Innovation Index*, 2009, p. 70

<sup>iv</sup> Environmental Defense Fund

#### **L44 Response**

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- 44-1      The commenter supports cap-and-trade. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 45 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Janet  
Last Name: Schwind  
Email Address: [janschwind45@cruzio.com](mailto:janschwind45@cruzio.com)  
Affiliation:

Subject: Cap and Trade policy

Comment:

I urge the board to concentrate on alternatives to a cap and trade policy that will little or nothing to reduce the emission of greenhouse gasses. Please consider first and foremost, measures to conserve energy use and secondly, the creation of local clean energy sources.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 12:01:20

45-1

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## **L45 Response**

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- 45-1      The commenter suggests that ARB consider alternatives to the proposed Cap-and-Trade Regulation, and encourages energy conservation and the development of local clean energy projects. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

**L46**

To: Mary Nichols, Chair  
California Air Resources Board

From: Prof. Alice Kaswan  
University of San Francisco School of Law

Re: Comments on Supplemental Functional Equivalent Document

Date: July 27, 2011

The publication of the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (Supplemental FED) provides a renewed opportunity to reconsider ARB's decision to achieve industrial emissions reductions largely through a cap-and-trade approach. The Supplemental FED provides helpful analysis, and these comments do not address the legal adequacy of the supplemental FED one way or another. Instead, these comments are intended to provide input on ARB's analysis of its cap-and-trade and regulatory alternatives as ARB makes its substantive policy choices.

Part I focuses on the cap-and-trade alternative, and suggests that the state incorporate measures to control co-pollutant increases.

Part II, which forms the bulk of these comments, addresses the regulatory alternative. It first questions ARB's conclusions about the relative co-pollutant co-benefits of the regulatory and cap-and-trade approaches. It then addresses a number of the concerns about a regulatory approach raised in the Supplemental FED, and suggests ways that those concerns could have been alleviated (and, thus, ways in which a regulatory approach could be more promising than suggested). Finally, it identifies a few of the benefits of a regulatory approach that the Supplemental FED does not elaborate.

I have also incorporated my previously submitted comments on the cap-and-trade rulemaking and on the proposed draft regulation at the end of these comments.

I. Analysis of Cap-and-Trade Alternative (Alternative 2)

The analysis of the cap-and-trade alternative should include a more robust response to one of the recognized impacts of a cap-and-trade program: the potential for uneven emissions characterized by increases or inadequate reductions in localized areas.

The Supplemental FED, and the environmental analyses that preceded it, all recognize that reductions in GHGs are likely to lead to beneficial reductions in co-pollutants. That said, as the Supplemental FED also acknowledges, even if overall emissions are reduced, market-based programs create inherent uncertainty about the distribution of pollutants. The Supplemental FED

46-1

46-2

observes that “increasing operations of more carbon-efficient equipment could result in localized increases in emissions.” (Supplemental FED at 53) Or facilities that currently operate below the level of “permitted” emissions might increase their “actual [co-pollutant] emissions up to the permitted level of a facility.” (Supplemental FED at 53)

The Supplemental FED responds to these potential impacts by “concluding that the remote possibility of localized air impacts ... would be considered potentially significant and unavoidable under CEQA.” (Supplemental FED at 53) ARB proposes to adopt an “adaptive management program” under which “ARB would be committed to monitoring the data on localized air quality impacts and to adjusting the program, if warranted.” (Supplemental FED at 53)

ARB’s proposed response to the risk of co-pollutant impacts creates an unnecessary risk of co-pollutant increases and unnecessarily delays a response. While the Supplemental FED is not the place to discuss every feature of program design, where potentially significant impacts are identified, potential design solutions to those impacts should be considered.

The Supplemental FED acknowledges that AB 32 requires CARB, to “[p]revent increases in other pollutant emissions – to design, to the extent feasible, any market-based compliance mechanisms to prevent any increase in the emissions of criteria air pollutants or toxic air contaminants (TACs)” (Supplemental FED at 6, quoting HSC section 38570(b)(2).) The Supplemental FED also summarizes numerous other AB 32 provisions that emphasize the importance of furthering air quality goals and maximizing environmental (and other) benefits, to the extent feasible. (Supplemental FED at 5-6) Potential co-pollutant increases or maldistributions could be addressed in the following ways:

**(1) Place individual emissions caps on facilities to prevent localized increases.**

Rather than deeming the impact of potential increases in co-pollutants “unavoidable,” or waiting for it to occur and then responding (as the “adaptive management” approach suggests), CARB could impose individual facility caps on facilities located in impacted communities. Facilities that are located in communities already adversely impacted by air pollution would be prohibited from increasing GHG emissions beyond current emission levels. In other words, they could engage in trading and would be permitted to purchase allowances, but only up to the level of their past actual emissions. This proposal (as well as other mechanisms for enhancing co-pollutant benefits), are discussed more fully in my prior comments on draft cap-and-trade regulations. For ease of reference, I have incorporated those comments at the end of this submission.

This proposal differs from the “individual facility caps” design alternative that ARB rejected in its initial alternatives analysis. (See Proposed Cap-and-Trade Regulation, Staff Report: Initial Statement of Reasons, IV-12) Under the rejected alternative, ARB would have imposed a decreasing cap on every covered facility, and each facility would have been required to reduce

46-2  
Cont'd



emissions pursuant to its individual cap. This proposal, in contrast, would be applied only in areas with poor air quality, and would be designed primarily to avoid emissions increases; facilities would retain the flexibility to purchase allowances up to their past emissions. This proposal would therefore create less of a trade-off with AB 32's cost-effectiveness goals than ARB's rejected design alternatives. (This proposal presents a minimum that is tailored to prevent emissions increases in polluted areas. Greater environmental co-benefits could, of course, be achieved with facility caps that decreased over time. The extent of the trade-off with cost-effectiveness goals would depend upon the stringency of the decreasing caps. See discussion in previously submitted comments, included on pages 14-15, below.)

46-2  
Cont'd

Adopting a mechanism to prevent increases at the outset would be superior to adopting an adaptive management approach, in which steps are taken only after increases have occurred. Since ARB proposes to fully assess the emissions distribution as little as once per compliance period (once every 3 years), an adaptive management approach is unlikely to provide a nimble response to potential increases.

**(2) If adopting an “adaptive management” approach, prepare a detailed strategy for responding to localized emissions concentrations.**

If, instead of adopting individual facility caps that would prevent co-pollutant increases, ARB instead takes an adaptive management approach, in which it responds to co-pollutant increases only if and when they occur, then ARB should carefully detail its planned strategy now. Some agencies have used “adaptive management” as a way to avoid and delay confronting difficult policy challenges. Whether in the Supplemental FED or as part of its rulemaking, an adaptive management plan, if adopted, should clearly articulate what emissions scenarios would trigger additional controls and the nature of the planned controls.

46-3

In terms of what emissions scenarios would trigger additional controls, ARB should clarify whether only co-pollutant emissions increases trigger a response, or whether, in light of AB 32's goal of complementing efforts to achieve air quality, a failure to improve co-pollutant emissions would also trigger a response. If an adverse emissions distribution occurs, then ARB should also articulate how it will improve the emissions distribution. ARB has articulated possible responses in very general terms,<sup>1</sup> but its adaptive management plan should provide more specific detail so the agency will be prepared to act when necessary. As noted above, ARB could prevent increases by imposing individual facility caps at the level of actual past emissions. Numerous other direct restrictions and incentives could also improve a trading program's

<sup>1</sup> In the Staff Report accompanying the draft cap-and-trade rule, ARB indicated that the approaches it “would consider include, but are not limited to, using allowance value from the cap-and-trade program to mitigate localized emissions increases, providing incentives for energy efficiency and other emissions-reduction activities within the community, or restricting trading or prohibiting certain compliance responses in specifically identified communities.” See ARB, Proposed Regulation to Implement the California Cap-and-Trade Program, Staff Report: Initial Statement of Reasons (October 28, 2010).

distributional outcomes, as described in the previously-submitted comments incorporated into the end of this submission.

46-3  
Cont'd

II. Analysis of Regulatory Alternative (Alternative #3)

A. Relative Co-Pollutant Benefits of the Regulatory Alternative

The Supplemental FED asserts that the cap-and-trade program would lead to better co-pollutant reduction outcomes than the regulatory alternative. That assertion does not acknowledge that the regulatory alternative is likely to provide more co-pollutant benefits for California.

One of the key differences between the regulatory alternative and the cap-and-trade approach is that, under a regulatory approach, the covered sectors would be responsible for making all of the required emissions reductions, whereas under the cap-and-trade program, facilities in the covered sectors could meet a substantial portion of their emission reduction obligations through the use of offsets. Whatever their intrinsic benefits, most offset projects do not offer co-pollutant reduction co-benefits relevant to California air quality problems.

The proposed cap-and-trade rule would allow facilities to use offsets to meet almost half their emission reduction obligation,<sup>2</sup> and would therefore reduce the co-pollutant co-benefits that would otherwise occur in the covered sectors. In other words, under the regulatory approach, industrial facilities would have to reduce emissions by almost twice as much as under the cap-and-trade program. The regulatory alternative is therefore likely to lead to greater co-pollutant reduction co-benefits from industrial facilities in California than the proposed cap-and-trade program.

46-4

The Supplemental FED acknowledges that there would be in-state co-pollutant reduction benefits from the regulatory alternative (76), but suggests, in its final analysis, that the regulatory alternative would be LESS effective than the proposed cap-and-trade program in “creating attendant air quality co-benefits.” (Supplemental FED at 110) That conclusion is surprising and unconvincing. It is based upon the assumption that the regulatory alternative would not be cost-effective and would generate significant leakage that would in turn increase out-of-state co-pollutant emissions. That is a worthwhile concern, but the alternatives analysis does not adequately address the potential benefits of reducing co-pollutant emissions *within* California, where high concentrations of co-pollutants lead to significant violations of air quality standards.

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<sup>2</sup> The Preliminary Draft Regulation (PDR) explained that the offset limits were designed to allow facilities to use offsets to meet 49% of reductions, with 51% of the reduction occurring within the covered sectors. See ARB, Preliminary Draft Regulation for a California Cap-and-Trade Program, 42-43 (Nov. 24, 2009). At that time, ARB believed that goal would be met by allowing facilities to use offsets to cover 4% of their total emissions. In light of the withdrawal of allowances for the Strategic Reserve, ARB will allow facilities to use offsets to cover 8% of their emissions. Presumably, that use would still result in the same ratio of offsets (49%) to reductions within the covered sector (51%).

Shifting the location of co-pollutants away from heavily polluted and populated areas could create benefits even if the net emissions remain the same. While shifting co-pollutants out-of-state should receive serious attention, it is also important to document potential in-state benefits.

CARB may well choose to adopt a cap-and-trade program, and to allow substantial use of offsets to lower costs. If it does so, however, it should be straightforward about the in-state co-pollutant consequences and provide a clearer picture of the relative in-state co-pollutant benefits of the regulatory and cap-and-trade options.

**B. ARB's Regulatory Alternative: Addressing the Issues CARB Identifies**

The regulatory alternative considered by ARB is interesting and demanding. It envisages requiring existing electric utilities to displace coal-based generation with lower-emission sources (presumably natural gas), and it imposes a flat 20-percent emission reduction requirement on several large industrial sectors (refineries, cement plants, and large oil and gas extraction facilities). (Supplemental FED at 73) ARB identifies numerous drawbacks to this alternative. These comments provide a response to a number of the concerns ARB identified.

**1. Regulatory Alternative: Not Cost-Effective and Leads to Leakage? Consider Cost-Effective and Feasible Regulatory Mechanisms**

Given the demanding nature of the regulatory alternative, it is not surprising that ARB found that the alternative posed certain drawbacks. As ARB observes, imposing the entire requirement on electric utilities and major industries, without the use of offsets and without trading among them, might be more expensive than a trading program that relies substantially on offsets, and could result in leakage. ARB observes that leakage would, in turn, undermine the state's GHG reduction goals and cause out-of-state co-pollutant impacts.

Rather than focusing only on a single, highly demanding, alternative, ARB could have focused on what could be achieved by currently cost-effective and feasible approaches, and would likely have found that fewer adverse impacts would flow from such an approach. The regulatory alternative might then have appeared more promising, in comparison with cap-and-trade, than the approach ARB considered.

As ARB noted in the Supplemental FED, "[d]irect regulations typically establish performance-based limits on emissions, activities, or outputs at specified sources that are designed to achieve emission reductions in a cost-effective and technologically feasible manner." (Supplemental FED at 60) Yet ARB's proposal simply imposed flat reduction requirements, without attempting to assess cost-effectiveness or feasibility. While not as cost-sensitive as a market-based mechanism, a regulatory alternative based upon identified cost-effective and feasible mechanisms would, obviously, be more cost-effective, and would presumably result in less leakage. The regulatory alternative would then be more viable than the approach considered by ARB; not all regulatory approaches share the flaws that ARB identified.

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**2. Regulatory Alternative: Sufficient Information? Document What Is Known and Identify Future Information Sources and Regulatory Plans**

ARB suggested that it had insufficient information to propose regulatory measures in some instances. While that may be true in some cases, quite a bit of information about emission reduction opportunities is available in many instances. The cap-and-trade regulation itself includes sophisticated compliance pathways that outline the mechanisms that many industries could use to reduce emissions, including both feasibility and cost estimates. In addition, the federal Environmental Protection Agency (EPA) is currently developing BACT and new source performance standards for new and existing sources, and actively addressing emission reduction options in the power and refining sectors, both important emissions sources in California.

It would be useful to document what we know *could* be achieved by available, cost-effective mechanisms, and to evaluate how much could be achieved by these measures. Where there is insufficient information, it would be useful to document how and when ARB will obtain more information and the role of that new knowledge in ARB's long-term control strategy.

For example, ARB expects to receive the results of its Energy Efficiency and Co-Benefits Audit program (due in 2012). If promising, those results could be translated into regulatory requirements. In her June, 2011 California Senate testimony, ARB Chair Mary Nichols announced that ARB would be considering how to ensure that industrial facilities take the cost-effective energy efficiency measures they identify in their audits. It would be helpful to have a more clearly articulated agenda for translating new information into regulatory requirements.

In addition, as noted above, EPA is developing BACT and new source performance standards for new and existing power and refinery sources, and ARB will have to incorporate those federal requirements into the state program (assuming that EPA does not accept the state's trading program as satisfaction of CAA requirements). ARB could indicate how regulation, now or in the future, would dovetail with federal regulatory measures.

Finally, the trading program itself could reveal best practices. If only some industry players are initiating promising reduction measures, ARB could consider regulatory approaches that induce others to take appropriate measures through regulatory requirements.

**3. Cost-Effective Regulatory Approach: Insufficient to Achieve Emission Reduction Goals? Consider Combined Regulatory/Trading Approach.**

It is conceivable that, even if ARB were to document available and cost-effective mechanisms, those mechanisms would not lead to sufficient reductions to meet AB 32's emission reduction goals, or could not lead to sufficient reductions by 2020 due to long capital investment lead times. Moreover, as ARB noted in its original alternatives analysis, because regulatory approaches are usually performance standards, absolute emissions could increase with economic growth. An emissions cap would therefore better serve AB 32's reduction goal.

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More clearly identifying available control measures would, however, provide a basis for designing a program that provided an optimal combination of regulatory and trading mechanisms. Most trading programs supplement direct regulatory programs; they do not stand alone. (See, e.g., the federal Acid Rain and NOx Budget programs, and Los Angeles' RECLAIM program.) Because ARB did not systematically catalog what could be achieved through available control mechanisms in the Supplemental FED, ARB does not provide a basis for conceiving or analyzing such a combined approach.

#### 4. Too Administratively Complex? Compare with Cap-and-Trade

In a number of instances, the Supplemental FED suggests that creating regulations to govern diverse sources would be too administratively complex. Most of the sources subject to the cap-and-trade program are already subject to detailed air quality permits negotiated on a case-by-case basis, so the additional regulatory effort should not be overstated. ARB may also have regulatory options that do not require advance generalized rulemakings that cover every source in detail and that would allow case-by-case flexibility. The Supplemental FED does not explore such options.

That said, developing and administering a regulatory program would no doubt be administratively challenging. However, it should also be noted that administering offsets and ensuring their integrity is likely to be similarly complex. And since almost half the reductions in a cap-and-trade program could consist of offsets, administrative complexity is not a marginal consideration in a trading program.

This comment does not intend to minimize the administrative complexity that regulations could entail; it simply notes that many aspects of a cap-and-trade program, particularly offset management, are likely to be as or more complex.

#### C. Additional Benefits of a Regulatory Alternative

Regulatory approaches offer additional benefits that were not fully addressed in the Supplemental FED. Some of these benefits are outlined in the previously-submitted comments included at the end of this submission. I note a few highlights here:

- **Overcome industry inertia.** Inertia and a lack of information can prevent industries from taking cost-effective and available measures. Regulation ensures that such measures occur, rather than relying on market signals that might not be effective.
- **Streamline compliance with upcoming federal CAA requirements.** Exploring regulatory options could streamline integration into federal regulation under the Clean Air Act. As the federal Environmental Protection Agency develops standards for new and existing stationary sources, California may be required to adopt federally-mandated regulatory controls (unless EPA accepts the cap-and-trade program in lieu

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of facility-specific controls). ARB could be coordinating the development of its regulatory requirements in tandem with the development of federal requirements.

- **Greater public participation in individual facility decisions.** Regulation offers more public participation opportunities. A trading program leaves compliance decisions to private entities, while regulatory approaches create public rulemaking proceedings and permitting processes that allow the public to participate.
- **Stronger government control over key energy infrastructure decisions.** To the extent that regulatory approaches take the form of requiring a greater percentage of renewables (greater than 33%), or requiring shifts away from higher-emission energy sources, the state would be playing an important role in determining its energy future rather than leaving such compliance decisions to the private sector.

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### Conclusion

As noted at the outset, these comments address fundamental questions about the wisdom of exclusive reliance on a pure cap-and-trade program. In particular, they focus on whether ARB should more deeply consider integrating regulatory and market mechanisms in the power and industrial sectors. The Supplemental FED provides a natural starting point for this inquiry, but the comments are intended more as an invitation to reconsider certain basic policy choices than as a legal commentary on the Supplemental FED itself.

Please feel free to contact me at (415 422-5053 or [Kaswan@usfca.edu](mailto:Kaswan@usfca.edu) if I can provide any further assistance.

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### Previously-Submitted Comments

#### Comments on Proposed California Cap-and-Trade Regulation and Environmental Justice (submitted December 10, 2010)

As federal and international efforts to provide a comprehensive approach to climate change fall by the wayside, it is all the more inspiring to review CARB's development of a sophisticated cap-and-trade program for California. Although I express concerns about the degree to which the proposed regulation integrates greenhouse gas (GHG) and co-pollutant reduction objectives, those concerns should not be read as a condemnation of this impressive initiative.

These comments address the following topics:

- Reliance on offsets

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- Impact of opt-in facilities on the allowance market
- Environmental impacts of biomass and biofuels
- Cap-and-trade and co-pollutants: Concerns
  - Increases in co-pollutants
    - Legal interpretation of “prevent any increase”
    - Potentially underestimate risk of emissions increases
  - Complement the state’s air quality objectives
- Cap-and-trade and co-pollutants: Suggestions
  - Mechanisms to maximize co-pollutant benefits
  - Staff’s concerns about these alternatives
- CARB assessment of co-pollutant impacts

I. Reduce Allowable Use of Offsets

The greater the use of offsets, the fewer the reductions from covered sectors. With fewer reductions in the covered sectors, there is less of an incentive to create more efficient alternatives and California will lose the environmental and economic co-benefits of GHG reductions in stationary source emissions. Rather than allowing for increased use of offsets, CARB should focus on cost containment mechanisms that respond to actual, not prospective, high prices, and that do not undermine incentives for reductions within covered sectors.

The Staff Report explains that the percentage of offsets that can be used to show compliance increased from 4% in the PDR to 8% in the current proposal to account for the decision to place a larger number of allowances in the Allowance Price Containment Reserve, since having more allowances in the Reserve would shrink the availability of allowances and potentially increase their cost.

Rather than assuming that greater offset use will be necessary to contain costs, CARB should limit offsets and increase allowance or offset supply if and when market conditions demonstrate that cost containment is, in fact, necessary. In many environmental programs, the costs of compliance have ended up lower than anticipated. Cost containment mechanisms that respond to actual prices are preferable. CARB could rely on the Reserve, or could begin by allowing 4%, and allow a progressively greater use of offsets if higher allowance prices emerge.

The Staff Report also emphasizes that allowing offsets provides the benefit of triggering GHG reductions or sequestration that might not otherwise occur. In addition, offset projects could generate their own environmental and economic co-benefits (whether domestically or abroad).

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The implicit assumption is that these measures would not be undertaken in the absence of an offset program. That conclusion presents a false choice. Many offset projects, like manure digesters, are worthwhile. CARB should explore new requirements in the agriculture sector to reduce GHG emissions, not require industrial emitters to subsidize agricultural reductions. Moreover, CARB should not allow stationary source emitters to avoid their own reductions by facilitating reductions or sequestration that should happen in addition to, rather than instead of, their own reductions.

To the extent that the activities contemplated as offset projects do require external funding, the use of auction revenue would be a more environmentally sound mechanism for providing the necessary funding. Then the projects would provide emissions reductions that would complement, rather than supplant, stationary source emissions reductions.

I. Opt-in Covered Entities

If non-covered facilities “opt-in” to the cap-and-trade program, they are likely to do so because they can easily reduce energy use and seek to make a profit selling excess allowances. CARB needs to ensure that its provisions for allowing facilities to opt in address the potential that the facilities could increase the number of available allowances, dampening the incentive for covered facilities to reduce emissions. Just as the cap will be adjusted when transportation fuels are added to the program in 2015, the cap may need to be adjusted to account for the emissions associated with facilities that opt in.

II. Biomass and Biofuels

In all provisions relating to the burning of biomass and biofuels, CARB should carefully assess associated co-pollutant and other environmental implications. For example, if biomass-derived fuel sources do not have to account for their GHG emissions, the rule could create incentives to use biomass that have incidental adverse environmental consequences.

III. Cap-and-Trade and Co-Pollutants

Given the acknowledged link between GHGs and co-pollutants, the state would benefit from integrating its GHG and co-pollutant reduction strategies and creating a more unified approach to regulating industrial emissions.

AB 32 recognizes the connection between GHGs and co-pollutants, and instructs CARB to develop GHG reduction policies that would not only reduce GHGs, but do so in a way that “maximizes additional environmental and economic co-benefits for California, and complements

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the state's efforts to improve air quality.”<sup>3</sup> Overall, the scoping plan in general and the cap-and-trade program in particular will likely lead to improvements in air quality. That said, the cap-and-trade program does not include measures to prevent increases in co-pollutants or optimize the location of GHG and corresponding co-pollutant reductions.

A. **Concerns**

1. **Increases in co-pollutants.**

The California legislature expressed its concern about the distributional implications of a cap-and-trade program by explicitly stating that market mechanisms must, to the extent feasible, be designed “to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.”<sup>4</sup>

My first comment is one of legal interpretation: based on the language in the Staff Report, the Staff appear to construe the language “prevent any increase” too narrowly. The Staff appear to be interpreting this language to mean that the cap-and-trade program *itself* must not “cause” increases in co-pollutant emissions.<sup>5</sup> Under this approach, the Staff Report acknowledges that the cap-and-trade program could, in some instances, create incentives that could result in co-pollutant increases. For example, if a utility relies upon several different generation facilities, the price signal generated by the cap-and-trade program could induce the utility to increase production at more energy efficient facilities. Co-pollutant emissions could therefore increase at the more efficient facilities.<sup>6</sup>

The Staff's interpretation of AB 32 appears too narrow. The language states that the agency is required to “prevent” increases in co-pollutant emissions, without limiting that obligation to increases caused by the cap-and-trade program itself. As the Staff Report acknowledges, facilities could choose to increase emissions in order to increase production or expand into a new type of production. New facilities could also be built. To the extent a cap-and-trade program allows facilities to increase emissions by buying GHG allowances, the GHG control program would not constrain co-pollutant increases and could be inconsistent with AB 32's requirements.

<sup>3</sup> CAL. HEALTH & SAFETY CODE § 38501(h).

<sup>4</sup> CAL. HEALTH & SAFETY CODE § 38570(b)(2).

<sup>5</sup> See, e.g., Staff Report, P-4, note 1 (Stating that “[n]ot all emissions increases at facilities covered by the cap-and-trade program will result from the program itself .... Staff believes that only in very limited circumstances would a localized emissions increase be the actual result of the incentives created by the cap-and-trade program ....”). See also Staff Report at II-59, note 33; Staff Report at VII-3, note 79.

<sup>6</sup> Incentivizing more efficient energy generation is, of course, a positive development. Nonetheless, AB 32 requires CARB to take the co-pollutant consequences into account.

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The Staff Report also suggests that co-pollutant increases are extremely unlikely to occur because the burden of New Source Review requirements and the cost of GHG allowances themselves will discourage increased emissions. At the same time, however, the Staff Report acknowledges that the state's refineries are likely to continue to supply areas outside California even if demand for fossil fuels in California drops. The Staff Report also acknowledges that new biorefineries and biomass facilities could be incentivized by AB 32 implementation measures. Thus, emissions increases are a real possibility.

The case studies in the emissions assessment do include emissions increase scenarios, evaluating both the possibility that facilities would increase GHG emissions by 4 percent and the possibility of a new source in each study area. The Staff Report reveals that these GHG emissions increases would lead to small increases in co-pollutants relative to the baseline scenario.<sup>7</sup> Moreover, it is possible that major facility expansions could lead to increases above 4 percent and that more than one new facility could choose to locate in certain areas, possibilities not considered by the assessment.

The Staff Report also argues that existing air pollution regulations would keep any co-pollutant increases to a minimum. This is not the place to pick apart California's air pollution regulations, but it is not clear that they would fully address an impacted community's concerns. For example, even if NSR were triggered and the facility had to purchase criteria pollutant offsets to compensate for the increase in criteria pollutants, it is not clear that the emission reduction credits would come from the same location as the increases, potentially leading to a net increase in impacted communities notwithstanding the offset requirement. Moreover, offset requirements apply only to criteria pollutants, not air toxics. While California's "Hot Spots" program provides more attention to local emissions than occurs in most states, it does not directly prevent increases.

The Staff Report's analysis of the impacts of emissions increases places them in context: the Staff Report analyzes potential co-pollutant increases under the cap-and-trade program in relation to the significant decreases in co-pollutants that existing regulations are expected to achieve by 2020. The state's initiatives to decrease co-pollutants are laudable. And the Staff's implicit point is well-taken: if those decreases are realized, there is less of a need to use AB 32 to indirectly accomplish co-pollutant reductions. Nonetheless, AB 32 states that the state's GHG policies should be designed to complement its efforts to attain air quality standards. The cap-and-trade program, as currently designed, does not take that step.

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<sup>7</sup> For example, in the Wilmington case study, if GHG emissions increased by 4 %, then, in comparison with the baseline scenario resulting from current criteria pollutant controls, there would be 1% less NO<sub>x</sub> reduction, 2% less PM<sub>2.5</sub> reduction, and 1% less ROG reduction. Staff Report, Table VII-2, at VII-13. Achieving less reduction is tantamount to increasing emissions relative to the baseline; co-pollutant emissions would be higher than they would have been had the facilities reduced instead of increasing GHG emissions.

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These comments do not dispute that changes in *co-pollutant* levels as a consequence of *GHG* trading reflect the relative stringency of associated co-pollutant regulation. If a GHG trade leads to increases in co-pollutants, it is because the co-pollutant regulatory program did not prevent those increases. CARB may resist the effort to impose co-pollutant goals on its GHG regulatory program. But, as noted above, AB 32 explicitly links GHG and co-pollutant emissions by specifying that the flexibility of a market-based GHG program not lead to increases in associated co-pollutants, even if those increases would be permissible under existing co-pollutant regulations.

## 2. Complement the state's air quality objectives.

As noted above, AB 32 directs CARB to develop policies that “complement[] the state’s efforts to improve air quality.”<sup>8</sup> It is not enough to prevent co-pollutant *increases*. Ideally, the cap-and-trade program should help achieve air quality standards by targeting GHG, and associated co-pollutant, *reductions* in the state’s most polluted areas. Not surprisingly, CARB’s Co-Pollutant Emissions Assessment reveals that greater co-pollutant reductions benefits would be achieved if all facilities had to reduce their proportionate share than will be achieved by letting facilities trade GHG allowances in ways that could maintain or increase emissions.<sup>9</sup> While the percentage difference in emissions reductions is small, the data indicates that the cap-and-trade program has not been designed to enhance the achievement of air quality objectives.

In addition, the emissions assessment does not evaluate what could have been achieved if the program were designed to require or incentivize greater GHG reductions in the state’s most polluted areas. The first scenario in all of the report’s case studies assumes that all facilities in the state reduce by the same amount. The report does not analyze the co-pollutant consequences of achieving greater-than-average GHG reductions in the state’s most polluted areas.

### B. Suggestions

In response to the November 2009 Proposed Draft Regulation, I submitted comments addressing numerous ways in which a trading program could incorporate co-pollutant reduction objectives (Kaswan PDR comments). The comments did not advocate for any one mechanism, but evaluated the strengths and weaknesses of several options.

The Kaswan PDR comments are incorporated here by reference. Of the seven options included in the original memo, I would suggest focusing on the following four options (options that could be used individually or in combination):

<sup>8</sup> CAL. HEALTH & SAFETY CODE § 38501(h).

<sup>9</sup> For example, in the Wilmington case study, if facilities reduced their GHG emissions by their proportionate share rather than increasing emissions, co-pollutant reductions would be enhanced by 2% for NO<sub>x</sub>, 3% for PM<sub>2.5</sub>, and 1% for ROG. Staff Report, Table VII-2, at VII-13.

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- (1) Combine trading with direct regulation (now or in the future);
- (2) Impose individual facility caps for facilities in heavily-polluted areas;
- (3) Create incentives for greater reductions in heavily-polluted areas (through differentiated allowance allocation, fees, higher allowance prices, or enhanced allowance retirement requirements; and
- (4) Devote auction revenue to a Community Benefits Fund to help finance co-pollutant reductions in disadvantaged areas.

While I will not repeat the analysis of these options in this document, I will comment on the Staff's discussion of some of these alternatives.

**Alternative Rejected by Staff - Implement Only Additional Source-Specific Command-and-Control Regulations.** CARB staff rejected the alternative of replacing the cap-and-trade program with a direct regulatory program for industrial sources. The Staff Report presents a number of convincing arguments for why regulation should not *replace* a cap-and-trade program, but did not address the value of complementing the cap-and-trade program with limited and targeted regulatory efforts where appropriate. The Staff Report expresses concerns about the cost-effectiveness of regulation if applied to all industries. But if regulation were used to complement cap-and-trade only where appropriate, CARB could take cost-effectiveness into account in deciding whether to impose regulations. In determining cost-effectiveness, it is also important for CARB to consider not only the costs of regulation to the relevant industry, but also the economic benefits of enhanced emissions reductions.

The Staff Report also observes that regulations would be difficult to draft given the lack of data on effective emission reduction mechanisms and the variation among facilities. However, CARB is requiring energy audits at industrial facilities, a process that includes an assessment of associated co-pollutant impacts. While current data may be insufficient, the audits could provide a much stronger basis for identifying cost-effective energy efficiency mechanisms that could be required at industrial facilities, and that could achieve both GHG and co-pollutant reductions.

CARB Staff may be assuming that facilities will adopt cost-effective reduction strategies in response to the price signal created by the cap-and-trade program, without the need for command-and-control regulations. But industrial investment decisions are complex. Inertia, uncertainty about future carbon markets, concerns about short-term capital expenditures, and other factors could impede otherwise cost-effective investment in emission reductions. If price signals do not end up prompting cost-effective measures with significant co-pollutant benefits, then CARB should retain the authority to require appropriate measures.

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In addition, if CARB identifies cost-effective GHG emission reduction measures with particularly significant co-pollutant benefits,<sup>10</sup> then it would be consistent with AB 32's goals to require those measures rather than relying upon the vagaries of the market to incentivize them.

**Alternative Rejected by Staff: Facility-Specific Caps.** The Staff Report expresses valid concerns about a program that applied facility-specific caps to all facilities. But the Staff Report evaluates only the most extreme version of this option. First, facility caps could be applied only to facilities in the state's most polluted areas. Second, the impact of facility caps would depend upon their stringency. The Staff Report rejects caps that would require each facility to reduce its proportional share of emissions. But a cap would not have to be that stringent. A cap that prevented the facility from increasing emissions would eliminate the risk of violating AB 32's requirement that the trading program prevent increases, while still providing substantial flexibility. If facility increases are as unlikely as the Staff Report claims, then such caps could ensure that the program complies with AB 32 without having a significant impact on covered facilities.

To further AB 32's goal's of complementing the state's efforts to achieve air quality, facility caps could, however, go farther than simply preventing increases. The caps could be set somewhat below the level of existing emissions. Such an approach could still be more flexible than the one that the Staff rejected, because the level could be set somewhere between current emissions and the full proportionate share of reductions.

The Staff reject facility caps because of their impact on cost-effectiveness. But a full assessment of cost-effectiveness should take into consideration not only the costs of pollution control, but the benefits of reducing pollution in heavily polluted areas. Thus, varying requirements depending upon the benefits of pollution control could be more, not less, cost-effective from the state's perspective.

**Alternative Rejected by Staff: Restricting Trading in Adversely Impacted Communities.** Essentially, the Staff Report argues that existing programs are already doing enough to address pollution in California, and that trading restrictions on stationary sources would add only a marginal benefit. Ultimately, whether CARB thinks it is necessary or not, AB 32 states that California should use its GHG policies, including its market mechanisms, to further co-pollutant reduction goals.

C. Assessment of Co-Pollutant Impacts

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<sup>10</sup> Co-pollutant benefits could be particularly significant either because GHG reductions lead to a large reduction in associated co-pollutants, and/or because the industries to be regulated are located in especially polluted areas.

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The proposed regulation states that CARB will monitor the co-pollutant consequences of the trading program and take further action as appropriate. Such monitoring will provide an important opportunity to assess the program. However, the report indicates that such an assessment will occur only once a compliance period – once every three years. That appears to be too infrequent to properly monitor the program’s co-pollutant consequences.

Ultimately, the state’s commitment to reduce GHGs is likely to improve co-pollutant levels and redound to the benefit of most, if not all, Californians. The state could, however, take greater initiative in fulfilling AB 32’s invitation to link GHG and co-pollutant reduction benefits.

Thank you for the opportunity to submit these comments.

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**Comments on the Proposed Draft Regulation** (submitted February 24, 2010)

This letter provides my comments on the Preliminary Draft Regulation (PDR) for a California Cap-and-Trade Program.

The PDR notes the importance of addressing the interface between the GHG cap-and-trade program and co-pollutants,<sup>11</sup> but has not yet incorporated measures to respond to these potential interactions. This letter is a response to the PDR’s request for comment on how CARB could incorporate AB 32’s environmental justice provisions into its proposed cap-and-trade program.

The first section of the comments identifies relevant AB 32 provisions and provides general comments on CARB’s environmental justice obligation. The second section analyzes mechanisms for integrating environmental justice. It identifies several parameters for evaluating potential mechanisms, including:

- (1) Degree and certainty of greenhouse gas (GHG) reductions (and associated co-pollutant reduction benefits) in disadvantaged areas;
- (2) Ease of administration (for CARB and regulated entities);
- (3) Economic impact and leakage; and
- (4) Implications if a federal cap-and-trade program is adopted.

The second part of the second section then uses these parameters to evaluate seven options for incorporating environmental justice. The seven options include:

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<sup>11</sup> See PDR Overview at 9-10.

- (1) Combine trading with regulation;
- (2) Individual facility caps;
- (3) Incentives for greater reductions in disadvantaged areas (differentiated allowance allocation; fees or higher allowance prices; or enhanced allowance retirement requirement);
- (4) Zonal trading;
- (5) Enhanced offset restrictions in disadvantaged areas;
- (6) Require the use of in-state offsets; and
- (7) Devote auction revenue to disadvantaged areas for co-pollutant reductions.

The comments are intended to aid CARB in its analysis of the relative strengths and weaknesses of available options. While I argue that CARB is legally obligated to address the co-pollutant consequences of its GHG trading policy, these comments do not advocate for one or another of the potential mechanisms.

The third section of these comments raises several miscellaneous comments on the PDR.

#### **Part I: AB 32 Requires CARB to Integrate Environmental Justice into its Cap-and-Trade Program**

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The California Legislature recognized the widespread impacts that climate policy generally, and a cap-and-trade program specifically, could have on the state. AB 32 requires CARB to develop a comprehensive policy that not only reduces GHGs, but also “maximizes additional environmental and economic co-benefits for California, and complements the state’s efforts to improve air quality.”<sup>12</sup> While CARB’s charge includes a variety of objectives, both economic and environmental, it is clear that the Legislature intended CARB to integrate GHG and co-pollutant reduction objectives.<sup>13</sup>

The law directly requires a cap-and-trade program to prevent increases in pollutants. Under AB 32, any market mechanisms must, to the extent feasible, be designed “to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.”<sup>14</sup> To the extent that existing co-pollutant controls do not completely prevent increases, the GHG trading program

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<sup>12</sup> CAL. HEALTH & SAFETY CODE §38501(h).

<sup>13</sup> Some have argued that CARB should not attempt to address the co-pollutant implications of the GHG cap-and-trade program and should instead address co-pollutant concerns through existing and separate authorities. TODD SCHATZKI & ROBERT N. STAVINS, ADDRESSING ENVIRONMENTAL JUSTICE CONCERNS IN THE DESIGN OF CALIFORNIA CLIMATE POLICY (Oct. 2009). But AB 32 requires CARB to address the co-pollutant implications of its climate policy, and, as discussed further below, requires CARB to take an integrated approach that factors co-pollutant benefits into design choices. Moreover, since the same infrastructure that produces GHGs also produces co-pollutants; an integrated approach would be more likely to lead to optimal results. In addition, while California is making considerable progress using existing authorities, existing authorities have not been sufficient to attain air quality goals. AB 32 provides CARB with an additional tool that goes beyond existing authorities: the opportunity to target GHG reductions in ways that will have ancillary co-pollutant benefits.

<sup>14</sup> CAL. HEALTH & SAFETY CODE §38570(b)(2).



will have to ensure that it does not lead to incidental increases in co-pollutant emissions.<sup>15</sup> The PDR appears to acknowledge CARB's duty to prevent increases.<sup>16</sup>

AB 32 requires CARB not only to prevent co-pollutant increases, but to maximize the climate policy's co-pollutant reduction benefits. As noted above, the Legislature intended for the state's GHG policy to "complement" the state's air quality objectives.<sup>17</sup> In regard to market mechanisms, the law states that CARB should "[m]aximize additional environmental and economic benefits for California, as appropriate."<sup>18</sup> Climate policy would complement air quality objectives and maximize environmental benefits by concentrating GHG reductions, and associated co-pollutant reductions, in the state's most polluted areas. For the purposes of this letter, I am identifying such polluted areas as "disadvantaged areas."<sup>19</sup>

While the PDR clearly acknowledges its legal duty to prevent co-pollutant increases,<sup>20</sup> it is more ambiguous about CARB's intent to maximize environmental benefits. It describes the objective, but indicates only that it has been raised by stakeholders.<sup>21</sup> AB 32 requires CARB to affirmatively address mechanisms for maximizing environmental benefits in order to determine whether they are feasible and appropriate.

AB 32's distributional goals pose a considerable challenge for a cap-and-trade program. A cap-and-trade program's flexibility renders it virtually impossible to determine where GHG increases and decreases, and increases and decreases of associated co-pollutants, will occur.<sup>22</sup> The Health Impact Assessment process that is currently underway should help reveal possible scenarios. However, a trading program's flexibility makes it impossible to know in advance how emissions will be distributed. Ultimately, given the unpredictability of actual emissions, CARB

<sup>15</sup> AB 32 requires CARB to evaluate the potential for such increases. *Id.* at 38570(b)(1). In conducting a sample analysis of the potential consequences of a cap-and-trade program, the Scoping Plan's Public Health Analysis simply assumed an across-the-board 10% decrease in emissions that did not analyze the potential for GHG trading to lead to increases. *See* SCOPING PLAN, APPENDIX H: PUBLIC HEALTH ANALYSIS H-114. The Scoping Plan acknowledged that, if a cap-and-trade program were to be adopted, a more careful analysis would be needed, *id.* at 18-19, and the PDR appears to recognize that a trading program's flexibility could lead to localized pollution impacts. *See* PDR Overview at 9.

<sup>16</sup> PDR Overview at 9. CARB qualifies its obligation by stating "to the extent feasible," reflecting similar statutory language.

<sup>17</sup> *See also* CAL. HEALTH & SAFETY CODE § 38562(b)(6) (requiring CARB to consider its regulations overall benefits, "including reductions in other air pollutants").

<sup>18</sup> *Id.* at §38570(b)(3).

<sup>19</sup> I understand that CARB is currently identifying "disadvantaged areas," and that that analysis will focus on both pollution concentrations and socioeconomic variables. This letter assumes that CARB will determine the "disadvantaged areas" requiring special attention under AB 32 and does not address how such areas should be defined.

<sup>20</sup> PDR Overview at 9 ("To the extent that we identify increase in co-pollutant emissions due to the cap-and-trade program, we will also, to the extent feasible, identify the means to prevent these increases.")

<sup>21</sup> PDR Overview at 10.

<sup>22</sup> The PDR acknowledges the possibility of GHG increases at individual sources. It states that "[t]he flexibility provided by trading allows for continued growth by individual sources ...." PDR Overview at 6.



should consider design features to control, or at least steer, emissions to meet AB 32's distributional goals.

**Part II: Mechanisms for Avoiding Co-Pollutant Increases  
and Maximizing Co-Pollutant Reductions**

CARB has numerous potential options for avoiding co-pollutant increases and maximizing their reductions, including regulation, trading restrictions, and direct investments in co-pollutant reductions. The first section of this part identifies overarching factors to consider in evaluating these options. The second section of the part analyzes potential options pursuant to these factors.

**A. Factors for Evaluating Co-Pollutant Reduction Options**

Mechanisms for addressing co-pollutants are likely to present differing and difficult tradeoffs. To facilitate an analysis and comparison of these mechanisms, this section identifies the following factors as likely to be relevant to CARB's decision:

**(1) Degree and certainty of GHG reductions (and associated co-pollutant benefits) in disadvantaged areas.** Some potential mechanisms would directly limit GHGs (and thus likely limit co-pollutants) (e.g., regulatory approaches, individual facility caps, dedicated investment of auction revenue in co-pollutant reductions). Others would create incentives, but not necessarily result in reductions (e.g., charging higher allowances prices or requiring enhanced allowance submissions). Yet others could potentially, but not necessarily, result in co-pollutant reductions (e.g., giving communities the ability to apply for grants from an auction revenue fund to finance co-pollutant reductions).

I assume for the purposes of this memo that the correlation between GHGs and co-pollutants is strong enough to conclude that GHG reductions would usually lead to co-pollutant reductions.<sup>23</sup> (If a given facility's GHG reduction efforts appear to be leading to co-pollutant increases, however, then regulatory attention should be directed to that dynamic.)

I also recognize that the ratio between GHG reductions and co-pollutant reductions could vary, with GHG reductions in some industries leading to proportionately greater co-pollutant reductions than in others.<sup>24</sup> In designing mechanisms for improving a trading program's

<sup>23</sup> There is some risk that GHG reduction policies could lead to co-pollutant increases, a real issue if it occurs. See Schatzki and Stavins, *supra* note 3, at 26. However, this letter assumes that GHG reductions are likely enough to lead to co-pollutant reductions to warrant the general assumption that GHG reductions will lead to co-pollutant reductions.

<sup>24</sup> See James K. Boyce, *Memorandum to Economic and Allocation Advisory Committee, Investment in Disadvantaged Communities* 3-4, (Dec. 30, 2009) (describing variations in correlation between GHGs and co-

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incidental co-pollutant outcomes, CARB could consider applying the mechanisms only to those industries demonstrating a high correlation between GHGs and co-pollutants.

(2) **Ease of administration (for CARB and regulated entities).** From CARB’s perspective, administrative considerations include the ease of implementing, enforcing, and defending each mechanism. For regulated entities, administrative considerations include potential permitting proceedings and the ease of determining and complying with applicable requirements.

(3) **Economic impact and leakage.** An obvious and important economic impact to be considered is the economic impact on regulated entities. The impact on individual facilities (particularly if subject to enhanced requirements) is relevant. Also relevant is the extent of the impact: how many facilities would be subject to additional constraints. For example, policies that apply only to facilities in disadvantaged areas will have less overall economic impact than policies that apply to all facilities. The extent of that impact would depend upon how many facilities are located in disadvantaged areas and hence subject to additional restrictions. Similarly, policies that are targeted only toward industries from which significant co-pollutant reductions could be gained would have less impact than policies applied across-the-board.

The economic impact on regulated entities has important implications for leakage. Particularly in the absence of a federal program imposing nationwide limitations, leakage is an understandable concern. Leakage would still allow California to reap co-pollutant benefits, but at the cost of GHG reduction goals and economic enterprise. While leakage is undoubtedly a real concern in certain industries and contexts, leakage claims must be carefully assessed on an industry-specific basis.

A related consideration is equity among regulated entities. Facilities located in disadvantaged areas could claim that imposing more demanding standards on them is “unfair” and renders them less competitive. However, imposing more demanding standards on facilities in disadvantaged areas internalizes and holds them accountable for the costs they are imposing on surrounding communities. While it is “unfair” to treat like entities differently, differences in the impact of pollution justify creating different standards for facilities based upon their differing impacts on the surrounding community.

In determining a given policy’s economic impact, the impact on regulated facilities is not the only relevant concern. AB 32 includes not only the goal of achieving cost-effective reductions, but also requires CARB to adopt climate policies that maximize overall societal

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pollutants). Schatzki and Stavins argue that CARB should not attempt to achieve environmental justice objectives within the cap-and-trade program due to the difficulty of determining the extent of the associated co-pollutant impacts and the resulting difficulty in calculating the precise benefits to be achieved by including co-pollutant objectives. Schatzki & Stavins, *supra* note 3, at 26. I argue that the difficulty in determining the extent of the benefit just not justify forgoing the benefit.

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benefits, both environmental and economic.<sup>25</sup> The state's cap-and-trade program will have numerous ancillary costs and benefits that determine the policy's overall economic impact.<sup>26</sup>

Reducing co-pollutants has economic as well as environmental implications. Concentrated pollution imposes significant economic costs, in the form of health expenditures, lost productivity, and the like. Controlling co-pollutants is a significant economic co-benefit of GHG regulation.<sup>27</sup>

Other relevant ancillary costs and benefits include employment impacts. While it is important to recognize that maximizing co-pollutant benefits could have negative jobs impacts in certain sectors, other sectors, like green tech sectors, could compensate for that impact.

Thus, determining the "economic impact" of a given measure requires CARB to consider not only that measure's cost-effectiveness for a given industry, but the economic benefits of improving pollution and promoting the green technology sector.

**(4) Implications if a federal cap-and-trade program is adopted.** Because federal cap-and-trade legislation may be adopted, it is necessary to assess (1) what mechanisms for meeting AB 32's environmental justice goals would still be available; and (2) the potential impact of various mechanisms on the federal program and potential tensions that could arise.

Under existing proposed federal legislation, California's cap-and-trade program, as a stand-alone program, is likely to be subject to a moratorium.<sup>28</sup> That would eliminate the state's ability to achieve co-pollutant outcomes through allowance distribution (either for free or by auction), and could impact the state's control over auction revenue (if equivalent levels of allowance value or auction revenue are not directed to the states).

However, current draft legislation would preserve the states' ability to impose regulations or to establish state-level allowance retirement requirements.<sup>29</sup> These mechanisms would likely survive the enactment of federal cap-and-trade legislation.

<sup>25</sup> See, e.g., CAL. HEALTH & SAFETY CODE § 38562(b)(6) (requiring CARB to consider overall societal benefits).

<sup>26</sup> See Boyce, supra note 14, at 2-4 (observing that achieving efficiency requires considering the climate policy's net social benefits).

<sup>27</sup> See *id.* at 2-3; Britt Groosman, Nicholas Z. Muller, and Erin O'Neill, *The Ancillary Benefits from Climate Policy in the United States* (draft white paper, Sept. 2009). The Groosman study analyzed the co-pollutant benefits of federal climate legislation proposed in 2008. While the substantial co-pollutant benefits they identify would be slightly less dramatic in California due to California's relatively low reliance on coal-fired power, the study nevertheless demonstrates that GHG controls could provide substantial co-pollutant reduction benefits.

<sup>28</sup> See, e.g., American Clean Energy and Security Act of 2009, 111<sup>th</sup> Cong. § 861 [hereinafter Waxman-Markey] (imposing a 5-year moratorium on state and regional cap-and-trade programs).

<sup>29</sup> See, e.g., Waxman-Markey § 334. The Waxman-Markey bill preserves the Clean Air Act's general savings clause that allows states to set more stringent air quality standards and limitations, and then goes on to state that the phrases "standard or limitation respecting emissions of air pollutants" and "requirements respecting control or abatement of

Even if California's efforts are not preempted by federal legislation, the federal program could create federal-state dynamics that are worth addressing. For example, California policies could impact the national allowance and offset markets. It is worth assessing the interactions and their implications for both California and the national program.

**B. Options for Incorporating Co-Pollutant Reductions Goals**

In the discussion below, I identify mechanisms and provide an initial analysis pursuant to the factors identified above. The analysis is preliminary and intended to be illustrative rather than complete.

It should be noted that, since the goal is improving the distribution of actual emissions, the mechanisms below address only the "downstream" aspects of a trading system, where allowances are held by emitting facilities.

**Option 1: Combine Trading with Regulation**

Although the PDR is focused on the trading program, CARB's capacity to address potential disproportionate impacts from the trading program could require it to utilize other governmental authorities, like regulatory options. While the Scoping Plan includes extensive regulatory measures for mobile source emissions and for electricity-generating units (the environmental performance standard), industrial stationary source emissions are to be controlled primarily through the cap-and-trade program.

Arguably, some of the potential distributional inequities associated with a trading program could be dampened through judicious use of regulatory mechanisms. Such measures could be targeted towards industries that have a high correlation between GHGs and co-pollutants, where reductions in GHGs are likely to lead to significant improvements in co-pollutant emissions. And they could be imposed only on facilities within disadvantaged areas suffering from high levels of pollution, thus ensuring a base level of GHG reductions in those locations that would most benefit from associated co-pollutant reductions. The regulatory process could also assure that the chosen GHG reduction method in fact reduced, rather than increased, co-pollutant emissions.

As part of the AB 32 implementation process, CARB is evaluating emission-reducing options in a number of sectors, like glass and cement manufacturing. The energy audits of large

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air pollution' shall include any provision to: ... require surrender to the State or a political subdivision thereof of emission allowances or offset credits established or issued under this Act, and require the use of such allowances or credits as a means of demonstrating compliance with requirements established by a State or political subdivision thereof." *Id.*

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industrial facilities are specifically considering the co-pollutant implications of improved efficiency. If cost-effective GHG control mechanisms with positive co-pollutant consequences emerge from these inquiries, CARB should consider requiring that the measures be adopted, at least in polluted areas, rather than waiting for or expecting the cap-and-trade program to provide the requisite incentive.

I now turn to a preliminary analysis of this option pursuant to the factors identified above.

(1) **Degree and certainty of co-pollutant benefits:** Regulatory mechanisms would provide a higher degree of certainty in optimizing the location of co-pollutant reductions than a trading program. Wherever imposed, baseline emissions would decrease, in contrast to a trading program, where emissions could potentially remain constant or even increase (within the constraints of existing co-pollutant controls). While regulatory options might be crafted as performance standards and thus allow for emissions increases if production subsequently increased, the adoption of the regulatory controls would reduce the baseline from which such increases would occur.

(2) **Ease of administration (for CARB and regulated entities).** Regulatory measures would require CARB to adopt (and potentially defend) the measures and require CARB to incorporate the measures into facilities' existing permits. Since CARB and a number of high-GHG facilities are already exploring potential GHG reduction methodologies, a regulatory approach would not require new research. The regulatory approach would, however, impose the administrative burden of promulgating and defending the rules. If controversial, the administrative burden in developing and defending the rules could be substantial.

Including the requirements in permits would create regulatory and enforcement costs. The key issue is whether those costs are worth their results, and the relative difficulty of enforcement in comparison with an unfettered trading program. While industry might prefer not to have to engage in a GHG permitting process, CARB must weigh that aversion against whatever advantages it believes such regulation could offer.

(3) **Economic Impact.** Reducing GHGs will not be costless for regulated entities. However, regulations are not necessarily more costly than a trading program. The cost of each depends upon their relative stringency and the degree to which a regulatory program incorporates cost considerations in developing and imposing regulatory requirements. Under AB 32, CARB has the discretion to decide when to impose regulation. If the agency imposes regulations that are, by definition, cost-effective, then it is not clear that the industry cost of regulation would necessarily be higher than industry costs in a trading program. CARB can also decide to impose regulatory requirements only where the costs appear worth the benefits, and can decide not to

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impose them where reductions are inordinately expensive and do not provide benefits that would otherwise justify the high cost.

One could argue: “Why bother imposing regulations if they are so cost-effective that they are likely to duplicate the measures that the impacted industries would have taken on their own under a trading program?” In response, regulatory measures could provide greater certainty that cost-effective measures are in fact being taken. If offsets are widely available and offset and allowance prices are low, the power of inertia could lead facilities to forego even cost-effective controls. Industries might choose to pay for allowances on a short-term basis to avoid short-term capital costs, even if the investment is cost-effective in the long-term. Regulatory requirements would ensure that cost-effective investments are made.

Assuming the regulations impose somewhat greater costs on industry than it would experience under a pure trading program, the extent of the impact would depend upon the number of facilities subject to controls. If regulations were imposed only on facilities located in polluted areas, the extent of the impact of imposing regulatory requirements would depend upon how many facilities were in such areas. If many of the state’s most polluting industries are concentrated in heavily-polluted areas, the impact of a regulatory approach could be quite broad. Regulations could also be targeted toward industries with the strongest correlation between GHG and co-pollutant emissions, further limiting the scope of the economic impact.

If regulations target GHG and associated co-pollutant reductions in disadvantaged areas, they will be applied where they will have the greatest health benefits. As discussed above, health benefits translate into economic benefits that could offset the economic impact of more stringent controls.

**(4) Implications if a federal cap-and-trade program is adopted.** Recently-proposed federal legislation has included the Clean Air Act’s saving clause, which allows states to set stationary source standards.<sup>30</sup> A preemption challenge is possible: an industry could claim that state regulation is an obstacle to the full achievement of the federal trading program’s objectives.<sup>31</sup> The savings provision may be sufficient to defeat such a claim.

In a federal trading program, state facilities are likely to receive freely-allocated allowances. If the regulations result in facility emissions that are less than the number of freely allocated allowances, the state will have to decide what to do with the excess allowances. It could require the facility to retire the allowances to the state (for the state to retire), or, it could allow the facility to sell the extra allowances. The choice could depend upon whether the state’s

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<sup>30</sup> See *supra* note 19.

<sup>31</sup> William W. Buzbee, *State Greenhouse Gas Regulation, Federal Climate Change Legislation, and the Preemption Sword*, 1 SAN DIEGO J. OF CLIMATE & ENERGY L. 23, 50-52 (2009).

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regulations are intended to achieve greater stringency (in which case it would want to retire the extra allowances) or to achieve other purposes, like collateral co-pollutant and green tech benefits (in which case it might be indifferent to the facility's sale of its extra allowances).<sup>32</sup>

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### **Option 2: Set Individual Facility Caps**

CARB could also take steps to improve distributional outcomes within the confines of the trading program. CARB could limit the trading flexibility of facilities in disadvantaged areas. As a proxy for co-pollutant consequences, facilities in disadvantaged areas could have facility-specific emission limits predicated on past emissions levels.

To prevent increases, facilities would not be allowed to emit more than a previous baseline of existing emissions. To meet their compliance obligation, the facility would not be able to submit more compliance instruments than the prior baseline.

To encourage reductions, facilities could not just be limited to their prior baseline, but be required to reduce emissions to a certain percentage below existing emissions. For example, if the emissions reduction goal in a given compliance period were 10%, they would not be able to submit more compliance instruments than 10% below the prior baseline.

**(1) Degree and certainty of GHG reductions (and associated co-pollutant benefits) in disadvantaged areas.** By tying the compliance requirement to prior emissions, this mechanism would provide a relatively high degree of certainty that GHG and associated co-pollutant emissions are not increasing in disadvantaged areas. If CARB not only limited emissions to baseline emissions, but required facilities to reduce emissions, then it would provide a high degree of certainty that GHG reductions are occurring in disadvantaged areas, maximizing co-pollutant benefits. While the correlation between the GHG and co-pollutant reductions may not be precise, some degree of correlation is likely.

Of all the mechanisms discussed, this approach is likely to provide the greatest certainty in controlling co-pollutant consequences and would therefore provide the greatest certainty that trading would not violate AB 32's limitation on co-pollutant increases.

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<sup>32</sup> For further development of the issues associated with achieving a more stringent state cap, see Alice Kaswan, *Decentralizing Cap-and-Trade? The Question of State Stringency*, 1 SAN DIEGO J. CLIMATE & ENERGY L. 103 (2009). If the state were attempting to achieve a more stringent goal than the federal government, the state could choose to concentrate the additional reductions in the state's more heavily polluted areas.



(2) **Ease of administration (for CARB and regulated entities).** This mechanism's administrative complexity would depend upon the administrative challenge associated with determining (and defending) a facility's baseline emissions. If the baselines are difficult to determine, administrative resources will be required to develop them. And if baselines are likely to be controversial and contested, administrative resources could be devoted to defending the agency's choice of baseline. In contrast, administering the compliance demonstration (ensuring that allowances match emissions, and that emissions do not exceed the designated cap) does not appear to impose an additional administrative burden beyond that normally associated with a cap-and-trade program.

From industry's perspective, the compliance requirement itself is not administratively complex. The fact that the impacted industries are likely to resist the emissions restrictions does not mean that it is administratively complex for them to comply.

(3) **Economic impact.** The extent of the impact on regulated facilities depends upon the extent to which facility caps end up restraining emissions from the levels facilities would otherwise have chosen. To the extent that impacted facilities are high-cost reducers who are forced to reduce emissions when they would have purchased compliance instruments in an unencumbered market, this mechanism will increase the costs of compliance for the affected facilities. However, if the facilities would have adjusted their emissions to the required levels in any case, then the mechanism would not impose additional costs on the affected facilities.

Since this mechanism would affect only those facilities in disadvantaged areas, it would have less overall impact than regulations imposed on all facilities. And if it were limited to facilities in disadvantaged areas whose GHG emissions are strongly correlated with co-pollutant emissions, the impact would be even less.

To the extent this mechanism requires facilities to reduce emissions when it would have been cheaper for them to buy allowances, it would impose additional industry costs. However, it would also result in improved public health benefits that should be considered in weighing the net "cost" of the restriction.

(4) **Implications if a federal cap-and-trade program is adopted.** Current proposed federal legislation would allow states to establish their own compliance requirements for federal allowances. The state should, therefore, be able to establish these allowance submission requirements even if federal legislation is passed.

If this mechanism changes industry emissions decisions, it could have some impact on the national allowance market. To the extent that the limitations induce high-cost reducers to reduce emissions when they would otherwise have purchased allowances, this approach would

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increase the supply of allowances relative to the no-control scenario. If widespread enough, it could lead to a slight decrease in national allowance prices.

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**Option 3: Incentives for Greater Reductions in Disadvantaged Areas (differentiated allowance allocation, surcharges or higher allowance prices, or enhanced allowance retirement requirement)**

Instead of pegging allowance submission requirements to a previous baseline, CARB could create incentives for greater GHG (and associated co-pollutant) reductions in disadvantaged areas. To the extent allowances are freely distributed, CARB could distribute fewer allowances to facilities in disadvantaged areas. CARB could also impose a fee on emissions from facilities in disadvantaged areas.<sup>33</sup> If allowances are auctioned, CARB could charge a higher price for allowances to be used in disadvantaged areas. Alternatively, whether allowances are auctioned or distributed for free, CARB could require a higher ratio of compliance instruments per ton of emissions. For example, a facility in a disadvantaged area could be required to submit 1.2 allowances per ton of emissions. All of these mechanisms would directly or indirectly increase the cost of emitting GHGs and create a stronger incentive for actual GHG (and associated co-pollutant) reductions.

**(1) Degree and certainty of GHG reductions (and associated co-pollutant benefits) in disadvantaged areas.** The effectiveness of these incentive-based mechanisms at reducing emissions in disadvantaged areas is likely to depend upon the price of allowances and offsets in relation to the costs of control. The more expensive the cost of compliance instruments, the greater the incentive for facilities to engage in emissions reductions rather than purchasing allowances.

By creating incentives rather than setting specific emission limitations, this approach would provide less certainty than capping individual facility emissions. Facilities could choose to continue to emit and to buy compliance instruments, notwithstanding the cost.

**(2) Ease of administration (for CARB and regulated entities).** The administrative implications of these incentive approaches vary depending upon the particular approach. If fewer allowances are distributed to facilities in disadvantaged areas, then baseline emissions would have to be determined. That baseline determination would, however, be a necessary prerequisite to the allowance distribution scheme itself, and not be a consequence of choosing to modify allowance distributions based upon a facility's location in a disadvantaged area.

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<sup>33</sup> See Boyce, *supra* note 14, at 10.

Enhanced allowance submission requirements should be administratively straightforward for CARB. They do not require the agency to establish and defend new facility baseline emission determinations.

Neither distributing fewer allowances to facilities in disadvantaged areas nor enhanced allowance submission requirements would impose a significant administrative burden on complying industries. (The economic burden is discussed below.)

For impacted industries, the administrative feasibility of charging higher auction prices for allowances to be used in disadvantaged areas would depend upon the extent to which facilities are likely to know, at the time of purchase, where they intend to use the allowances. If facilities purchase allowances right before their compliance obligation is due, the process could be straightforward. But if they purchase them in advance and/or sell them, then the link between auction purchase and location-of-use could become more attenuated. The more attenuated, the greater administrative challenges this option presents.

(3) **Economic impact.** All of these options would be likely to impose higher costs than an unrestricted trading program. As incentive systems, they are intended to impose higher costs in order to trigger greater emissions reductions. The costs would not be industry-wide since they would be imposed only on those facilities in disadvantaged areas. If the incentives were imposed only on those industries with a high correlation between GHG and co-pollutant emissions, then the overall cost of such constraints could be further limited.

Assuming some increase in costs, a more interesting issue is how the cost of these mechanisms would compare with the cost of imposing individual facility caps. The economic impacts would depend upon the type of incentive mechanism.

**Distributing fewer allowances to facilities in disadvantaged areas.** If facilities in disadvantaged areas receive fewer allowances, then they would either have to reduce emissions by more or have to purchase additional allowances. That flexibility could provide some cost savings in comparison with capping individual facility emissions, since facilities would have the option of purchasing allowances if that were cheaper than reducing emissions.

**Charging a surcharge, higher allowances prices at auction, or imposing heightened allowance submission requirements.** The impact of imposing fees, higher allowance prices, or heightened allowance submission requirements on facilities would depend upon whether they are high or low cost reducers. For low-cost reducers, imposing heightened allowance submission requirements or higher prices could impose higher costs than capping individual facility emissions. Low-cost reducers would likely respond to a trading program with emissions reductions, so capping individual facility emissions would not impose any extra costs on low-

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cost reducers. If low-cost reducers were required to pay more for allowances or were required to submit more allowances per ton of emissions, however, then they would face higher costs even though their emissions were reduced.

For high-cost reducers, the flexibility offered by the incentive approach might reduce costs relative to capping individual facility emissions. Imposing a set limit of emissions could be very expensive for high-cost reducers. For them, it might be cheaper to pay a fee or buy allowances – even extra allowances – than to reduce emissions.

More generally, requiring more allowances per ton of emissions could indirectly increase the price of compliance instruments. If facilities subject to the restriction were to purchase compliance instruments rather than reduce emissions, this approach could also, effectively, tighten the cap and reduce the supply of compliance instruments. That could increase prices generally, extending the cost impacts beyond the directly targeted facilities. The extent of the impact would depend upon how many facilities were subject to the requirement and the extent to which they responded by purchasing compliance instruments rather than reducing emissions.

Alternatively, if this approach were effective in incentivizing emission reductions, and facilities reduced emissions by more than they would have under a traditional cap-and-trade program, then their net demand for compliance instruments would not change, notwithstanding the increased allowance-to-emissions ratio. Under that scenario, there would be little impact on allowance supply and the cost of allowances.

**(4) Implications if a federal cap-and-trade program is adopted.** If a federal cap-and-trade program is adopted, the state would no longer control allowance distribution and would not be able to distribute fewer allowances to facilities in disadvantaged areas or charge higher prices for allowances at auction. However, since currently proposed federal legislation does allow states to establish their own allowance submission requirements, they could still charge emissions fees or require the submission of more than one compliance instrument per ton of emissions.

To the extent that requiring the submission of more than one compliance instrument per ton of emissions leads facilities to buy instruments rather than reducing emissions, there could be some impact on the national cap and the national allowance market. But if facilities respond to the reduction incentive by reducing emissions, then there would still be some impact on the national cap (since facilities would be reducing by more than one ton per compliance instrument), but there should be little, if any, impact on the national allowance market.<sup>34</sup>

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<sup>34</sup> Since facilities reduced emissions, they would not be demanding more allowances from the national allowance market, notwithstanding the enhanced allowance submission requirement. If the demand for allowances does not change, then allowance prices are unlikely to change.

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**Option 4: Zonal trading**

The South Coast's RECLAIM program has imposed zonal limitations to limit trading from facilities in a cleaner zone to facilities located in a more polluted zone. Some have suggested a similar approach for California's cap-and-trade program.<sup>35</sup> Conceivably, facilities in disadvantaged areas could be prohibited from using allowances generated by reductions from facilities in non-disadvantaged areas. In that way, pollution reductions in clean areas would not contribute to continued or increasing emissions in disadvantaged areas.

If this approach decreased the availability of allowances in disadvantaged areas, then allowance prices for allowances that could be used in such areas would likely increase, creating a stronger incentive for emissions reductions. In the RECLAIM program, zonal trading limitations led to substantially higher allowance prices for allowances in the more polluted area, incentivizing reductions for that region.<sup>36</sup>

**(1) Degree and certainty of GHG reductions (and associated co-pollutant benefits) in disadvantaged areas.** If allowances are auctioned and most facilities fulfill their compliance obligation through auction purchases, then trading would be relegated to a relatively small role. Facilities in disadvantaged areas would buy the allowances they need at auction, rather than relying on trades. Under such circumstances, it is not clear how effective this mechanism would be at limiting emissions in more polluted areas.

However, if allowances are freely distributed, then facilities are more likely to use trading to adjust to their preferred level of emissions reduction. The extent to which a zonal trading program would improve distributional results would depend upon the extent to which the trading program decreased the available supply of allowances in disadvantaged areas and, as a consequence, increased allowances prices and incentivized emissions reductions.

In terms of the certainty of reductions, a zonal trading program would primarily create reduction incentives rather than imposing strict limits, and would thus not provide certainty regarding GHG (and associated co-pollutant) reductions in disadvantaged areas.

The impact of zonal trading on allowance supply would depend upon where reductions occur: if they primarily occur within disadvantaged areas themselves, then there would be little impact on allowance supply since such allowances could be used anywhere. That result would be positive on some levels, because it would reflect reductions in disadvantaged areas. However,

<sup>35</sup> See Boyce, *supra* note 14, at 10-12.

<sup>36</sup> *Id.* at 11 (noting higher prices in RECLAIM's restricted zone).

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if those reductions are then channeled to other disadvantaged areas, it would not ensure that *all* disadvantaged areas reap the benefits of the zonal trading system.

If reductions primarily occur in non-polluted areas, and the resulting allowances are not available for use in disadvantaged areas, then the zonal trading program could have a more substantial impact on allowance supply in disadvantaged areas, on the resulting allowance prices in those areas, and on the associated emission-reduction incentive.

The impact could also depend upon how the allowance market plays out. It is conceivable that zonal trading could influence who uses which allowances, without substantially impacting the number of allowances available in disadvantaged areas. If sufficient unrestricted allowances are available, they could flow to disadvantaged areas while the restricted allowances remain within non-disadvantaged areas. Under this scenario, a zonal trading program would not substantially impact co-pollutant emissions in disadvantaged areas.

**(2) Ease of administration (for CARB and regulated entities).** For CARB and for impacted industries, the ease of administration would depend upon the degree to which allowances can be easily tagged and traced to their source. That traceability would be particularly important if a dynamic allowance market develops that goes beyond one-on-one transactions.

**(3) Economic impact.** The economic impact of this approach on regulated entities would depend upon the extent to which the zonal trading program impacted the availability, and associated cost, of allowances; the cost of emissions reductions (as an alternative to purchasing allowances); and the number of facilities affected by the restrictions.<sup>37</sup>

As with all of these mechanisms, the higher allowance prices would reflect the higher social costs associated with pollution in disadvantaged zones. As Prof. Boyce notes, since “co-pollutants result in variations in marginal abatement benefits, ... permit price differentials can be an efficiency-improving result.”<sup>38</sup>

**(4) Implications if a federal cap-and-trade program is adopted.** A zonal trading program would be difficult to implement under a federal trading program. Although currently proposed federal legislation would allow states to establish their own allowance compliance submission requirements, California would not be able to “tag” allowances (and label them as from a polluted versus an unpolluted area) if the allowances are generated outside of California’s

<sup>37</sup> In the RECLAIM program, allowances in the restricted area cost 8 times more than allowances in the unrestricted zone. See Boyce, *supra* note 14, at 11.

<sup>38</sup> *Id.* at 11.

jurisdiction. Any effort to limit trading to allowances created within California would likely be deemed unlawful under the Dormant Commerce Clause.

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#### **Option 5: Enhanced Offset Restrictions in Disadvantaged Areas**

Since the use of offsets results in less of a co-pollutant reduction benefit from covered facilities, one option could be to limit the use of offsets by facilities in disadvantaged areas. This approach could increase the cost of emissions (assuming that allowances and offsets retain separate prices in the allowance market), and could thereby create an indirect incentive for emissions reductions.

However, it appears to be a fairly blunt instrument for accomplishing its objective, since facilities could continue emitting by purchasing allowances rather than offsets. Policies that focus on the use of all compliance instruments, both allowances and offsets, appear better suited to accomplishing emission reduction objectives in disadvantaged areas. And concerns about offset use could be more directly addressed through controlling the use of offsets at all facilities, not just in disadvantaged areas. For these reasons, I do not discuss this option further.

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#### **Option 6: Require Use of In-State Offsets**

Some have suggested that California should accept only offsets that have been generated within the state. That policy could be motivated by a number of factors, including ensuring that California receives the benefits, both environmental and economic, of offsets. The policy could have co-pollutant benefits because some potential offsets, like reducing manure-related agricultural emissions, would also reduce co-pollutants.<sup>39</sup>

**(1) Degree and certainty of GHG reductions (and associated co-pollutant benefits) in disadvantaged areas.** This approach would concentrate offsets' co-pollutant reduction co-benefits within California. However, it would not provide a mechanism for controlling the nature or distribution of those co-benefits. For example, if an urban facility purchased agricultural offsets, that transaction could reduce rural pollution, but it would not address the urban emissions enabled by the offset transaction.

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<sup>39</sup> See DAVID ROLAND-HOLST, CARBON EMISSION OFFSETS AND CRITERIA POLLUTANTS: A CALIFORNIA ASSESSMENT (2009), available at [http://www.ucsusa.org/assets/documents/global\\_warming/Offsets-and-Criteria-Pollutants.pdf](http://www.ucsusa.org/assets/documents/global_warming/Offsets-and-Criteria-Pollutants.pdf).

It is also unclear how many offsets would be generated by activities that reduce co-pollutants. Many offset opportunities, like timber conservation or soil tillage practices, sequester carbon rather than reducing co-pollutants. While those offsets may have their own important co-benefits, they do not lead to co-pollutant reductions.

A more direct way of achieving the co-pollutant reduction benefits associated with certain offsets, like agricultural or landfill reductions, would be to require such reductions directly, rather than relying upon the offset market to incentivize and pay for such reductions. If agricultural or landfill reductions are available as offsets, then they simply replace reductions in other sectors. More co-pollutant reductions would be achieved by requiring reductions in both industrial and agricultural/landfill emissions.

(2) **Ease of administration (for CARB and regulated entities).** California would have more control over offsets generated within California, and so its administration of California offsets could be more effective than relying upon offsets generated outside of California.

It is not clear how the burden associated with a California-offsets-only policy would compare with accepting out-of-state offsets, since the comparison would depend upon the relative complexity of California's process for accepting out-of-state offsets. The more California attempts to independently verify out-of-state offsets, the greater the burden of out-of-state offsets. However, if California were to simply accept out-of-state offsets (presumably approved by an out-of-state entity), then accepting out-of-state offsets could impose less administrative burden than verifying in-state offsets (with, however, perhaps some loss to the effectiveness of the state's control).

(3) **Economic impact.** Limiting California facilities to in-state offsets could deprive state facilities of low-cost offsets generated elsewhere. At the same time, however, limiting California facilities to in-state offsets would provide other California entities, like the timber and agriculture sectors, with the profits associated with the offsets.

(4) **Implications if a federal cap-and-trade program is adopted.** Limiting offsets to those generated in California would be problematic if a federal trading program is adopted. Industries opposed to the limitation would likely challenge it as a violation of the Commerce Clause, particularly since it explicitly discriminates against offsets generated in other states and could be viewed as protectionist to California's economic interests.

Presumably, such a measure would also be highly controversial within the Western Climate Initiative, if that trading program were to become operational prior to the adoption of a federal program.

46-8  
Cont'd



**Option 7: Use Auction Revenue to Reduce Co-pollutants in Disadvantaged Areas**

If allowances are auctioned, a certain percentage of auction revenue could be dedicated to helping disadvantaged communities. The California legislature is considering legislation to create this type of “community benefits fund” (“CBF”).<sup>40</sup> One potential use of the CBF would be to reduce co-pollutants, particularly in communities where the GHG trading program has not generated emissions reductions.

**(1) Degree and certainty of GHG reductions (and associated co-pollutant benefits) in disadvantaged areas.** The degree and certainty of GHG reductions would depend upon how fund revenue was distributed and the uses to which such revenue could be put. If directly channeled to communities that have not received co-pollutant reduction benefits from the trading program and dedicated to co-pollutant reductions, then the fund could address co-pollutants in disadvantaged areas with a fairly high degree of effectiveness and certainty. However, if affected communities must apply for funds (as is proposed in current legislation), then there is no guarantee that communities experiencing a maintenance or increase in emissions would apply for and receive grant funds. In addition, CBF proposals have generally allowed the funds to be used for a wide variety of important benefits, including alternative energy and adaptation, so it is not clear that communities would use the funds for co-pollutant reductions.

This proposal has inherent value as a mechanism for using revenue from the trading system to help disadvantaged communities. It does not, however, provide a direct mechanism for meeting AB 32’s co-pollutant goals.

**(2) Ease of administration (for CARB and regulated entities).** This proposal would operate outside the trading process, and so would not create additional burdens within the trading program. It would, however, require a separate administrative process for administering the community benefits fund.

**(3) Economic impact.** Assuming that allowances were auctioned in any case, this proposal addresses the distribution of the revenue, not the cost to regulated entities. This memorandum will not address the much larger question of the economic impact of auctioning allowances versus distributing them for free.

**(4) Implications if a federal cap-and-trade program is adopted.** If a federal cap-and-trade program were adopted, California would lose the ability to auction allowances. The extent

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<sup>40</sup> AB 1405, California Global Warming Solutions Act: Community Benefits Fund (introduced February 2009), available at: [http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab\\_1401-1450/ab\\_1405\\_bill\\_20090901\\_amended\\_sen\\_v93.pdf](http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_1401-1450/ab_1405_bill_20090901_amended_sen_v93.pdf). The bill is currently inactive.



to which California could continue to operate a community benefits fund would depend upon the extent to which a federal program directed auction revenue to the states and gave the states the flexibility to use auction revenue for reducing co-pollutants. It is also conceivable that California would be able to generate revenue through other mechanisms, like fees, in lieu of allowance sales.

### **Conclusion**

The foregoing analysis demonstrates that CARB does have options for addressing the co-pollutant implications of its trading policy and that such options can and should be rigorously evaluated. These comments do not recommend a particular mechanism; instead, they are designed to assist CARB in conducting its analysis of potential options. The analysis is intended to be illustrative rather than definitive. Other variables may be relevant to CARB's analysis. There may be other viable mechanisms for addressing the co-pollutant consequences of a GHG trading program. And the analysis itself would undoubtedly benefit from CARB's detailed understanding of the impacted industrial sectors and their likely behavior under a trading program.

## **Part III: Miscellaneous Comments on the PDR**

### **Offset Use**

By allowing 4 percent of emissions to be covered by offsets, the state is allowing covered facilities to rely heavily upon offsets rather than their own reductions. Assuming that the 4 percent of emissions represents 49 percent of the required emissions *reductions*, the covered sectors are likely to reduce emissions by much less than they would have absent such a generous offset policy. The chances of increasing or maintaining co-pollutants in disadvantaged areas are much higher if the covered facilities are not, in fact, required to make a substantial portion of the reductions themselves. The trading program would be much more effective at simultaneously lowering industrial co-pollutants if the covered sectors were required to make more of their own emission reductions.

As noted above, some of the offset opportunities present their own co-pollutant reduction benefits, like reduced agricultural emissions. While such reductions would clearly benefit the state, it is not clear that there should be a trade-off between industrial and agricultural emissions. The state would achieve greater GHG and co-pollutant reductions if it required both agricultural and industrial reductions, instead of allowing agricultural reductions to substitute for industrial reductions.

46-8  
Cont'd

While the primary focus of these comments is on the implications of California's cap-and-trade program for co-pollutants, it should be noted that the generous offset policy also minimizes the incentive for transformative change by reducing incentives for green alternatives.

CARB has likely proposed a heavy reliance on offsets due to concerns about the cost of the trading program.<sup>41</sup> However, since experience with past trading programs has shown that actual costs are often lower than anticipated, California could take a more nuanced approach to offsets. It could more strictly limit the use of offsets initially. Then, if the price of allowances exceeded certain (high) thresholds,<sup>42</sup> it could progressively increase the level of permissible offsets. (RGGI has adopted a similar approach.)

### **Modifications of the Base Budget in Response to Improved Estimates of Expected Emission Levels**

The PDR's proposal to allow CARB to modify the annual base budget<sup>43</sup> is an important attribute to avoid an insufficiently stringent cap, particularly if economic growth is slow and base emissions are lower than anticipated. However, I recommend that CARB retain the flexibility only to adjust the cap downward, not upward. One of the benefits of a cap is that it holds down emissions even if the state experiences economic or population growth that leads to higher-than-anticipated emissions. It would be more environmentally beneficial to respond to such higher emissions, and the higher cost of allowances that result, through cost containment measures that do not jeopardize the cap.

### **Treatment of Biomass Fuels**

The PDR suggests that facilities combusting biomass fuels would not be required to surrender allowances.<sup>44</sup> Presumably, that approach is intended to create an incentive for biomass combustion. The potential environmental implications, like associated co-pollutants and agricultural implications, should be carefully assessed.

### **Conclusion**

AB 32 presents a unique opportunity and a unique challenge. It allows CARB to adopt a cap-and-trade program, but subjects that trading program to objectives and constraints not faced by other trading programs. By imposing distributional goals on a trading program, AB 32 will

<sup>41</sup> CARB's proposal is consistent with the design principals for the Western Climate Initiative. However, those design principles set 49 percent as the maximum level a state can use; they do not preclude a state from setting tighter limits on offset use.

<sup>42</sup> The thresholds should be relatively high in order to ensure that a sufficient price signal is established for emissions reductions and the promotion of green alternatives.

<sup>43</sup> PDR § 95910.

<sup>44</sup> PDR § 95950.

46-8  
Cont'd

allow CARB to accomplish multiple objectives. While challenging, AB 32 allows CARB to develop a comprehensive, integrated, pollution control plan that will help guide the development of a cleaner, greener, infrastructure for the state.

Thank you for your consideration of these comments. I would be happy to answer any questions or to discuss the comments with you or your staff at you or their convenience. I can be reached at [kaswan@usfca.edu](mailto:kaswan@usfca.edu) or (415) 422-5053.

46-8  
Cont'd

## **L46 Response**

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46-1        The commenter states that the Supplement provides a helpful analysis and that the comments provided are intended as input to ARB and do not address legal adequacies of the Supplement. The letter provides valuable insight for ARB to consider in future policy decisions. The comments focus on actions and measures that could be considered to minimize potential co-pollutant emissions in impacted communities. Please refer to response 4-1 regarding cap-and-trade program design issues.

ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

Nonetheless, the commenter suggests that uncertainty and uneven distribution of emissions are disadvantages of a cap-and-trade program or other market-based trading scheme, and the establishment of individual emission caps on facilities located in impacted communities could minimize potential localized impacts in those locations. ARB notes that previous research suggests otherwise. In a study of the acid rain program, U.S. EPA staff analysis found that under the SO<sub>2</sub> emissions trading program, the largest reductions occurred in areas with the highest emission levels. This finding was true both regionally and at individual plants. Thus, it is possible that the areas with highest emissions could observe disproportionate benefits from a cap-and-trade program. Nevertheless, should a cap-and trade regulation be approved, ARB is committed to monitoring to identify and to address situations where the regulation causes an adverse localized air quality impact. Please refer to responses 37 and 106-4 for additional discussion of adaptive management.

The proposed Cap-and-Trade Regulation is a separate ongoing rulemaking process, and may or may not ultimately be approved by ARB in its currently proposed configuration or with design modifications. The suggested modification to establish emission caps on facilities located in impacted communities is one possible strategy to mitigate localized impacts should localized impacts become an issue under any cap-and-trade regulation. It is important to recognize that none of the GHG reduction measures or regulations supersede any air quality regulations. California air quality is protected under the umbrella of the federal Clean Air Act and the California Clean Air Act which establish ambient air quality standards. Facility-specific emission requirements are established by local air pollution control districts and/or air quality management districts (air districts), which have the authority to limit emissions through the application of stringent emission controls for both new and existing sources. Additional mitigation may be required for mobile and other sources as part of the overall CEQA evaluation. ARB strongly believes that the potential for adverse environmental impacts in localized areas from existing facilities is extremely unlikely with or without a cap-and-trade regulation as emissions are already subject to existing permits, regulatory controls, and enforcement actions. The potential for localized impacts is similar under all of the alternatives evaluated.

The commenter also addresses the issue of offsets in a potential cap-and-trade program. As noted above, the proposed Cap-and-Trade program is a separate ongoing rulemaking process, and may or may not ultimately be approved by ARB in its currently proposed configuration or with design modifications. The Supplement presents the most current estimates of reductions that could be achieved by Scoping Plan measures, prepared in October 2010 based on the CEC 2009 IEPR. Some reductions would be implemented sooner than others, but all reductions must be realized by 2020 in order to reach the AB 32 2020 target.

The commenter suggests that ARB prepare a detailed strategy for its adaptive management approach. ARB is currently developing the adaptive management component of the proposed Cap-and-Trade Regulation, and would be seeking stakeholder input. At least once each compliance period, ARB would use information collected through the mandatory reporting regulation, the proposed Cap-and-Trade Regulation, the industrial efficiency audit, and other sources of information to evaluate how individual facilities are complying with the regulation. If any adverse impacts are identified, ARB would, if feasible, modify the program to lessen the impacts. Please refer to responses 37 and 106-4 for additional discussion of adaptive management.

The commenter has provided numerous valuable suggestions regarding the selection of alternatives presented in the Supplement, and the comparison of the relative merits of those alternatives. The range of alternatives examined in the Supplement is the same as that presented in the 2008 FED, but the level of analysis has been expanded to provide a more in-depth comparison of the alternatives. There are many possible modifications of each of the alternatives that could be considered. The alternatives evaluated were intended to provide context and an understanding of the fundamental differences between the basic approaches that could be implemented to achieve the required GHG reductions. As noted by the commenter, should ARB pursue a cap-and-trade regulation, a combination of the examined alternatives could be designed to potentially achieve specific benefits and minimize less desirable traits of the alternatives as considered individually. This is a valuable observation and several of the suggested modifications may be appropriate to address specific issues, such as localized emissions in impacted communities. ARB is continuing to evaluate other measures that could address these concerns. ARB is currently collecting information on opportunities for further greenhouse gas and co-pollutant emission reductions through the Energy Efficiency and Co-benefits Assessment Regulation for Large Stationary Sources. ARB is scheduled to receive this data by the end of 2011. Staff would initiate a process to ensure that large industrial sources subject to the regulation be required to take all cost-effective actions identified under those audits. The audit results, due to ARB by the end of 2011, would inform the development of regulatory requirements staff intends to propose to the Board in 2012. ARB staff plans to initiate a separate public process in Fall 2011 to discuss metrics and actions to implement this commitment. AB 32 provides ARB the authority to adopt technologically feasible and cost-effective measures regardless of whether they are identified in the Scoping Plan.

46-2 Please refer to response 46-1.

46-3 Please refer to response 46-1.

46-4 Please refer to response 46-1.

46-5 Please refer to response 46-1.

46-6 Please refer to response 46-1.

46-7 Please refer to response 46-1.

46-8 The commenter incorporates her comments submitted in December 2010 on the proposed Cap-and-Trade Regulation. Response 4-1 which explains that the purpose of the Supplement is to provide an expanded

analysis of alternatives examined in the broad programmatic environmental review of the 2008 FED. The purpose is to allow the public and decision-makers to consider broad policy and regulatory alternatives to the proposed project and not to take up particular details about specific design features of each measure, including a cap-and-trade program. These detailed comments on the proposed Cap-and-Trade Regulation are appropriately addressed in the separate rulemaking process for that proposed regulation. The commenter's comments submitted during that rulemaking process addressing its separate environmental analysis will be answered in writing and considered by the decision-makers prior to consideration of that regulation for final adoption in October 2011. Please refer to response 4-1.

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**L47**



July 27, 2011

The Honorable Mary Nichols  
Chair, California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

Subject: **CalChamber's Comments on the Supplement to the AB 32 Scoping Plan  
Functional Equivalent Document as released June 13, 2011**

Dear Chairwoman Nichols:

The California Chamber of Commerce (CalChamber) appreciates the opportunity to comment on the California Air Resources Board (CARB) Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED).

The CalChamber is the largest broad-based business advocate in the state, representing the interests of nearly 15,000 California businesses, both large and small. As the representative of California businesses both directly and indirectly impacted by the promulgation of AB 32 regulations, CalChamber strives to remain a constructive voice throughout the AB 32 implementation process in order to advance the greenhouse gas (GHG) emission reduction goals in a cost-effective manner while protecting California businesses and allowing for economic growth.

CalChamber has long maintained that if designed appropriately, a market-based mechanism such as the cap-and-trade, has the ability to garner significant GHG reductions in a cost effective manner. A well designed cap-and-trade program can provide cost savings for AB 32 implementation and create market incentives that will encourage the innovation and creativity that drives California's economy. To minimize emissions and economic leakage, it is important that key features of such a program include free allowance allocation, a broad use of offsets, and the ability for seamless linking to a regional or federal program. As the state recovers from one of the hardest economic recessions of our time, it is important that CARB also consider trade exposure, the economy and job leakage impact to capped industries within the design elements of a program as it moves forward with the FED.

Contrary to a market based mechanism, direct command and control regulations are too prescriptive, they increase compliance costs and do little in terms of driving economic innovation. Command and control regulations are also limiting and are only applicable to in-state facilities whereas a market based mechanism can expand beyond the state's jurisdiction with a potential linkage to regional, national and international programs. Likewise, a carbon tax policy may provide predictability but it is not necessarily cost-effective and would do little to spur economic and technological innovation.

47-1

47-2

1215 K Street, Suite 1400  
Sacramento, CA 95814  
916 444 6670  
www.calchamber.com

CalChamber has expressed concern with the treatment of fuels under CARB's current proposed cap-and-trade system in previous comments to CARB, and with the revision of the FED, we believe it is appropriate to request that the 2015 inclusion of transportation fuels be revisited. With no Western Climate Initiative (WCI) trading partners ready to link, California will be alone in such a program. A California-only fuels under the program should be further evaluated with all economic impacts taken into consideration – including cost and consideration for the fact that California is already implementing the Low Carbon Fuel Standard (LCFS). Given the importance of transportation on California's economy, and the significance of energy costs to nearly every resident and business in the state, it is imperative that CARB do a thorough analysis of the economic impact of CARB's current proposal to include fuels in a unilateral cap-and-trade program; making sure that costs are minimal and total benefits to California are maximized.

47-2  
Cont'd

To ensure GHG reductions are achieved while maintaining the competitiveness of California businesses and the health of the economy, it is critical for CARB to monitor key indicators of not only the GHG reductions that are occurring, but also indicators of the health of California's economy. As expressed in earlier comments of the Scoping Plan in 2008, evaluation of all the economic impacts is of utmost priority and essential in order to keep the program's credibility. We urge CARB to identify and monitor these key indicators and correct any inadvertent problems that may occur before significant damage is done to California's economy or environment.

We also urge CARB to include a periodic review process of the AB 32 Scoping Plan to ensure emission reduction goals are being met in a manner that is both economically efficient and environmentally sound. Periodic Scoping Plan reviews should include impact assessments of a California-only program to ensure that it meets the economic and emission reduction goals of AB 32. While it's important to ensure the GHG goals of AB 32, it is equally important that consideration and oversight be given to any and all economic impacts, including those industries that would be both directly and indirectly impacted as a result of economic leakage. As CARB moves forward, we hope that these and other important issues are addressed with much diligence and oversight via an open forum that allows for public participation and comment in order to ensure transparency in the process and maintain integrity in the program.

47-3

Again, we appreciate your consideration and the opportunity to comment on the Supplement to AB 32 Scoping Plan FED.

Should you have any questions, please feel free to contact me at (916) 444.6670

Sincerely,



Brenda M. Coleman  
Policy Advocate

## L47 Response

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- 47-1 The commenter states key features should be considered (e.g., free allowance allocation) to minimize emissions and economic leakage. Please refer to response 4-1, 36-1, and 36-2.
- 47-2 The commenter expresses the opinion that direct command-and-control regulations are too prescriptive and increase compliance costs and do little to drive economic innovation. The commenter also indicates that a carbon tax may provide predictability but is not necessarily cost-effective. The commenter also requests that the 2015 inclusion of transportation fuels be revisited in the proposed Cap-and-Trade program. Costs of compliance with the LCFS should be considered, and the commenter requests that a thorough economic impact of including fuels in a cap-and-trade program. The comments do not pertain to the adequacy of the impact analysis of the Supplement. Rather, the comments focus on the design features of the proposed Cap-and-Trade program. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but any specific measure, including a cap-and-trade regulation, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, comments about particular components of specific emission reduction measures (such as a cap-and-trade regulation) do not raise a "significant environmental issue associated with the proposed action" (see CCR section 60007[a] [emphasis added]), because the proposed action (i.e., the Proposed Scoping Plan) does not include adoption of the particular components of specific measures (such as a cap-and-trade regulation).
- To clarify, the proposed Cap-and-Trade program recommended in the Proposed Scoping Plan was proposed as a rule in October 2010 (<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>) and will not be considered for final adoption until October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of the regulation as proposed. (See information at the website: <http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>) The LCFS final statement of reasons can be found at: <http://www.arb.ca.gov/regact/2009/lcfs09/lcfscombofinal.pdf>
- 47-3 The commenter encourages ARB to continue monitoring of economic impacts and to ensure that AB 32 objectives to minimize leakage are met. Comment is noted. The commenter also encourages a periodic review process. AB 32 already requires a periodic review process.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 48 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Matthew  
Last Name: Fidanque  
Email Address: [mfidanque@gmail.com](mailto:mfidanque@gmail.com)  
Affiliation: West Oakland Environmental Indicators Pr

Subject: AB32: Alternative to cap and trade

Comment:

As an environmental policy analyst and social justice advocate, I understand the need to move forward with comprehensive climate change legislation for California. However, the cap and trade system that CARB has advocated is neither equitable nor effective. Rather than giving away pollution rights to corporations, and supporting ineffective and discriminatory offset projects in developing countries, we should focus on reducing greenhouse gas emissions here in our state and charging forward into the clean energy future.

A more productive strategy would be to regulate specific pollution sources, in order to improve the health of our vulnerable communities that live near these sources, and implement a carbon tax, whose revenue can encourage public transportation, energy efficiency projects, and solar and wind generation. We cannot have a "Global Warming Solutions Act" unless it supports solutions for all of us, including communities at risk.

Thank you,  
Matthew Fidanque

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 16:20:15

48-1

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### **L48 Response**

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- 48-1      The commenter expresses support for a direct regulatory approach in combination with a carbon tax. Comment does not raise specific issues regarding the adequacy of the environmental analysis; therefore no revisions to the Supplement are necessary, and no further response is required. Please also refer to response 15-1, 36-1, and 36-2.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 49 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Harvey  
Last Name: Eder  
Email Address: harveyederpspc@yahoo.com  
Affiliation: Public Solar Power Coalition &self

Subject: Comments Supp. to Scoping Plan FED CARB 1HE PSPC

Comment:

Hereby incorporate by reference all of the comments and the complete record that I/we submitted in the spring and summer of last year 2010 in the Cap and Trade proceedings and the 33% Renewable Electric Ssystem RPS.REC.RES in CARBS records including but not limited to the full transcript of The Story of Cap and Trade by Annie Lenard google for same and enter in record, full testimony/comments in the record from South Coast Air Quality Management District in the spring March-June of 2010 including the history of derivatives starting with the Panic of 1907 to present transcript from 60 minutes over the last 10 years record on green house gas and trading proposal. The article cover of Scientific American from November of 2009 onConverting the World by 2030 to solar renewables wind water and solar by Mark Jacobson Env. Engineering Prof at Stanford University and Mark Delucci of UC Davis which is was submitted into the record cited above in full as well as their 2 articles from Dec. 2010 on the same subject in Energy Policy Journal hereby in incorporated into the record.

The supplement to the scoping plan FED under Cap and Trade discusses the problems with SCAQMD RECLAIM Nox trading system in 2000 and 2001 when prices went out of wack and nothing was cited about the gaming of the system done by Enron which also resulted in black outs and brown outs and PG&E going bankrupt and SCEdison within in hours of going bankrupt and the price of electricity sky rocketing. Also incorporated by reference is the program about Enron that included this information played several times over this year and last year onCNBC the finance investment channel. This is a glaring omission to the evaluation of the models for Cap and Trade that is consistent with the record that i we submitted as cited above with CARB last year and here (inb the supplement to scoping plan FED and the extremely adverse environmental socio economic impacts that were omitted from this whole process.

As suggested in the June 8 meeting transcript that was hard to find and onlu listed under the June 7 listing for the comments to the Supplement and not separatelky when searched at the CARB website. AlsoThere shold be hearings in this process to gather info such as cited in the June 8 transcript of the meeting and the numbers that were wrong or omitted should be provided timely for review along with those cited in the June 8 transcript and on the Comments at the June 7 cite. This whole process should ber slowed down. In the meeting with J. Beardsley etc. where i we suggest3ed that a social economic study ber conducted this should have and still needs to be done as was commucated at the meeting in or aboput June 2010 that could be attended by telephone . The June 8 meeting should have been connected by telephons video etc. and was not and inquiry was timely made. I we intend to enter the legal process in this matter.

Only the Cap part of the Cap and trade system in the Supp to the FED scoping Plan whould be used not the Cap and Trade system. Regulation should be used with a co2 equivalent FEE that may be adjusted. The state needs a 10 year solar conversion plan and a back up 20 and 40 year plan as cited in the record by submittal and above/ The 2005 Executive Order made by the Governor for an 80 % reduction of co2e from 1990 levels by 2050 will likely be made into law as the 33% RPS renewable enenenergy implementation was in SX1,2 that became state law this spring. CARB should support with other state energy related agencies a 25% oil production tax like Sara Palin enacted in Alaska except this should be split 50/50% with education and solar conversio( there is an

49-1

49-2

49-3

49-4

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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initiative that is working its way through the ballot in near term coming months that will put a 15% or \$3.6 billion dollar fund for education in California

More comments will follow before the 5pm 7/28/11 deadline

Harvey Eder citizen and Executive Director of the Public Solar Power Coalition there should not be a 60 min limit on comments made through this system. This limits public input and the democratic process !!! harveyederpspc@yahoo.com

5

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 16:02:41

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Cont'd

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## **L49 Response**

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- 49-1      The commenter incorporates his comments submitted in spring and summer of 2010 on the proposed Cap-and-Trade Regulation and the 33 percent renewable electricity regulations along with other documents and transcripts. Please refer to response 4-1 which explains that the purpose of the Supplement is to provide an expanded analysis of alternatives examined in the broad programmatic environmental review of the 2008 FED. The purpose is to allow the public and decision-makers to consider broad policy and regulatory alternatives to the proposed project and not to take up particular details about specific design features of each measure, including a cap-and-trade program. Comments submitted during a separate rulemaking process, including the proposed Cap-and-Trade Regulation, will be answered as part of that rulemaking process. Please refer to response 4-1.
- Also, ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. Further, in accordance with the requirements of CEQA, ARB need not respond to all non-project-specific secondary materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484).
- 49-2      The commenter requests that ARB include information about Enron in the Supplement's general discussion of other cap-and-trade programs. No further response is required because commenter does not specifically explain how this raises a significant environmental issue with regard to the alternatives analysis. Please refer to response 49-1.
- 49-3      The commenter makes various suggestions with regard to ARB's process and timeline. No further response is required this does not raise a

significant environmental issue with regard to the alternatives analysis nor with regard to the procedural requirements of CEQA. Please refer to response 49-1.

- 49-4 The commenter makes various suggestions including a CO<sub>2</sub> fee and solar conversion plan. These suggestions are directed to various policy issues not within the scope of the environmental analysis under consideration and do not require further response. Please refer to response 49-1.



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**L50**

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Mark W. Toney, Ph.D., Executive Director

June 9, 2011

Chairperson Mary Nichols  
California Air Resources Board  
Sacramento, CA 95814

**RE: Replace Cap-at-Trade with More Effective GHG Reduction Measures**

Dear Chairperson Nichols,

TURN has been a strong advocate for AB 32 as innovative and comprehensive policy to reduce emissions and to help transform California to a zero-emissions, clean energy economy. As the AB32 statute acknowledges, fairness in reducing air pollution and avoiding increased air pollution in these heavily burdened communities also turns out to be the best thing for all Californians to address climate change, smog, and rebuild California with a green economy.

TURN strongly urges the Air Resources Board to comply with the recent court ruling directing it to conduct a thorough assessment of cap-and-trade alternatives before choosing a final mechanism for reducing industrial GHG emissions. It is our position that such an assessment will identify a strategy to replace the cap-and-trade proposal with effective direct emission control programs that will enable California to meet the crucial goals of AB 32 to avoid catastrophic climate change, while also reducing the co-pollutants that contribute to severe health problems in low-income communities of color, where the very largest polluters are located.

It is important that this assessment of emission reduction alternatives to cap-and-trade facilitate full public participation and stakeholder input, especially from the environmental justice and consumer advocacy communities. Done properly, this assessment can provide the ARB with the opportunity to thoroughly examine proven alternatives to cap-and-trade measures and to adopt those that prove most effective in meeting the requirements of AB 32.

We believe that replacing cap-and-trade with more effective GHG reduction measures will make a significant contribution in advancing California as the leader in the global effort to stop global warming, and in safeguarding the environment and health of all Californians.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Toney".

Mark Toney  
Executive Director

50-1

## **L50 Response**

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- 50-1      The commenter opposes cap-and-trade. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L51**

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**COMMENT 51 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Brian  
Last Name: Beveridge  
Email Address: [brian.woeip@yahoo.com](mailto:brian.woeip@yahoo.com)  
Affiliation:

Subject: Carbon tax, not cap and trade

Comment:

Cap and trade does little for our local communities and what is worse, often allows polluters like refineries to pollute locally and buy redemption across the ocean somewhere. A carbon tax market will allow the same financial incentive for every carbon producer with less burden on local communities of color.

I urge the CARB to recognize this fundamental environmental justice issue and recomend carbon taxing, not cap and trade, to the legislature.

thank you, Brian Beveridge

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 17:05:12

51-1

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### **L51 Response**

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51-1            The commenter recommends a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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### Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 52 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: James  
Last Name: Demeter  
Email Address: james@demeteramps.com  
Affiliation: California Manufacturer

Subject: What if

Comment:

What if this whole Man caused Climate Change Thing is a fraud and the science is proven wrong? This is happening now as the computer models used by the IPPC fall into error and the planet refuses to warm. Will you cancel this super job Killing farce before it is too late? More and more real science is coming out proving that natural variations are driving climate change. You continue to generate more and more rules and regulations That will drive out all industry and ruin this once Golden State. My science class taught CO2 is plant food and all life is dependent on it, but that was before politics corrupted the classroom.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 17:02:05

52-1

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## **L52 Response**

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- 52-1      The commenter contends that climate change is a fraud. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 53 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Ravahn  
Last Name: Samati  
Email Address: ravahn.samati@gmail.com  
Affiliation:

Subject: Consider Cap & Trade Alternatives

Comment:

I hope that the Board will consider the alternative Carbon Tax to Cap and Trade. This is a much more transparent approach to pricing carbon. Also, the revenues go to the state, which can use it to close the budget gap, re-fund our public transportation systems, schools, and social services, and invest in green energy.

Simultaneously, regulate specific pollution sources. A carbon tax makes it more expensive to pollute, but does not always guarantee less pollution. That's why it's a good idea to combine this policy with strict enforcement of clean air laws with the biggest polluters, such as oil refineries, making sure to clean up the environment for the communities that live around them.

The "trade" part of Cap & trade is problematic. It allows companies that want to continue emitting to buy credits from those that emit less. In addition companies were able to game the cap-and-trade system to make money for polluting by getting credits given away by government with no real reductions in emissions at all. This has been the case in the European Union.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 18:45:30

53-1

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### **L53 Response**

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53-1      The commenter requests that the Board consider a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 54 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Harvey  
Last Name: Eder  
Email Address: harveyederpspc@yahoo.com  
Affiliation: Public Solar Power Coalition &self

Subject: Comments Supp. to Scoping Plan FED CARB Part 2 HE PSPC

Comment:

This is part 2 of comments due to lack of them on part 1 submitted  
2 hours ago today 7/27/11

The 22MMTons of co2/co2e? reductions cited in the Supplement to scoping plan FED cites that LCFS Low Carbon Fuel Standards will be used in excess of 10MMTons reductions co2/ co2E ? to meet the total goal of apx. 450MMTco2/co2e? goal for the state by 2020. There was a meeting of the LCFS workgroup apx. 1 month ago that he/PSPC participated in on the phone and gave comments during the public section of that meeting in Sacramento. The issue of Cap and Trade was cited in the meeting and that a sub group of the LCFS would meet to work on Cap and Trade or market mechanism for implementing the LCFS Low Carbon Fuel Standard. This is illegal and the instant proceedings supersede the/ any activity taking part in the LCFS area. It is rather part of this proceedings. The activity of the LCFS group must stop until these proceedings are resolved. Apparently there was it was reported in the meeting that there has been some staff/ structural reorganization of the Cap and Trade people now some most of all working on LCFS. This is possible an end run by CARB to go around the Courts decision. All of the numbers have to be reevaluated.

The issue of fuel switching as in the diesel to low sulfur diesel in the recent past, and CARB etc et al have been pushing natural gas as the Clean Alternative Fuel to the tune of \$2 billion

Through the Carl Moyer Program etc. converting buses and now refuels trucks. PSPC has participated in the process before the LCFS was established by the board or the SCoping plan over the past few years. raising the issue of ch4/methane as well as nitrous oxide emissions over the life of vehicles. During the history of the proceedings over the past few years the only data on this subject was provided with Michael Benjamin and Cody Livingston providing info on studies on methane emission etc., over the life of a vehicle. This was ignored by CARB staff and incorporated into the record is the communications with staff including cochair of the LCFS group Jim Duffy who was sent a copy link of , along with John Curtis

of CARB staff of the Washington D.C study of Metro Buses over time done by NREL/DOE Univ. of West Virginia which is also incorporated herein the record. CARB has not and does not plan to study what happens over time to natural gas vehicles. neither is CEC, Fed EPA DOE etc. and there is proposed legislation in Congress to convert the nations truck . and bus fleet to natural gas without studying this. This needs to be done as soon as possible. SCAQMD recently said they were going to look at only 2 buses in a study of 22 buses. The grams of ch4 emissions per mile for buses was .3 used in the Feb 2009 LCFS for LNG & CNG fuels while the Washington D.c. study cited 10 and 17 grams per mile of ch4 and a report done last year for South Coast for trucks found from 45 to 100 grams ch4/methane per mile emitted. GHG must be measured and considered in this proceeding completely without an end run or further omissions !!! Dr. Duffy was sent this info over 1 year ago and over 2 years ago info was cited to Anal Prabu and John Curtis without response and more recently as well !!! Pickens has money but his plan needs to be evaluated along with the environmental impact on water of fracking and included in this supplement to the scoping plan FED.

More comments will follow before 5pm tomorrow.

Attachment:

54-1

54-2

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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### **L54 Response**

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- 54-1      The commenter notes this comment submission is a continuation of a comment submitted earlier (Comment # 49). The commenter's point is unclear, but appears to be directed at the separate activity associated with the Low Carbon Fuel Standard (LCFS). The LCFS is a separate activity not directly under consideration in this proposed action and to response regarding the LCFS. No further response is required as commenter raises no significant environmental issue related to the environmental analysis of the alternatives in the Supplement. Please also refer to response 49-1.
- 54-2      The commenter makes general references to other ARB rulemaking activities. No further specific response is required as commenter raises no specific significant environmental issue suggesting specific revisions to the environmental analysis. Please refer to response 54-1.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

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COMMENT 55 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Laurie & Allan  
Last Name: Williams/Zabel  
Email Address: [williams.zabel@gmail.com](mailto:williams.zabel@gmail.com)  
Affiliation: Private Citizens & Volunteers CCL

Subject: Comments on Supplement to Scoping Plan - Flaws of Using GHG Offsets

Comment:

AB 32 Supplement to Scoping Plan - Comment submitted July 27, 2011

COMMENT ON SUPPLEMENT TO AB 32 SCOPING PLAN FUNCTIONAL EQUIVALENT  
DOCUMENT ♦ IMPLEMENTATION OF AB32

Comment by Laurie Williams & Allan Zabel on behalf of ourselves as private citizens, as residents of California and as volunteers, writing on behalf of Citizens Climate Lobby, a non-profit organization based in San Diego, California, asserting that adoption of the proposed greenhouse gas offset program, regulations and protocols is arbitrary and capricious and contrary to the intent and requirements of AB 32, the California ♦s Global Warming Solutions Act of 2006.

The California Air Resources Board (♦CARB♦) has repeatedly acknowledged that in order to maintain the integrity of the cap-and-trade system, any greenhouse gas offsets must be verifiable, enforceable and ♦additional♦ (see Supplement at p. 53, ♦Offsets must meet rigorous criteria that demonstrate that the emissions reductions are real, permanent, verifiable, enforceable, and quantifiable. To be credited as an offset, the action or project must also be additional to what is required by law or regulation or would otherwise have occurred♦). CARB♦s staff report on Offsets notes that AB 32 requires these criteria to be met. See, e.g., Staff Report on Compliance Offset Protocols for U.S. Ozone Depleting Substances Projects, dated October 13, 2010 at page 1. As explained in our prior comments, which are hereby incorporated by this reference and provided in full below, these criteria cannot be met with respect to greenhouse gas offsets and are not met by the proposed protocols or regulations. See our comments dated December 13, 2010 regarding the offsets and offset protocols, and our July 30 and August 1, 2008 comments, regarding the disadvantages of a cap-and-trade program, including the damage to such a program's integrity from offsets.

In addition to our prior comments, we provide the following additional comments on the Supplement to the Scoping Plan:

1. No Response to Prior Comments: We have not seen any response to our prior December 13, 2010 comment on the fatal flaws of the greenhouse gas offset program and protocols. Nor have we seen a response to our July 30 and August 1, 2008 comments on the flaws of cap-and-trade with offsets as an approach to addressing greenhouse gases. The San Francisco Superior Court decision dated March 18, 2011 ([http://op.bna.com/env.nsf/id/smiy-8f6uv7/\\$File/CARBborder.pdf](http://op.bna.com/env.nsf/id/smiy-8f6uv7/$File/CARBborder.pdf) ♦Sup. Ct. Decision♦) states that CARB is required to respond to comments prior to making a decision. We do not believe it is legal for CARB to move forward with adopting or approving the offset program and/or protocols until our comments have been presented to the Board and responded to in writing. See Sup. Ct. Decision at p. 33, citing Cal. Code Reg. tit. 17, ♦ 60007, subd. (a). Please note, not only did CARB fail to respond in writing to our comments, but CARB also failed to respond in writing to other commenters who described the flaws of offsets and their potential to undermine the integrity of the AB 32 program.

2. Program Violates AB 32♦s Requirements: Our conclusion is that the AB 32 requirements for greenhouse gas offsets in AB 32 are not met by the proposed program and protocols. In addition, we describe what we believe to be the unfixable flaws of the offsets approach and conclude that offsets should not be part of the AB 32

55-1

55-2

55-3

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=ceqa-sp1...>

program to reduce Greenhouse Gas (GHG) emissions. The proposed regulation provides admissions of uncertainty and lack of enforceability. For instance the statement at page 9: (35) Business-as-Usual Scenario means the set of conditions reasonably expected to occur within the offsets project boundary in the absence of the financial incentives provided by offset credits, taking into account all current laws and regulations, as well as current economic and technological trends. Reasonably expected to occur in this context is speculative and subjective and cannot be part of an enforceable standard. The proposed regulation states that additionality includes: activities, that result in GHG reductions or GHG removal enhancements, are not required by law, regulation, or any legally binding mandate applicable in the offset project's jurisdiction, and or any GHG reduction or GHG removal enhancement activities that would not otherwise occur in a conservative business as usual scenario. (Emphasis added; see <http://www.arb.ca.gov/regact/2010/capandtrade10/candtmmodreg.pdf> at page 170.) The use of the term conservative does not make this speculative standard enforceable or verifiable. The net result of these flaws, and the others discussed in our December 13, 2010 comment, will be a system that claims reductions based on activities that have already happened and would have happened without the offset credit program. This in turn will result in false accounting and a failure to correct the incentives that are keeping GHG emissions at dangerous, unsustainable levels, thereby locking in additional climate degradation.

3. The Proposed Offsets Represent a Substantial Portion of Required Reductions: The Supplement confirms that up to 8 percent of all compliance obligations can be met with offsets. While CARB notes that a reduction is required from projected 2020 emission levels of 507 million metric ton CO<sub>2</sub>e to 427 million metric ton CO<sub>2</sub>e emissions, current 2011 levels are not noted, nor is the percentage reduction needed to reach the goal of 1990 levels by 2020. However, the Electric Power Research Institute's paper Overview of the California Greenhouse Gas Offsets Program, dated April 2011, states at page 10 states that, if the maximum quantity of offsets is submitted for compliance, offsets could be used to satisfy as much as 85% of required reductions. See [http://globalclimate.epri.com/doc/EPRI\\_Offsets\\_W10\\_Background%20Paper\\_CA%20Offsets\\_040711\\_Final2.pdf](http://globalclimate.epri.com/doc/EPRI_Offsets_W10_Background%20Paper_CA%20Offsets_040711_Final2.pdf) at p.10. Even if a smaller percentage of compliance obligations are met with offsets, it is clear that offsets are intended to be a substantial portion of required reductions and their failure to represent real, additional, enforceable reductions could be extremely damaging to California's efforts to address climate change, as well as to the efforts of the many states and countries expected to follow California's lead.

4. Using Offsets to Keep Costs Low Undermines Incentives for Efficiency, Investment and Individual Decisions that Would Reduce Emissions: The Supplement repeatedly indicates that an important function of offsets is (1) to keep the costs of compliance low (cost containment mechanisms see Supplement at p. 52) and (2) to thereby prevent leakage of California's industry and attendant polluting activities to other jurisdictions, as well as (3) to address other sectors of the economy not subject to the cap. (1) Keeping Costs of Compliance Low: Relying solely on compliance with caps and low cost offsets to reduce emissions, rather than an increase in fossil fuel prices, hurts many of the incentives that would drive the rapid transition to a clean-energy economy that is needed to avert dangerous climate change. For instance, if CARB were to adopt carbon fees that rose predictably, to insure that clean energy would become cost-competitive with fossil fuels within a known time frame, this would create huge incentives for a shift in private investment from fossil fuel energy into clean energy infrastructure and innovation as well as into energy efficiency. Similarly, individuals and businesses would experience a strong incentive to be creative in reducing their carbon footprint. In this respect the cost containment approach of greenhouse gas offsets is not only lacking in integrity but also undermines a critical incentive needed to provide the rapid reductions without which costly and potentially irremediable effects of climate change are likely to become inevitable. (2) Leakage of emissions is a significant concern. As noted in the Scoping Plan, one way to address leakage is border adjustments, adding costs to goods that arrive from jurisdictions whose regulations do not have programs to address greenhouse gases and rebating costs to goods that travel from California to other jurisdictions. (See Supplement at p.92.) While such border adjustments can be more easily imposed on international trade, it may be possible to impose such adjustments on interstate commerce as long as the adjustments merely create a level playing field for out-of-state businesses and are not protectionist. However, the potential for leakage to occur is not an excuse for adopting a fatally flawed and unworkable approach, such as cap-and-trade with greenhouse gas offsets. Essentially,

55-3  
Cont'd

55-4

55-5



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=ceqa-sp1...>

CARB fails to acknowledge that higher prices for activities that produce greenhouse gases are an extremely valuable tool for driving greenhouse gas reductions. CARB instead claims that keeping costs low is a higher value, discarding the alternative as politically and legally untenable, rather than analyzing this alternative as required by the Superior Court decision and State law. If carbon fees would be more effective but less implementable in California, CARB should acknowledge this. As noted in our paper, ♦Keeping Our Eyes on the Wrong Ball♦ (incorporated by this reference and available at:

<http://www.carbonfees.org/home/Cap-and-TradeVsCarbonFees.pdf> ), carbon fees returned to residents in equal monthly rebates can keep energy affordable while creating strong incentives for investments in clean energy and energy efficiency. (3) Addressing other Sectors: Nor should the need to address other sectors, such as forestry and agriculture, be an excuse for using unverifiable and unenforceable GHG offsets to address our fossil fuel usage. A separate program of regulation and incentives for increased forest cover and better agricultural practices would have greater integrity and make sure we do not confound the accounting necessary to determine whether we are making appropriate reductions in the energy and industrial sectors.

PRIOR COMMENTS ♦ INCORPORATED BY REFERENCE AND BELOW:

Comment submitted December 13, 2010 and available at:

[http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=capandtrade10&comment\\_num=878&virt\\_num=521](http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=capandtrade10&comment_num=878&virt_num=521)

COMMENT ON PROPOSED ADOPTION OF A CALIFORNIA CAP ON GREENHOUSE GAS EMISSIONS AND MARKET-BASED COMPLIANCE MECHANISMS REGULATION, INCLUDING COMPLIANCE OFFSET PROTOCOLS ♦ IMPLEMENTATION OF AB32

Comment by Laurie Williams & Allan Zabel on behalf of themselves as private citizens of California and as volunteers, writing on behalf of Citizens Climate Lobby, a non-profit organization located in San Diego, California, asserting that adoption of the proposed offset protocols is arbitrary and capricious and contrary to the intent and requirements of AB 32, the California♦s Global Warming Solutions Act of 2006.

Overall Point ♦ AB 32 requires that greenhouse gas (♦GHG♦) offsets be ♦real, permanent, quantifiable, verifiable, enforceable, and additional.♦ Adoption of the proposed Offset Protocols by the California Air Resources Board is arbitrary and capricious and should be rejected because the protocols for proposed GHG offsets cannot meet these standards. In addition, to the extent that GHG offsets are not additional, they destroy the integrity of the entire program by allowing additional GHG emissions from the capped sector above the ♦cap♦ that will not be offset by additional emission reductions elsewhere. Finally, because California♦s program is looked to as a model and proof of concept, adoption of this flawed mechanism would be extremely damaging to national and international efforts to effectively reduce GHG emissions. Adoption of GHG offsets as part of the California program would serve as a template for such programs, encouraging others to pursue this flawed approach to the most urgent problem facing humanity, increasing the chances of catastrophic climate change, and defeating the stated purpose of AB 32. Under the proposed action, ♦covered entities can use offset credits to satisfy up to eight percent of the entity♦s total compliance obligations.♦ See Notice of Public Hearing at p. 5. This 8% of the compliance obligation is very significant percentage of the total reductions sought.

Fatal Flaws of GHG Offsets - To be credited as an offset, the staff report states that a project ♦must also be additional to what is required by law or regulation or would otherwise have occurred.♦ See ARB Staff Report, page 35 of 472. (Emphasis added.) Our analysis focuses primarily on the latter requirement. As demonstrated in our Whistleblower Disclosure (♦Williams/Zabel Disclosure♦), dated July 22, 2010 ([http://www.carbonfees.org/home/Whistleblower\\_Disclosure\\_to\\_Congress\\_7-21-10.pdf](http://www.carbonfees.org/home/Whistleblower_Disclosure_to_Congress_7-21-10.pdf)),

GHG offsets of the type that ARB proposed to adopt are fatally flawed and cannot be fixed. There is no reliable way to distinguish offset projects which will occur because of the offset incentive from those which would have happened anyway because of the following four unfixable flaws of GHG Offsets:

♦ Additionality: Whether reductions outside the capped sector are additional is necessarily a hypothetical inquiry and such an inquiry cannot reliably distinguish business-as-usual. Specifically, it is impossible to know what ♦otherwise would have occurred♦ and therefore it is not possible to create an offset program that reliably excludes business-as-usual activities from being counted as ♦additional.♦ (See U.S. Government Accountability Office discussion below, confirming this conclusion.)

♦ Leakage/Shifting Economic Activity: In some cases, such as in the context of forestry projects, the offsets will fail to appreciably mitigate demand and the polluting activity (such as logging) will

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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simply shift elsewhere;

◆ Perverse Incentives to Increase Emissions and Keep Them Legal: GHG offsets create perverse incentives to keep polluting activities legal and in some cases to increase them, so they can keep being sold as offsets (Note: this dynamic is recognized in the Ozone Depleting Substances (◆ODS◆) Protocol re: HCFC-22 by-product HFC-23 destruction in the United Nations Clean Development Mechanism (◆CDM◆), see ODS Protocol at p. 11 of 67); and

◆ Unenforceable: The complexity and subjectivity of offsets renders them impossible to certify, regulate or enforce.

As explained in our discussion below of each of the four proposed offset protocols suffers from one or more of these flaws and would result in approval of non-additional projects in violation of AB 32. As a result, it would be arbitrary and capricious to adopt the proposed GHG offset protocols as part of the proposed cap-and-trade program

See also, U.S. Government Accountability Office, March 2009

-Observations on the Potential Role of Carbon Offsets in Climate Change Legislation at p. 12, GAO-09-456T (<http://www.gao.gov/new.items/d09456t.pdf>). ◆Because additionality is based on projections of what would have occurred in the absence of the CDM [United Nations Clean Development Mechanism], which are necessarily hypothetical, it is impossible to know with certainty whether any given project is additional.◆ (Emphasis added.)

Keeping Our Eyes on the Wrong Ball - Offsets are described in the Staff Report as a ◆cost containment mechanism,◆ which offers additional low-cost emissions-reduction opportunities. See Staff Report at page 14 of 472. However, cost containment interferes with another goal cited in the Staff Report -- to ◆stimulate investment in clean and efficient technologies.◆ See Staff Report at page 11 of 472. Keeping the price of fossil fuel emissions lower by allowing offsets delays investment in clean energy technologies and energy efficiency by keeping fossil fuels cost competitive. As a result, such ◆cost containment◆ defeats the goal of a rapid transition to clean energy and energy efficiency. See <http://www.carbonfees.org/home/Cap-and-TradeVsCarbonFees.pdf>

Critique of Proposed GHG Offset Protocols for AB 32:

The four offset protocols proposed for adoption by the ARB are Livestock Manure (Digester) Projects, U.S. Ozone Depleting Substance Projects, U.S. Forest Projects and Urban Forest Projects.

We provide a specific critique of why each of the protocols cannot meet the AB 32 requirements below:

(1) Livestock Manure (Digester) Projects

The digester performance standard contradicts AB 32 requirement of additionality:

As noted above, key element of additionality is that the project is additional to what ◆would otherwise have occurred.◆ See ARB Staff Report at p. 35 of 472.

a. Significantly Better Than Average: The offset protocol for Livestock Manure Digester Projects fails to meet this standard of additionality by having a performance standard that allows all such digesters to be offsets on the basis that a digester ◆is significantly better than average.◆ See Livestock Protocol at p. 9 of 68. Thus, the protocol redefines ◆what would have occurred otherwise◆ to include what is already occurring at some facilities.

◆Data shows that California livestock operations (dairy, in particular) manage waste in a manner primarily in liquid-based systems that are very suitable for digesters. Yet even in these favorable conditions digesters are found on less than 1% of the dairies,◆ (Id.) (however, the majority of the farms that currently have digesters are significantly larger than the average California dairy.)

b. Evidence that Digester Projects Can Be Profitable Without Offset

Payments: A December 2009 announcement by the U.S. Department of Agriculture and the U.S. Department of Energy indicates that

◆Currently, only about 2% of U.S. dairies that are candidates for a profitable digester are using the technology, even though dairy operations with anaerobic digesters routinely generate enough electricity to power 200 homes.◆ See,

[http://apps1.eere.energy.gov/news/news\\_detail.cfm/news\\_id=15685](http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=15685).

The Department of Energy has confirmed that ◆A biodigester usually requires manure from more than 150 large animals to cost effectively generate electricity. Anaerobic digestion and biogas production can also reduce overall operating costs where costs are high for sewage, agricultural, or animal waste disposal, and the effluent has economic value. In the United States, the availability of inexpensive fossil fuels has limited the use of digesters solely for biogas production. However, the waste treatment and odor reduction benefits of controlled anaerobic digestion are receiving increasing interest, especially for large-scale livestock operations such as dairies, feedlots, and slaughterhouses.◆ See,

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[http://www.energysavers.gov/your\\_workplace/farms\\_ranches/index.cfm/mytopic=30005](http://www.energysavers.gov/your_workplace/farms_ranches/index.cfm/mytopic=30005).

c. Existing Projects: The proposed program appears to allow existing digester projects to count as additional to what otherwise would have occurred. The ARB staff report states, "The proposed regulation also includes a process for offset credits from qualified existing offset projects operating under specific offset protocols to be accepted into the compliance offsets program." See ARB Staff Report at p. 78 of 472. This feature means that existing projects -- project that are currently in progress -- can be counted as additional to what otherwise would have occurred. The net result is a system that allows profitable, existing projects and approaches to methane reduction to be used to allow emissions above the cap in the allegedly capped sector.

d. Perverse Incentive to Increase Emissions (Digester Offsets May Increase Emissions and Cause Other Environmental Harm): The ARB Livestock Manure Protocol Report notes that "The installation of a BCS [Biogas Control Systems] at an existing livestock operation where the primary manure management system is aerobic (produces little to no methane) may result in an increase of the amount of methane emitted to the atmosphere. Thus, the BCS must digest manure that would primarily be treated in an anaerobic system in the absence of the project in order for the project to meet the definition of an offset project." See Livestock Report at p. 19 of 68, FN 5. This footnote provides an important admission that proposed Digester Protocol may encourage an increase in emissions as a means to gain offset payments. Specifically, manure could be, and sometimes is, processed in an aerobic environment, producing little to no methane. An example is that manure can provide valuable fertilizer to farming operations and be used instead of petrochemical fertilizers. However, by creating the offset program, ARB may encourage facilities to first switch from an aerobic to an anaerobic process (and hence increasing methane), so that their farm can qualify to participate in obtaining offsets. This decision could also lead to increased use of petrochemicals and other environmental harm.

e. Perverse Incentive to Keep Methane Emissions Legal and Prevent Regulatory Evolution: In addition to potentially encouraging a move to anaerobic conditions so that a dairy would qualify for offsets, the Digester Protocol also creates an incentive for additional market participants to oppose regulation that would require either aerobic treatment or an anaerobic digester. As noted with respect to the other Protocols and in the Williams/Zabel Disclosure, normal regulatory evolution would move in the direction of prohibiting activities that are found to be harmful in significant ways that were not previously appreciated or known. In this case, all facilities that engage in anaerobic storage of manure for more than 150 cows could potentially be required to use a biogas control system and destroy or sell the resulting methane for energy. A law that creates an offset market for this activity creates opposition to a comprehensive regulation that would remove this activity from the offset market and deprive these market participants of the related revenue, creating instead an obligation that has associated costs. The heightened opposition to such regulation should be analyzed as part of what otherwise would occur, in order to fully consider whether the proposed offset protocol creates truly additional reductions outside the capped sector.

f. Summary: In summary, there are five types of evidence that it would be arbitrary and capricious to approve the proposed Digester Protocol for Offsets: (1) the protocol redefines additional as significantly better than average, which clearly includes a type of activity that is already occurring (non-additional) without the offset incentive, (2) the protocol allows offsets for activities that would be profitable even without the offset payment, (3) the protocol allows existing projects to create offsets, (4) the protocol creates a perverse incentive for some farms to increase anaerobic manure storage to increase the chance of offset income, and (5) the protocol increases the incentives for those who profit from the offsets to fight new regulation that would require the capture and/or use of the methane produced by livestock, as this would deprive them of offset profits. In light of these five factors, the degree of additionality created by the Protocol is unknowable and unverifiable and thus fails to meet the required standards for AB 32 offsets.

(2) U.S. Ozone Depleting Substances (ODS) Projects

a. Destruction of ODS from Refrigeration Equipment and Foam: The proposed ODS Protocol would grant GHG offsets for projects which collect and destroy ODS from refrigeration equipment containing ODS and from foam which was manufactured using ODS as a blowing agent.

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Both the ODS refrigerant and the ODS blowing agent must originate from the United States. See ODS Protocol at sections 2.3.1 and 2.3.2 (p. 22 ♦ 23 of 67). The ODS Protocol contains two major flaws. These flaws would allow potential project operators to receive GHG offsets for claimed GHG emission reductions which are not additional. In addition, the ODS Protocol's reliance on unverifiable assertions and records generated by the offset project operator would create opportunities for fraud which would be extremely difficult or impossible to prove once the fraud was completed.

b. Unsupported Assumptions: In explaining how the performance standard of destruction of ODS pursuant to the Protocol would be additional, the Staff Report claims, without providing any supporting citation or materials, that ♦Data shows that less than 1.5% of recoverable US sourced ODS are destroyed upon end-of-life of the [refrigeration] equipment or [foam] material. This indicates that collecting and destroying the ODS is above and beyond common practice and therefore destruction meets the performance standard.♦

Staff Report, page 6. In addition, the ODS Protocol assumes that all ODS recovered from refrigeration equipment is reclaimed for further use. ODS Protocol at sections 2.3.1 and 5.1.1.

c. Destruction of ODS during Business-As-Usual: The combination of these assumptions is important for claiming that all ODS destroyed pursuant to the Protocol are additional for purposes of generating offsets. If ODS removed from refrigeration equipment is not always reclaimed and reused, but for technical and/or financial reasons is sometimes destroyed, the destruction of this ODS would not be additional because it would occur in the course of business-as-usual.

d. Barriers to Reclaiming and Reuse - Title VI of the Clean Air Act: In fact, not all ODS recovered from refrigeration equipment is reclaimed and reused. To be used as reclaimed refrigerant, ODS must meet established specifications under Title VI of the Clean Air Act. To be economically viable as reclaimed refrigerant, ODS removed from refrigeration equipment must not be mixed with other types of ODS and must not be heavily contaminated with oils and other impurities. Either of these problems will most often make the cost of bringing the ODS up to Clean Air Act specification prohibitively expensive. These problems regularly occur and a significant amount of ODS removed from refrigeration equipment is destroyed rather than being reclaimed and reused. The ODS Protocol would allow the generation of GHG offsets from this destruction.

e. Barriers to Verification: The ODS Protocol contains two glaring enforcement weaknesses. First, as stated above the ODS Protocol requires that both the ODS refrigerant and the ODS blowing agent destroyed in a project must originate from the United States. This requirement is not practically enforceable. Once the foam or refrigerant is destroyed, it will be virtually impossible for an enforcement inspector to verify or challenge the paper records kept by the project operator. Second, this hopelessly flawed reliance on paper records generated by the self-interested project operator is a hallmark of the entire verification ♦methodologies♦ in the ODS Protocol. The temptations for a project operator to exaggerate or outright fabricate records will be enormous. If GHG offset prices come close to the offset prices in the European GHG trading program, destruction of a single pound of GHG could be worth nearly \$100. Again, once all the real evidence is gone, e.g., the foam and refrigeration unit are in the landfill and the ODS has allegedly been destroyed, there is little, if any, hope of proving the fraud.

f. Emissions Above the Cap: As with the Digester protocol above, the net result of the unverifiable and non-additional offsets that can be created under this protocol is a system that would allow emissions above the cap in the capped sectors.

g. Perverse Incentive to Keep Landfill Disposal of Foam Containing ODS Legal: Allowing offsets for ODS destruction from foam may also create additional barriers to passage of appropriate regulations that would require ODS destruction before foam containing these substances could be brought to a landfill. Once an offset activity is profitable, those who are profiting will provide additional resistance to the passage of legislation and/or regulations that could provide an across the board, rather than piecemeal solution. In this sense, the proposed offsets do not meet the standard of additional reductions beyond what would have occurred otherwise.

(3) U.S. Forest Projects

a. Reforestation, Improved Forest Management and Avoided Conversion: The proposed U.S. Forest Protocol would grant GHG offsets for three types of projects ♦ reforestation, improved forest management, and avoided conversion. This Protocol contains a plethora of very serious flaws. The most serious of these flaws concern the determination of whether any given forest project is additional, i.e., whether the project would have occurred in the course of business-as-usual. For each type of forestry project, the U.S. Forest Protocol established a performance test. If the project meets the applicable performance standard, the project is

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deemed to be additional. U.S. Forest Protocol at section 3.1.2. (p. 34 of 131.)

b. Performance Standard Approach to Additionality and Business-As-Usual : We have set forth an analysis concerning the common failures of a performance standard approach to determining additionality in the Williams/Zabel Disclosure at pp. 9-11. As detailed below, the U.S. Forest Project Protocol includes a number of these failures that result in include projects which would have occurred in the course of business-as-usual. This is because performance standards of this type are, by their very nature, almost always comparisons to projects which have actually occurred.

In a market economy, the most advanced methods quite often give the business using them a competitive advantage. This is why these advanced pieces of equipment and methods are most often significantly better than average and better than common practice. In a market economy, they are the result of business-as-usual. It violates AB 32's requirement of additionality to grant offsets to such projects.

c. Improved Forest Management and the Common Practice Performance Standard: The U.S. Forest Protocol for improved forest management projects contains several different performance standard flaws. It relies on calculations that involve mind-numbing complexity and a series of subjective and unenforceable judgment calls. This protocol also relies heavily on common practice as its benchmark for additionality. The entire demonstration of additionality is based upon estimating baseline onsite carbon stocks and comparing this to common practice on similar lands in the area of the project. U.S. Forest Protocol at section 6.2.1. (p. 64 of 131.) Since it is impossible to have an objective determination of whether forest management projects are beyond what would otherwise have occurred under this protocol, the offset performance standard clearly fails to satisfy AB 32's requirements that offsets be real, permanent, quantifiable, verifiable, enforceable, and additional.

d. Reforestation - Less Than 10% Tree Canopy Cover Performance Standards: For reforestation projects, the U.S. Forest Protocol allows two possible performance standards, either of which could lead to the approval of offsets. One of the standards is the there is currently less than 10% tree canopy cover. In this case, the protocol merely states that projects which occur on land that has had less than 10 percent tree canopy cover for the last 10 years are automatically additional. No analysis, data, or rationale is presented for this determination.

e. Reforestation - Areas with Significant Disturbance - Alternative Performance Standards- Economic Cost Scenario or Historically Not Engaged In or Allowed Timber Harvesting: For reforestation projects which occur on land which has undergone a Significant Disturbance (e.g., fire) projects are additional if they either meet one of two performance standard. For the economic cost scenario (set forth in a two page appendix to the Protocol) or if the Forest Owner has not historically engaged in or allowed timber harvesting. U.S. Forest Protocol at section 3.1.2.1. The economic cost scenario approach to additionality appears to very heavily rely on data which either does not yet exist or have not been made public. Twice this part of the Protocol states that certain economic information and assumptions can be found in the lookup table in the Forest Offset Protocol Resources section of ARB's website. U.S. Forest Protocol, Appendix E, p. 103. We were unable to locate this section of ARB's website. In addition, the second test for additionality contains no explanation or number of years which constitute historically engaged in or allowed timber harvesting. It is suggested, by example, that this qualification would apply to municipal or state parks, but this is made clear or exclusive in the Protocol. U.S. Forest Protocol at section 3.1.2.1. This completely subjective standard is neither rational nor enforceable.

f. Avoided Conversion Projects Shifting Economic Activity: Finally, for avoided conversion projects (e.g., conversion of forest to commercial, residential or agricultural land), the U.S. Forest Protocol relies very heavily on appraisals of land value in the various land use scenarios. U.S. Forest Protocol at section 3.1.2.3. This approach has two basic problems. First, leaving a forest uncut and unconverted to another use does not necessarily result in fewer GHGs. Forest products exist in a world market. The largest supplier to the U.S. of softwood (used, for example, in building homes), is Canada. If U.S. demand for softwood is not diminished, the forest preserved in the U.S. will almost certainly result in additional timber harvesting in Canada or some other country. This will result in no net decrease in GHGs. In fact, it would like result in a slight increase represented by the fuel it takes to import the timber products. Second, appraising land value is hardly an exact science. Anyone aware of the mortgage meltdown should be aware that appraisals can be manipulated, fabricated, and, essentially, purchased by a self-interested party. Having a qualified appraiser, as required by the Protocol, hardly

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addresses this problem.

(4) Urban Forest Projects

a. Tree Planting and Maintenance: The proposed Urban Forest Protocol would grant GHG offsets for tree-planting and maintenance programs carried out by municipalities, educational institutions, and utilities. This Protocol is the most benign, and probably the most well-intentioned, of the proposed offset protocols. However, even the Urban Forest Protocol contains one serious flaw.

b. Net Tree Gain: The Urban Forest Protocol assumes that any Net Tree Gain represents an additional reduction in GHGs. While any Net Tree Gain is a happy thing for the environment, people, and the livability of our communities, these gains do occur in the course of business-as-usual. A case in point is the urban forest project carried out by San Francisco's Department of the Environment. In its September 2009 Annual Report to the Mayor and Board of Supervisors, San Francisco's Urban Forestry Council noted that a five-year plan, initiated in 2004, had resulted in the planting and maintenance of 26,408 trees. This occurred well before the incentives of GHG offsets. See Annual Report, September 2009, [http://www.sfenvironment.org/downloads/library/sfe\\_urban\\_forest\\_annual\\_report\\_2009.pdf](http://www.sfenvironment.org/downloads/library/sfe_urban_forest_annual_report_2009.pdf).

c. Emissions Above the Cap: Ultimately, for an offset protocol to have integrity, the results of all offset projects must be the result of the financial incentive. If this is not the case, the financial gain for the would-have-happened-anyway project is merely a gratuitous reward. While cities and other institutions would appreciate the extra revenue for planting and maintaining trees they would have planted and maintained anyway, the problem is that all non-additional GHG offset will inexcusably undercut the goal of the associated environmental program, reducing emissions. Any such non-additional offsets, will result in allowing additional unjustified emissions above the cap in the capped sectors.

### CONCLUSION

It is critically important for ARB to resist the temptation to make offsets part of California's cap-and-trade program. Given that rapid transition to cleaner energy and energy efficiency is critical to avoiding global climate disruption, California cannot afford to endorse a program that would allow increases in emissions in the capped sector above the cap to be offset by unverifiable reductions that overlap with business-as-usual. A system that allows such offsets will encourage other jurisdictions to follow suit and create a system that locks in climate degradation and the attendant harsh consequences. While these offset protocols are supported by interests that would like to profit from the protocols and by continued emissions in the capped sectors, they would create a huge loophole of non-additional offsets and would delay effective action in ways that are likely to be tragic for today's young people and for future generations.

While we agree that it would be positive for California to create incentives for a net increase in additional forest cover, more reliable capture and destruction or recycling of ozone depleting substances, and reductions in livestock methane emissions, we do not believe that GHG offsets are a reliable way to accomplish these goals. As demonstrated above, the proposed offset protocols are an inappropriate mechanism for seeking these improvements because it there are numerous barriers to reliably verifying that any given project is additional. As a result, it is arbitrary and capricious and inappropriate for the Air Resources Board to approve the proposed GHG offset protocols.

Comment 42 for Design Comments for the GHG Scoping Plan  
(sp-design-ws)

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(<http://www.arb.ca.gov/lispub/comm2/bccommprt.php?listname=sp-design-ws>  
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First Name: Laurie

Last Name: Williams

Email Address: [williams.zabel@gmail.com](mailto:williams.zabel@gmail.com)

Affiliation: [www.carbonfees.org](http://www.carbonfees.org)

Subject: Carbon Fees not cap-and-trade; also Request for Extension  
Comment:

My husband, Allan Zabel and I have written 2 pieces regarding this issue. Please consider our explanations of why carbon fees are the more efficient and effective market mechanism in the 2 pieces below (1) our website at [www.carbonfees.org](http://www.carbonfees.org), and (2) our July 11th editorial, imported below. In summary, we believe that cap-and-trade is a flawed strategy for addressing climate change. The Acid Rain experience does not prove that cap-and-trade is applicable to climate change. The two situations are completely distinguishable. With climate change we face the need for massive new infrastructure and innovation (as opposed to Acid Rain, where an easy fuel switch was available); we also have a lack the comprehensive accurate monitoring of greenhouse gases that was available for the contaminants of concern in Acid Rain. Finally Acid Rain did not allow outside offsets. All of this makes the applicability of the Acid Rain experience to climate change a

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Also attached as a PDF please find a visual explanation of how carbon fees work, and a request for additional public education and an extension of the comment period on this issue.

1. Please see our May 4th, 2008 Open Letter to Congress at [www.carbonfees.org](http://www.carbonfees.org). While this is not aimed at California and the AB 32 process, the same arguments apply. This website also provides additional information on our credentials as public sector environmental enforcement attorneys and references for the arguments that we make.

2. Please also consider the arguments in the following piece: Cap & Trade - Misplaced Confidence (published in California Energy Circuit on July 11, 2008) which addresses AB 32 and the upcoming decision by the California Air Resources Board.

By Laurie Williams & Allan Zabel

As poles and glaciers melt, permafrost thaws and oceans acidify from our ever-increasing greenhouse gas emissions, the question of whether a carbon cap-and-trade program or carbon fees would provide swifter, more equitable and certain emissions reductions is increasingly urgent. Based on our experience as environmental enforcers (including Allan's experience with cap-and-trade programs), we believe that the California Air Resource Board's confidence in cap-and-trade is misplaced and that carbon fees provide the more effective and efficient path to the goals of AB 32, California's landmark climate protection law.

As long expected, California's recently released AB 32 Draft Scoping Plan relies heavily on cap-and-trade to reduce the state's significant contributions to global greenhouse gas emissions. The draft minimizes the value of a system of carbon fees. The Air Resources Board justifies its preference by calling cap-and-trade a more certain route to meeting AB 32's requirement to reduce California's emissions 30 percent below business as usual by 2020.

However, cap-and-trade has serious downsides.

Unless all cap-and-trade elements, including offsets, are limited to systems with accurate emissions measurement, the cap on total emissions will likely be inflated and claimed reductions exaggerated. While the emissions of large electrical generating facilities with continuous emission monitoring systems can be accurately tracked, many other sources of emissions and offsets cannot be as closely monitored.

If these less-accurately-measured sources participate, the integrity of the cap-and-trade program will be undermined, as will the certainty in reductions that CARB seeks. In addition, even if the market is limited to facilities with continuous emission monitors, this will create artificial scarcity that is likely to result in disruptions and unfairness, as initial and future allocations of the right to emit are distributed and traded.

A preview of such disruptions was provided by the manipulations that created the California energy crisis early in this decade. This potential was also demonstrated in a recent simulation at the University of California at Berkeley's Haas School of Business, in which students gamed a carbon-trading market for individual gain, leading to scarcity and high prices. This potential for market manipulation could contribute to undesirable price volatility. The resulting lack of price predictability in a cap-and-trade system (specifically, the lack of certainty that the price of energy from fossil fuels will exceed the price of green energy) reduces the incentive for the substantial investments in the new infrastructure and innovation necessary to provide alternative energy at affordable prices.

The history of cap-and-trade demonstrates the limitations of the state's proposal.

The so-called cap-and-trade of the federal acid rain program in no way resembles the complex challenge we face in reducing greenhouse gases. Under the program, all facilities had monitors, so the system had the integrity of accurate measurement. There was relatively little trading, particularly outside of any given corporation and its subsidiaries. Trading in the acid rain program primarily meant that some corporations complied with the gradual reductions in total sulfur emissions by averaging among several of their facilities. In addition, there was no significant need for

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investments in new technologies or innovation in order to reduce sulfur. All that was needed--and what happened--was a fuel switch from high-sulfur coal, to the low-sulfur coal found in Wyoming's Powder River Basin.

In contrast, another cap-and-trade program failed spectacularly in Los Angeles. Known as RECLAIM (the Regional Clean Air Incentives Market), it was aimed at reducing ground level ozone. In RECLAIM, despite the presence of monitors, an inflated cap delayed most emission reductions for over seven years. At the end of that time, the market collapsed and the necessary control technology was required by regulation.

Similarly, attempts to design an effective carbon cap-and-trade system have failed under the Kyoto Protocol--a 1997 international accord to cut greenhouse gas emissions which the U.S. never ratified. Utilities and other sources have underreported their emissions, purchased flawed offsets, driven up prices, reaped billions in undeserved profits and generally failed to produce promised emission reductions.

Despite cap-and-trade's enormous disadvantages, it is ardently supported by two disparate groups. This first consists of those who stand to profit, whether from trading, certifying offsets and/or delaying the phase-out of fossil fuels. The second includes those who truly want rapid reductions, but believe that the greater efficiency and transparency of carbon fees is politically unattainable and/or fail to understand that the vulnerabilities of cap-and-trade to manipulation and fraud will make the cap illusory.

The advantages of carbon fees, in contrast, include simplicity and transparency. For instance, the U.S. Congressional Budget Office stated in its February 2008 report: "A tax on emissions would be the most efficient incentive-based option for reducing emissions and could be relatively easy to implement." These advantages include that it is much easier to effectively trace and impose a fee on all fossil fuels at the point of importation or extraction than it is to accurately measure all greenhouse gas emissions.

By phasing in gradually increasing carbon fees that would go up each year until the price of energy made from fossil fuels exceeds the price of clean technologies, carbon fees would create the certainty needed to spur investment in post-fossil fuel energy sources. A per-capita rebate of these carbon fees to all California taxpayers would cushion the impact of higher energy prices, particularly for low and middle income taxpayers, during the transition to the post-fossil fuel economy. The relative certainty provided by escalating carbon fees and the investments they would foster are likely to catapult California and the nation into a leadership position in green technology and set a roadmap for the rest of the world on how to move beyond the ineffective policy of cap-and-trade.

As CBO acknowledges, the main barrier to the carbon fees approach is a lack of political acceptability. It in turn is based on a lack of public education about why carbon fees (and a ban on new coal-fired power plants without sequestration) are our best hope to save our way of life and leave a habitable biosphere to the next generation.

By selecting carbon fees to meet AB 32's goal, California could lead the nation in effectively and efficiently addressing climate change. While CARB's draft scoping plan attempts to support its preference for cap-and-trade by indicating that it would fit well with expected cap-and-trade programs by the Western Climate Initiative and the federal government, this justification is unworthy of California's proud tradition of environmental leadership.

Only if we discuss the urgency of the problem and the most effective solution with friends, families, neighbors and colleagues, and ask them to join us in calling and writing our representatives, can we jump-start the huge outpouring of public participation necessary to make carbon fees the acceptable as well as the wise choice.

--Laurie Williams and Allan Zabel of [www.carbonfees.org](http://www.carbonfees.org) wrote this editorial as citizens and parents. In May, the two lawyers issued an open letter to Congress urging lawmakers to put their efforts into setting carbon fees in place of a carbon cap-and-trade program. For details about their professional experience and carbon fees approach, see their website.

55-6  
Cont'd



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=ceqa-sp1...>

3. Attached please find a visual providing a chart to demonstrates how the certainty that green energy will become less expensive than fossil fuel energy would affect investment and affordability. Cap-and-trade cannot deliver this same price certainty and hence will not be as effective in moving us to a post-fossil fuel economy.

#### 4. REQUEST FOR EXTENSION:

We believe that an additional period of public education should occur on the issue of carbon fees vs. cap-and-trade, and that there should be an additional comment period on this issue prior to a final decision.

Attachment:

[www.arb.ca.gov/lists/sp-design-ws/45-why\\_carbon\\_fees\\_work\\_7-28-08.pdf](http://www.arb.ca.gov/lists/sp-design-ws/45-why_carbon_fees_work_7-28-08.pdf)

Original File Name: Why Carbon Fees Work 7-28-08.pdf

Date and Time Comment Was Submitted: 2008-07-30 22:56:07

Attachment: [www.arb.ca.gov/lists/ceqa-sp11/75-lw\\_\\_az\\_comment\\_re\\_ab\\_32\\_supplement\\_\\_offsets\\_7-27-11v4.doc](http://www.arb.ca.gov/lists/ceqa-sp11/75-lw__az_comment_re_ab_32_supplement__offsets_7-27-11v4.doc)

Original File Name: LW & AZ Comment re AB 32 Supplement & Offsets 7-27-11v4.doc

Date and Time Comment Was Submitted: 2011-07-27 22:52:38

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## L55 Response

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55-1 The commenter asserts that adoption of the “proposed greenhouse gas offset program, regulations and protocols” is contrary to the intent and requirements of AB 32. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but any specific measure, including a cap-and-trade regulation, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, comments about particular components of specific emission reduction measures (such as specific design features of a cap-and-trade regulation) do not raise a “significant environmental issue associated with the proposed action” (see CCR section 60007(a) [emphasis added]) because the proposed action (i.e., the Scoping Plan) does not include adoption of the particular design components of specific measures (including the design feature of how to distribute permits within a cap-and-trade regulation).

The Cap-and-Trade program recommended in the 2008 Scoping Plan was proposed as a rule in October 2010

(<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>)

and will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency’s rationale for choosing the design of that regulation, including information about offsets

(<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). A separate FED evaluating the environmental impacts of the proposed Cap-and-Trade Regulation has been prepared and subjected to public review and comment. The alternative analysis in that FED includes design variations for the proposed Cap-and-Trade program.

55-2 The commenter incorporates comments submitted in December 2010 on the proposed Cap-and-Trade Regulation. As explained above, the purpose of the Supplement is to provide an expanded analysis of alternatives examined in the broad programmatic environmental review of the 2008 FED. The purpose is to allow the public and decision-makers to consider broad policy and regulatory alternatives to the proposed project and not to take up particular details about specific design features of each measure, including a cap-and-trade program. Detailed comments on the proposed Cap-and-Trade Regulation submitted under that rulemaking process will be addressed in that separate rulemaking process for that proposed regulation. Any timely comments submitted in 2008 on the 2008 FED that raised significant environmental issues were responded to in the document entitled ARB Response to Public Comments on the

Functional Equivalent Document for the Proposed Climate Change Scoping Plan available at:  
<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>. The written responses were prepared and approved prior to the 2008 Scoping Plan being considered for final adoption in May of 2009 ([http://www.arb.ca.gov/cc/scopingplan/sp\\_executive\\_order.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_executive_order.pdf)).

55-3 This comment again assumes that the proposed action would authorize any particular regulation. The commenter cites specifics associated with the separate, proposed Cap-and-Trade rulemaking. Any of these issues that were raised in a timely manner during the Cap-and-Trade rulemaking process will be answered accordingly under that process. Please also refer to response 55-1.

55-4 The commenter states that the proposed offsets represent a substantial portion of required reductions. The commenter further states that while ARB notes that a reduction is required from projected 2020 emission levels of 507 MMTCO<sub>2</sub>E to 427 MMTCO<sub>2</sub>E, current 2011 levels are not noted, nor is the percentage reduction needed to reach the goal of 1990 levels by 2020. In addition, the commenter states that offsets could be used to satisfy as much as 85 percent of required reductions. Furthermore, the commenter states that even if a smaller percentage of compliance obligations are met with offsets, it is clear that offsets are intended to be a substantial portion of required reductions and their failure to represent real, additional, enforceable reductions could be extremely damaging to California's efforts to address climate change.

The comment assumes that the cap-and-trade program would function under an unlikely scenario which could potentially result in 85 percent of required reductions under the cap to be met through offsets. The scenario under which this could occur is not supported by any economic modeling. Furthermore, the AB 32 Scoping Plan is a non-regulatory document that recommends measures to achieve GHG emission reductions. The FED Supplement has been prepared to describe alternatives to the Proposed Scoping Plan. Offsets are a component of the proposed Cap-and-Trade Regulation, which is a separate rulemaking process and not part of the FED Supplement or these comments and responses. Offsets provide cost containment and encourage real reductions in uncapped sectors. The FED Supplement presents the most current estimates of reductions that could be achieved by Proposed Scoping Plan measures, prepared in October 2010 based on the CEC 2009 IEPR. Some reductions would be implemented sooner than others, but all reductions must be realized by 2020 in order to reach the AB 32 2020 target.

55-5 The commenter expresses that offsets undermine incentives for efficiency and investments to reduce GHG emissions. Please refer to responses 55-1 through 55-3. The commenter critiques ARB's characterization of the function of offsets in a cap-and-trade program. The commenter indicates that offsets undermine incentives for efficiency and investments to reduce GHG emissions and advocates that instead of relying on compliance with caps and low cost offsets, ARB could adopt carbon fees. ARB disagrees that offsets undermine incentives for efficiency and investments, because the number of offsets allowed are limited in quantity. Offsets also stimulate investment in emission reductions in the uncapped sectors for which there are offset protocols. Staff's analysis indicates that the majority of emission reductions achieved by cap-and-trade would come from those sources covered by the proposed program. Furthermore, cap-and-trade places a price on carbon, which would incentivize the most cost-effective improvements that reduce emissions.

Please refer to response 15-1 regarding a carbon fee or tax.

The commenter further suggests administrative adjustments, such as "border adjustments" to address the potential for leakage under a carbon fee. ARB examined the feasibility of border adjustments as an alternate design feature for a cap-and-trade program in the analysis of alternatives in the environmental analysis for the proposed Cap-and-Trade Regulation proposed in October 2010 at page 377 of Appendix O of the Staff Report. See the rulemaking page for more information about that separate rulemaking activity and reports available at <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>

A border adjustment commonly takes the form of a fee placed on imported goods coming into California. The application of border adjustments to interstate and international trade would face legal scrutiny under the Commerce Clause (Article 1, Section 8, Clause 3 of the U.S. Constitution) and World Trade Organization principles. Further, it is very difficult to measure the emissions associated with industrial imports to California given the wide range of products, such as cement, places from which those products originate, processes used to make those products and carbon intensity of the inputs to make those products. Additionally, implementing any feasible border adjustment (that could be practically carried out and withstand legal challenge) would likely raise the administrative burden of implementing and complying with this regulation because of the burden of tracking imports and enforcing compliance obligations on imported goods.

The commenter asserts the proposed Cap-and-Trade program included in the Proposed Scoping Plan should not include "unverifiable and

unenforceable” GHG offsets to address fossil fuel usage. Any offsets included in a proposed Cap-and-Trade program under both the Proposed Scoping Plan and Alternative 2 must meet rigorous criteria that demonstrate that the emission reductions are real, permanent, verifiable, enforceable and quantifiable. As proposed in the Cap-and-Trade Regulation, offsets must come from uncapped sectors, so they cannot be generated from improved efficiency in electricity, natural gas, or transportation fuel use. To the extent that commenter’s comments are directed at the specifics of the proposed Cap-and-Trade Regulation proposed in October 2010, please refer to the rulemaking page for that ongoing rule development at the website listed above. Please also refer to responses 4-1, 4-2, 5-1, 6-1, and 6-2.

- 55-6      This comment is a resubmission of commenter’s previous comments on the proposed Cap-and-Trade Regulation. In accordance with the requirements of CEQA, ARB need not respond to all non-project-specific materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484). Please also refer to responses 55-1 through 55-3.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

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**COMMENT 56 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Kathy  
Last Name: Scripps  
Email Address: purplestarca11@yahoo.com  
Affiliation:

Subject: Clear cutting

Comment:  
eAs a 4th generation Californian nothing is more disturbing to my family & freinds than clear cutting. Our favorite family camping area was clear cut. The loggers left it looking like a Nuclear blast zone. They also left 50 gal oil drums, broken logging equipment and large patches of petroleum on the ground. Our forests should be cut using selective practices. Clear cutting damages the complete ecosystem of the forest. It damages the creeks, habitat for all plants ans animals that live in, around and on the tree's. The native forest lands belong to our future generations.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 23:43:15

56-1

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**L56 Response**

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56-1      The commenter expresses concerns regarding clearcutting. Please refer to response 19-1.



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BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

**COMMENT 57 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Frank T.  
Last Name: Lossy  
Email Address: [ftlossy322@comcast.net](mailto:ftlossy322@comcast.net)  
Affiliation:

Subject: Up coming hearing  
Comment:  
Dear ARB,

I appreciate being invited to express my views at this time.

It is my impresson that the broad plans and judgements you have developed are sound ways of fostering a carbon emission reduction, and I wish to commend that work.

However I believe that it would be preferable in a nuber of ways for the body public if you would give further thought to the issue of how the carbon caps you have developed should be enforced. Instead of trading of permits by means of auctions of unused allowances, I would recommend a system of CAP AND DIVIDEND be developed without permitting trading . Instead I propose that all penalties for exceeding allowances be assessed and collected by the State of CA, and distributed to the citizenry of CA as a dividends.

This would be more fair to the public, which will be paying indirectly for the penalties anyway, in the form of higher energy prices passed on to them by the energy producers. And I believe it would make the system more palatable to the citizenry.

Please let me know whether you are willing to consider such a modification.

Thank you for the opportunity to be heard in connection with your work-task.

Appreciatively,

Frank T. Lossy, M.D.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 00:34:38

57-1

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### **L57 Response**

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57-1            The commenter suggests a cap and dividend. Please refer to responses 1-1, 4-1, 4-2, and 5-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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<http://www.arb.ca.gov/lispub/comm/bccomm>

**L58**

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**COMMENT 58 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Kimberly  
Last Name: Burr  
Email Address: kimlarry2@comcast.net  
Affiliation:

Subject: trading carbon

Comment:

Deforestation is a major climate change problem. Forests around the planet must be increased and mature forests protected NOT traded!!

Policing a trading scheme is not a proven model to reduce carbon emissions or CO2 build up. The best scheme, which is feasible only through guidance from government, is to transition to clean energy as quickly as possible as in a cap and dividend system.

Many businesses will thrive and achieve efficiencies, advantages, and market share during and after transition. Businesses and lobbies that merely assert that they will be harmed by capping carbon and reinvesting in clean energy must be required to demonstrate through peer reviewed studies, that the economics, even if there MIGHT be some costs incurred, are infeasible. The courts have said that business may sometimes have to incur costs so long as they are reasonable and environmental protection will be realized.

The environmental document must analyze the historic impacts of constructively forcing technology through regulation. Increased miles per gallon is one good example. Good regulation creates a level playing field and is forward looking like our major environmental laws were. Industries can change, will change, and will be better competitors in the global economy if they are efficient, nimble, and jump into the niche that is clean renewable energy. It is not in any one's interest to be dictated to by stale and rigid thinking that holds every one back.

Please incorporate these elements into the environmental analysis.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 08:11:07

58-1

58-2

58-3

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### **L58 Response**

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- 58-1            The commenter expresses concerns with forests being used as offsets in the Proposed Cap-and-Trade Regulation. Please refer to response 19-1.
- 58-2            The commenter expresses concerns with the economics of cap-and-trade. Please refer to response 5-1.
- 58-3            The Supplement provides an expanded description and analysis of the five alternatives originally presented in the 2008 FED. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 59 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Darwin  
Last Name: Bond-Graham  
Email Address: [darwinbondgraham@gmail.com](mailto:darwinbondgraham@gmail.com)  
Affiliation:

Subject: Carbon Tax  
Comment:  
Dear ARB,  
The previous scoping of AB 32 was indeed flawed in its over-due emphasis on cap and trade like schemes.  
A straightforward carbon tax, which there would be many ways to implement, with a 100% dividend to CA's residents, would be both the most effective and just way to tax the "bad" economic activities that emit large amounts of greenhouse gas, and stimulate activities that either conserve energy, or utilize low-carbon emitting energy sources.  
I urge the board to further study and ultimately implement a carbon tax.  
Sincerely,  
Darwin BondGraham

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 08:35:22

59-1

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**L59 Response**

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59-1            The commenter suggests a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 60 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Lynda  
Last Name: Daniels  
Email Address: lynda67@cox.net  
Affiliation:

Subject: Emissions  
Comment:  
California needs to lead the way in controlling emissions. Please  
pass legislation that will help us all breathe better.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 08:55:18

60-1

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## **L60 Response**

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- 60-1      The commenter indicates that California needs to lead the way in controlling emissions. ARB has reviewed this comment, and determined that it does not state a specific concern or question regarding the adequacy of the environmental analysis of the alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

COMMENT 61 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Emily  
Last Name: Bockmon  
Email Address: [ebockmon@gmail.com](mailto:ebockmon@gmail.com)  
Affiliation:

Subject: Revenue-neutral Fee and Dividend

Comment:

I applaud the efforts of the ARB and appreciate the steps CA has taken toward a responsible energy policy. The scoping plan put forth by ARB has many great elements that will continue to move the state toward reduced emissions. Unfortunately the scoping plan misses the mark in its support of developing a California cap-and-trade program.

I urge the Board to consider a revenue-neutral carbon fee and dividend, rather than the currently proposed cap-and-trade system. We need action that will be effective immediately, and will be easy and cheap to implement. A carbon fee will have much lower implementation costs than cap-and-trade and will require less oversight in the years following. I believe it will have the additional advantage of being more effective at emissions reductions as well.

The scoping plan already includes a similar fee to what is being suggested in the High Global Warming Potential Mitigation Fee. This measure will help better reflect, in their cost, the impact of otherwise relatively inexpensive but harmful chemicals. Carbon emissions could easily be treated in this same manner, as a chemical whose true costs are not currently being included in its cost to consumers. A carbon fee would help to accurately price carbon by acknowledging its climate change potential. By including a revenue neutral dividend that is directly returned to the people of California, there is no increased financial burden by the increased cost of energy.

A revenue-neutral carbon fee and dividend will help us quickly, fairly and simply achieve our goal of reducing greenhouse gas emissions to 1990 levels by 2020.

Thank you,  
Emily Bockmon

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 08:51:48

61-1

61-2

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### **L61 Response**

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- 61-1        The commenter is generally supportive of ARB's efforts. ARB has reviewed this comment and determined that it does not state a specific concern or question regarding the adequacy of the environmental analysis of the alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record.
- 61-2        The commenter suggests a carbon fee. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 62 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Paul  
Last Name: Fritz  
Email Address: pcfriz2000@yahoo.com  
Affiliation:

Subject: AB 32 Cap and Trade  
Comment:  
Dear CARB,

Specific carbon market designs can address objections raised by groups critical of the impacts of AB 32's Cap & Trade program. Instead of giveaways to polluting industries, CARB should auction 100% of permits. Rather than unlimited offsets, CARB should strictly limit them. Inequities in the use of allowance value can be addressed with a Cap & Dividend approach that returns revenues back to all Californians equally.

Please incorporate these elements into the environmental analysis.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 08:59:39

62-1

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## **L62 Response**

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62-1      The commenter advocates a Cap-and-Dividend approach that returns revenues back to all Californians and suggests auctioning 100 percent of permits and limiting offsets. Please refer to responses 1-1, 4-1, 4-2, 4-3, 5-1, 5-2, 6-1, and 6-2.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L63**

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## Comment Log Display

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**COMMENT 63 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Debra  
Last Name: Berliner  
Email Address: [berliner.debra@gmail.com](mailto:berliner.debra@gmail.com)  
Affiliation:

Subject: Please support effective climate action, not cap and trade

Comment:

Dear CARB Members,

I am proud to live in California where we're leading the country in climate action. However, major flaws in the cap and trade mechanism threaten our leadership and our capacity to truly reduce state greenhouse gases in a meaningful way. The "trade" aspect allows big polluters to continue polluting, often in hard hit communities already burdened by air pollution and other environmental hazards. It is the responsibility and ethical imperative of elected officials to protect the most vulnerable of their constituents. Moving forward with cap and trade betrays that responsibility. Please instead consider implementing a carbon tax, which could bring the same GHG savings without the social costs.

Thanks for all your work.

Best regards,  
Debra Berliner

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 08:52:33

63-1

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**L63 Response**

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63-1            The commenter suggests a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

**COMMENT 64 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: steve  
Last Name: holmes  
Email Address: stevor\_h@yahoo.com  
Affiliation:

Subject: Global Warming/Climate Change being related to CO2 is a HOAX

Comment:

Here's three important things (articles/videos) about the falacy of CO2 causing climate change. Cosmic rays cause clouds. Sun activity blocks that so a more active sun leads to fewer clouds and more heat. Warmer climate leads to more CO2 and NOT the reverse. Here are SCIENTIFIC pieces to PROVE it:

<http://blog.alexanderhiggins.com/2011/07/18/scientists-gagged-interpreting-study-links-climate-change-cosmic-rays-35691/>  
Scientists Gagged From Interpreting Study That Links Climate Change To Cosmic Rays

Cosmic rays are influence by the sun and the galayy:  
<http://www.youtube.com/watch?v=dKoUwttE0BA>

The reason that CO2 is higher with hotter weather is because the hotter weather increases the CO2 and hot the reverse, as the Climate Change FRAUDS assert:  
<http://www.weatheraction.com/pages/pv.asp?p=wact10&fsize=0>

Global Warming/Climate Change is just a SCAM so a TAX can be collected and MAINLY so people involved in the "carbon exchange" can make MILLIONS of dollars for "running" it.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-27 23:05:03

64-1

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## **L64 Response**

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64-1      The commenter states that global warming is a scam. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. In accordance with the requirements of CEQA, ARB need not respond to all non-project-specific secondary materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484).



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 65 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - 45 DAY.

First Name: Leonard  
Last Name: Stone  
Email Address: leonardontheoast@gmail.com  
Affiliation:

Subject: AB-32 economy killer

Comment:

To believe science which cannot predict local weather more than 3 days in the future can effectively predict world wide climate ten, twenty or fifty years in the future is complete folly.

The enactment of AB-32 will decrease economic activity in California. Air quality is not confined to state borders. When our industry moves to neighboring states, so will jobs and revenues, the air will flow back and forth.

The pain of this effort is far more reliable and severe than the potential benefit. If we only eliminate manufacturing and energy consumption, we will have cleaner air and water. Of course we will have to live in caves without light or heat. We will travel by foot and eat whatever the land will allow us.

Over the last 50 years life expectancy has increased from 60 to 85. Most of that is the advancement of medical science. There is some credit to lifestyle. As we restrict our use of energy we will learn how much credit lifestyle deserves.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 05:43:51

65-1

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## **L65 Response**

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- 65-1        The commenter states that AB 32 will hurt the economy of the state. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.**

**COMMENT 66 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Betty  
Last Name: Lo  
Email Address: [locols@pacbell.net](mailto:locols@pacbell.net)  
Affiliation:

Subject: A.B. 32  
Comment:  
Dear Chairman Nichols,

I do not believe that cap-and-trade should allow clearcutting to take place, no matter how well it is done. Clearcutting is too severe and the consequences are too great to deal with. Too much clearcutting has been done in the western states over the last few decades - we have all experienced the consequences!

We need to lead with this preventive measure; so that we don't suffer anymore in the future.

Please consider other solutions.

I would love to hear back from you on this issue.

Thank you very much.  
Sincerely,  
Betty Lo

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 09:09:41

66-1

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**L66 Response**

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66-1      The commenter expresses concerns with regards to clearcutting. Please refer to response 19-1.



**L67**

400 Corporate Pointe Culver City, CA 90230 | 800.726.8462 | [www.antiochla.edu](http://www.antiochla.edu)

July 27, 2011

Mary Nichols, Chairperson  
James Goldstene, Executive Officer  
California Air Resources Board  
1001 "I" Street  
P.O. Box 2815  
Sacramento, CA 95812

Via email: [mnichols@arb.ca.gov](mailto:mnichols@arb.ca.gov), [jgoldstene@arb.ca.gov](mailto:jgoldstene@arb.ca.gov)

**Re: Diana Pei Wu, PhD, comments on 2011 Scoping Plan Functional Equivalent Document – REDD causes human rights abuses and exacerbates deforestation and greenhouse gas emissions in toxic hot spots in the U.S. and internationally.**

Dear Chairperson Nichols, and Mr. Goldstene,

I offer the following comments on the alternatives in the AB32 Scoping Plan, in the hope of reaching a new accord on this opportunity to stop disastrous climate change and eliminate California's fossil-fueled smog and toxic emissions.

My name is Diana Pei Wu, and I am a Professor of Urban Communities and Environment at Antioch University Los Angeles. I received my PhD from the University of California, Berkeley in Environmental Science, Policy & Management in 2006. During that time period, I worked and studied themes as diverse as environmental racism, international community development and conservation, human rights, and forestry. I also have an M.A. in Ecology and Evolutionary Biology from Princeton University and, before becoming a social scientist, had worked as a tropical ecosystem field ecologist for nearly a decade in places as diverse as Hawaii, Costa Rica, Panama, Cameroon, Malaysia, Kosrae, Brasil, Western Samoa and Kenya.

Below I outline the great and continuing failures of market-based pollution programs, in particular, the program being proposed as REDD – Reducing Emissions from Deforestation and forest Degradation. Although all governments and most mainstream conservation groups claim that no official REDD projects exist yet, there are dozens, if not hundreds, of so-call "REDD readiness" programs already in existence, and the already existing findings should prove to you that the observed problems with these programs are indeed structural by nature, and unable to be remediated or "safeguarded" without great cost to human and ecological well-being.

In particular, there cannot be any substitute for cleaning up our own state's pollution right here, which is foremost a severe burden on communities of color, and which threatens all Californians and the planet with climate change, health and economic impacts. Attempting to "fix" Cap and Trade cannot work, causes delays we cannot afford, and fails to take responsibility for our own pollution. Virtually all of industrial reductions are left to cap and trade.

67-1

Since ARB certified the FED in 2009, new information has become available that should be considered in evaluating alternatives to Cap and Trade for the AB32 Scoping Plan, the road map to meeting our GHG reduction goal of 1990 levels by 2020 and achieving other goals in AB 32, and other crucial information was never evaluated. Among other things, this information further demonstrates that Cap and Trade fails to meet pollution reductions and can cause significant environmental harm to communities (inside and outside California). We urge CARB to take a serious look at alternatives, including direct regulations that can achieve big greenhouse gas and co-pollutant reductions and avoid significant negative impacts of Cap and Trade. So far the regulatory process has clearly ignored real alternatives to Cap and Trade. These issues are summarized below, and detailed in this letter.

### REDD Basics

REDD stands for “Reducing Emissions from Deforestation and forest Degradation” and is currently being negotiated within the United Nations Framework Convention on Climate Change. Although no final agreements have yet been reached on REDD, there are dozens of so-called “REDD Readiness” projects already on the ground, which provide illustrative examples of the potential successes and structural problems of the program.

According to its backers, REDD and REDD+ hold out the enticing prospect of mitigating climate change, conserving threatened biodiversity, and bringing much-needed development finance to poor Indigenous Peoples and local forest-dwelling communities – while simultaneously offering significant profits to investors.

According to the Global Canopy Program,<sup>1</sup> “The idea behind REDD is simple: Countries that are willing and able to reduce emissions from deforestation should be financially compensated for doing so.”

However, Australian scientist Peter Wood argues “there are a number of fundamental issues that remain unresolved that hang in the balance, including environmental, social and governance safeguards, monitoring reporting and verification of safeguards, and the inclusion of logging in natural forests.”<sup>2</sup>

Likewise, civil society groups, particularly those representing constituencies of climate justice, indigenous peoples, youth and women, warn that REDD and REDD+ will benefit timber, oil and gas companies, create perverse incentives to increase deforestation, and exacerbate already-existing toxic hotspots in the Global North.

In addition, they argue that even before it formally exists, just the idea and promise of REDD has already created the conditions for a global land grab, and that REDD-readiness projects have already displaced indigenous and forest-dependent communities from their ancestral lands or severely curtailed their abilities to practice traditional customs on those lands, failed to meet minimal requirements for Free, Prior and Informed Consent, and has in some cases failed to reduce overall deforestation.

The UNFCCC differentiates between REDD and REDD+ by saying that Reducing Emissions from Deforestation and Forest Degradation (REDD) is an effort to create a financial value for the carbon stored

<sup>1</sup> Global Canopy Foundation. 2008. *The Little REDD Book: A guide to governmental and non-governmental proposals for reducing emissions from deforestation and degradation*. Oxford, UK: Global Canopy Programme.

<sup>2</sup> Wood, Peter. 2010. “REDD+: Reducing the Risk.” *Outreach: a multi-stakeholder magazine on climate change and sustainable development*. Day 6. <http://www.stakeholderforum.org/sf/outreach/index.php/day6-item1> (Accessed July 10, 2011).

in forests, while “REDD+” goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. The UN-REDD program claims that REDD+ will fulfill the requirements of full engagement and respect for the rights of Indigenous Peoples and other forest-dependent communities.<sup>3</sup>

REDD became a major flashpoint of civil society actions and debate inside and outside the UNFCCC 16<sup>th</sup> Conference of the Parties (COP16) in 2011, in Cancún, Mexico. It is anticipated that this will happen again as the 2012 17<sup>th</sup> Conference of the Parties (COP17) approaches, to be held in Durban, South Africa.

### Key Programs and Players

REDD projects are being piloted in many countries under the auspices of the United Nations REDD Program, the World Bank Forest Carbon Partnership Facility, the U.S. Agency for International Development, and other global bodies.<sup>4</sup> There are also bilateral pilot programs<sup>5</sup> such as the Kalimantan Forests and Climate Project, between Indonesia and Australia, and some voluntary market programs that involve some conservation NGOs such as World Wildlife Fund and Conservation International.<sup>6</sup> Norway is the largest funder of the UN-REDD program.<sup>7</sup>

In addition, journalist Jeff Conant reports in *Z Magazine* (July/August 2011) that at least one subnational governmental level REDD readiness initiative was unveiled at COP16 in 2010 between the state of California in the United States, and the state of Chiapas in Mexico.

### Critiques of REDD and REDD+ projects and policies

According to Friends of the Earth International, Carbon Trade Watch,<sup>8</sup> REDD-Monitor, the Indigenous Environmental Network, the Global Justice Ecology Project<sup>9</sup> and hundreds of other civil society organizations representing environmental, indigenous peoples, women<sup>10,11,12</sup> and youth constituencies, although REDD may benefit some communities and biodiversity in certain specific areas, overall it is emerging as a mechanism that has the potential to exacerbate inequality, reaping profits for corporate and other large investors while bringing considerably fewer benefits - or even serious disadvantages - to Indigenous Peoples and other forest-dependent communities. In addition, if governments focus on REDD

<sup>3</sup> UN-REDD Program. Homepage. <http://www.un-redd.org/> (Accessed July 8, 2011)

<sup>4</sup> UNFCCC. “REDD Web Platform.” [http://unfccc.int/methods\\_science/redd/items/4531.php](http://unfccc.int/methods_science/redd/items/4531.php) (Accessed July 1, 2011)

<sup>5</sup> UNFCCC. “Demonstration Activities.” [http://unfccc.int/methods\\_science/redd/demonstration\\_activities/items/4536.php](http://unfccc.int/methods_science/redd/demonstration_activities/items/4536.php) (Accessed July 1, 2011)

<sup>6</sup> Carbon Trade Watch, 2011. *Some Key REDD+ Players*. July 2011. 6 pp.

<sup>7</sup> Angelsen, Arild, Sandra Brown, Cyril Loisel, Leo Peskett, Charlotte Streck and Daniel Zarin. 2009. *Reducing Emissions from Deforestation and forest Degradation (REDD): An Options Assessment Report*. Prepared for the Government of Norway. Norway: Meridian Institute and REDD-OAR.

<sup>8</sup> Carbon Trade Watch and Indigenous Environmental Network. 2010. *No REDD!: A Reader*. (Released Monday, December 6, 2010).

<sup>9</sup> Carbon Trade Watch, Global Justice Ecology Project and Indigenous Environmental Network. 2011. *Key Arguments Against Reducing Emissions from Deforestation and Degradation (REDD+)*. June 2011. 3pp.

<sup>10</sup> GenderCC Women for Climate Justice. 2010. “Gender in the Climate Money Grail.” *Outreach: a multi-stakeholder magazine on climate change and sustainable development*. Day 6. <http://www.stakeholderforum.org/sf/outreach/index.php/day6-item3> (Accessed July 10, 2011).

<sup>11</sup> World Rainforest Movement. *REDD and Gender Impacts*. November 2010.

<sup>12</sup> Wu, Diana P., Aurora Conley and Ana Filippini. 2010. “Women and REDD.” *Outreach: a multi-stakeholder magazine on climate change and sustainable development*. Day 6. <http://www.stakeholderforum.org/sf/outreach/index.php/day6-item8> (Accessed July 10, 2011)

in isolation, it could become a dangerous and ineffective distraction from the business of implementing real and effective policies for climate change mitigation and adaptation.

An emerging literature in political science, sociology and international development studies also shows the emergence of a global land grab<sup>13</sup> in relationship to global land governance questions, with REDD and other market based initiatives such as payment for ecosystem services (PES) as some of the key drivers of this global land grab, and uncertainty in indigenous people or other national minority groups' land tenure and traditional rights a major factor in vulnerability to displacement.<sup>14</sup>

Civil society organizations such as Friends of the Earth International<sup>15</sup> conclude that “large transnational corporations, especially those involved in the energy sector or energy-intensive industries, are rapidly honing in on REDD because it offers them – perhaps more than any other participant – a true ‘win-win’ opportunity. Through REDD these corporations recast themselves as climate change champions even as they continue, or even expand, operations to extract fossil fuels and other pollution-intensive activities. At the same time they stand to profit from REDD, at the level of hundreds of millions of dollars.”

In many countries there is also ongoing uncertainty about land tenure and carbon rights, and in some it seems that REDD is muddying these particular waters even further. Case studies from Ecuador<sup>16</sup> and Chiapas<sup>17</sup> also demonstrate that areas with conflict or uncertainty over indigenous peoples' land tenure, in conjunction with government or state-sponsored interests in income-generation, provide ample opportunity for these projects to exacerbate human rights abuses. Conant<sup>18</sup> documented that the community of Amador Hernandez in the Lacandon region of Chiapas had their health services cut off in early 2011, most likely in preparation for “REDD Readiness.” REDD is being championed as a source of revenue both by the Chiapas state government and the Mexican national government.

Previous studies demonstrated the eviction of Ogiek peoples from their lands in Kenya in anticipation of a REDD-readiness project and research conducted or reported by Rebecca Sommer and Chris Lang have demonstrated conservation NGOs or individual “carbon cowboys” attempting to convince or coerce indigenous communities to sign over traditional lands and rights without meeting the substantive standards of Free, Prior and Informed Consent in Brazil and Papua New Guinea.

There is also an emerging debate about whether REDD can really work at the project level. A 2011 consultation process with Southeast Asian groups<sup>19</sup> demonstrated that in at least one pilot project, community members have yet to receive any revenues, although the project has been ongoing for about 5 years. A similar experience was expressed by members of a Tanzanian NGO at a US-government sponsored side event at COP 16. Also, most studies demonstrate that in and near pilot projects,

<sup>13</sup> Zoomers, A. 2010. “Globalisation and the foreignisation of space: seven processes driving the current global land grab.” *Journal of Peasant Studies* 37(2):429-447.

<sup>14</sup> Sutherland, W. et al. 2010. “A horizon scan of global conservation issues for 2010.” *Trends in Ecology and Evolution* 25(1): 1-7.

<sup>15</sup> Friends of the Earth International. 2010. *redd: the realities in black and white*. The Netherlands: Friends of the Earth International. 28pp.

<sup>16</sup> Carbon Trade Watch and Indigenous Environmental Network. 2010. *No REDD!: A Reader*. (Released Monday, December 6, 2010).

<sup>17</sup> Conant, Jeff, with photographs by Orin Langelle. 2011. “Turning the Lacandon Jungle to the Carbon Market.” *Z Magazine* July/August 2011: 76-80.

<sup>18</sup> Conant, Jeff, with photographs by Orin Langelle. 2011. “Turning the Lacandon Jungle to the Carbon Market.” *Z Magazine* July/August 2011: 76-80.

<sup>19</sup> Thai Climate Justice, Philippine Movement for Climate Justice, Towards Ecological Recovery and Regional Alliance and Focus on the Global South. 2011. *REDD in South East Asia: a Political Economy Perspective*. Bangkok: Focus on the Global South. 22 pp.



deforestation has not actually decreased – for instance, in the case of the Kuna and Emberá territories in the Darién region of Panamá.

Current research on carbon markets demonstrate that the current trading price of carbon is below that of potential profits from deforestation or replacement by monocrop forest plantations of Eucalyptus, acacia or oil palm. That is to say, given that the largest culprits of global deforestation are larger timber and forestry companies, plantation forestry, industrial agro or biofuels and exploration for fossil fuel extraction, the existing market prices are insufficient to prevent deforestation by market-driven and profit-seeking actors. This reality, if it continues, would undermine the market feasibility of any carbon trading or offset mechanism, including REDD, to avoid deforestation.

Civil society organizations offer the following alternative vision to a market-based solution to deforestation:

“If governments are to succeed in mitigating climate change by addressing deforestation, they must agree to an equitable mechanism that actually aims to stop deforestation. This will require reducing demand for agricultural and timber products, and addressing other underlying causes of deforestation. Such a mechanism should reward those that have already conserved their forests. It should build on the experiences of Indigenous Peoples and communities around the world, who already know how to manage and benefit from forests sustainably.”

I strongly urge you to explore real alternatives to cap-and-trade and come to the reasonable conclusion that these mechanisms harm communities and livelihoods for Californians, and our families and communities in other parts of the world. California must not take on the position of exacerbating or causing human rights abuses in other parts of the world. The ecological, ethical and economic fallout of those violations reverberate deeply throughout the global world system. Please feel free to contact me if you have any further questions or concerns. I can be reached via email at [dwu@antioch.edu](mailto:dwu@antioch.edu), or by cell phone at 510-333-3889.

Sincerely,



Diana Pei Wu, Ph.D.

Assistant Professor (Core Faculty), Antioch University Los Angeles

67-1  
Cont'd

## **L67 Response**

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67-1           The commenter urges ARB to look at alternatives, but does not provide specific suggestions. The Supplement provides an expanded description and analysis of the five alternatives originally presented in the 2008 FED. In accordance with the substantive requirements of CEQA, these alternatives represent a “reasonable range” that could feasibly attain most of the basic project objectives while having the potential to reduce or eliminate significant environmental effects. A range of alternatives analyzed in an environmental document is governed by the “rule of reason,” requiring evaluation of those alternatives “necessary to permit a reasoned choice” (CCR section 15126[f]). The alternatives mentioned by the commenter are evaluated in the Supplement.

The commenter’s detailed comments about REDD do not directly relate to the adequacy of the environmental analysis contained in the Supplement. REDD is not part of the proposed project. REDD as part of a cap-and-trade program would have to be developed under a separate rulemaking process and brought before the Board for approval. The rulemaking process to include REDD would have a full public process and environmental review.

Please also refer to response 81-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 68 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Charles  
Last Name: Moore  
Email Address: thechasmo@comcast.net  
Affiliation:

Subject: Carbon tax alternative to Cap & Trade

Comment:

I'm writing to recommend that you pursue a Carbon Tax instead of a Cap & Trade as implementation of AB 32. We need to create a healthier environment and this seems like an easy solution where we can discourage the behavior we don't want (pollution) and encourage the behavior we want (finding green alternatives.) The EU's Cap & Trade program failures show that that system does not inherently reduce emissions. But a Carbon Tax would be a great step towards restricting businesses ability to externalize the cost of their harmful behaviors.  
Thanks for considering this and for the work that you do to make California healthier and a leader in creative ecological solutions.

peace,  
Charles RH Moore

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 11:15:09

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### **L68 Response**

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68-1      The commenter urges Board to consider a carbon tax. Please refer to response 15-1.

**L69**



Los Angeles Refinery

1660 West Anaheim Street  
Wilmington, CA 90744  
Phone (310) 952-6000

**Electronic Posting**

<http://www.arb.ca.gov/lispub/comm/bclist.php>

July 28, 2011

Clerk of the Board, Air Resources Board  
1001 I Street  
Sacramento, California 95814

Re: Comments on Supplement to AB 32 Functionally Equivalent Document (FED) dated June 13, 2011

ConocoPhillips submits these comments regarding the proposed AB 32 Scoping Plan and the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (the "Supplement"), the latter of which was released on June 13, 2011 for public comment.

ConocoPhillips has significant operations in California including oil refineries, crude oil, and petroleum product pipelines, and terminals. As the third largest U.S. energy company, we also have important operations in other Western Climate Initiative states, throughout the U.S. and worldwide.

In addition to the specific comments provided here, ConocoPhillips does support comments submitted by the Western States Petroleum Association.

Because the 2008 Scoping Plan has been necessarily reopened, as noted in Section 1.0 of the Supplement, ConocoPhillips is submitting comments on the full Proposed Scoping Plan. CARB refers to the reopened AB 32 Scoping Plan as the "Proposed Scoping Plan", which is a naming convention ConocoPhillips follows in these comments.

CARB has used the benefit of time to update certain portions of the original Scoping Plan, including the use of updated emissions projections. Other portions have not yet been updated, despite the availability of similar updated projections and data. Using such currently-available data, CARB should evaluate the various measures in the Proposed Scoping Plan and those regulations being pursued under AB 32 in terms of meeting the objectives of the Proposed Scoping Plan. ConocoPhillips below notes several specific instances in which the Proposed Scoping Plan, and thus, subsequent CARB decision-making, would benefit from the use of currently-available data.

Further, it is not clear if the measures being pursued under AB 32 were chosen based on a cost versus benefit analysis. The measures described in the Proposed Scoping Plan should be analyzed and prioritized based on their ability to achieve the Proposed Scoping Plan objectives at the lowest cost.

The Proposed Scoping Plan ignores the High Carbon Intensity Crude Oil (HCICO) regulatory provisions that have been incorporated into the Low Carbon Fuel Standard (LCFS). Because HCICO was not included in the original Scoping Plan, the Board was unable to consider the environmental impact of HCICO, nor could it consider whether inclusion of HCICO in the LCFS regulatory scheme met the objectives of the original Scoping Plan. Also, the Board was unable to assess the economic impact of HCICO. As the HCICO provisions have developed and discussions with CARB have occurred regarding those developments, it has become clear that the potential adverse impacts of HCICO are more potentially significant than earlier anticipated. We urge CARB to include a thorough analysis of HCICO in

69-1

69-2

the Proposed Scoping Plan and associated California Environmental Quality Act processes. Several detailed concerns are noted below.

**1. Objective #12: Page 5 of the Supplement concerns "minimizing leakage"**

It is not clear in the Proposed Scoping Plan, Supplement, or subsequent regulatory action, if CARB has analyzed the potential for leakage that will likely result from implementation of the current HCICO approach in the LCFS. ConocoPhillips encourages CARB to evaluate removal of the HCICO provision from the list of preferred regulatory actions for implementation of AB 32 or to pursue alternative approaches that would minimize leakage per AB 32 and the Proposed Scoping Plan. The industry has recently shared data with CARB that provides examples of crude oil shuffling and the associated leakage that the HCICO provisions will encourage. It is also not clear if CARB has analyzed the potential for leakage due to biofuel shuffling under LCFS.

**2. Objective #10: Page 5 of the Supplement concerns a "broad range of public benefits"**

Has CARB analyzed the impact of more expensive transportation fuels under LCFS, potential refinery shutdowns due to LCFS requirements, LCFS biofuel requirements, LCFS HCICO, and imports of intermediates/blendstocks/fuels from outside California? All of these have the potential to place a significant economic burden on the state of California due to higher transportation fuel costs that may not provide a corollary benefit to the public.

**3. Objective #17 and #18: Page 6 of the Supplement concern "emissions impacts" and "preventing increases in other pollutant emissions"**

ConocoPhillips is concerned that Objectives #17 and #18 will not be met under the current approach for HCICO if crude shuffling results from implementation of that approach. The industry has recently shared data with CARB that provides examples of crude oil shuffling and the associated emissions increases that may result with the current HCICO. CARB is encouraged to review removal of the HCICO provisions and, if needed, consider alternative approaches that would directionally meet stated program objectives.

**4. Section III. Evaluations, Part C: Cost Effectiveness of the Proposed Scoping Plan discusses the role of cost effectiveness in the development and adoption of regulations of this type**

CARB should revisit this section in light of the more recent data. With new data available, it is important to update cost information so that the Board will more fully understand the impact.

Section 11346.3 of the Government Code requires State agencies to assess the potential for adverse economic impacts on California business enterprises and individuals when proposing to adopt or amend any administrative regulation. The assessment shall include a consideration of the impact of the proposed regulation on California jobs, business expansion, elimination or creation, and the ability of California businesses to compete with businesses in other states. ConocoPhillips is concerned that this requirement was not fully evaluated in this Proposed Scoping Plan and requests that CARB revisit this requirement, particularly with respect to LCFS and its currently evolved HCICO provisions.

**5. Appendix I of the Proposed Scoping Plan: CARB determines that the LCFS will have no cost impact**

CARB should revisit this conclusion in light of the more recent experience in biofuel prices. It is also necessary for CARB to revisit the cost impact of LCFS because the analysis in the Proposed

69-2  
Cont'd



Scoping Plan did not include the HCICO impact. With new data available and LCFS regulation expanded to include HCICO, it is important to update the cost so that the Board will fully understand the impact of the Proposed Scoping Plan measures.

We appreciate the opportunity to comment. If you have any questions regarding these comments, please contact Dan Sinks, Fuels Issues Advisor at 562-290-1521, Stephanie Williams, Manager of Government Affairs in our Sacramento office (as noted below), or me at any time.

Sincerely,



Chris Chandler  
Manager, Los Angeles Refinery  
ConocoPhillips Company

cc: Linda Adams, Secretary Cal-EPA  
CARB Board Members  
Mary Nichols, Chair, California Air Resources Board  
James N. Goldstene, CARB Executive Officer

For further information, please contact:

Stephanie Williams  
ConocoPhillips, Manager of Government Affairs, West Coast  
1201 K Street, Suite 1930  
Sacramento, California 95814  
916-447-1698

69-2  
Cont'd

## **L69 Response**

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- 69-1      The commenter states that their comments are directed at the full Scoping Plan, not the expanded environmental analysis provided in the Supplement released for circulation and comment. As described in the Supplement at page 1, what is referenced as the “Proposed Scoping Plan” is the Plan that the Board will reconsider. The Supplement describes the Plan as it was developed in 2008 (called the “2008 Scoping Plan”) and the changes that have occurred since the Plan was last brought to the Board. The Proposed Scoping Plan includes updated 2020 emission projections and emission reductions from measures adopted since 2008. See pages 6 through 12 of the Supplement. ARB also provided further details on the updated data in the Status of Scoping Plan Recommended Measures available at: [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf). A full update of the Scoping Plan is planned for 2013 in accordance with the requirements of AB 32. No further response is required because commenter does not raise any specific significant environmental issue with regard to the alternatives analysis.
- 69-2      The commenter recommends ARB update the 2008 Scoping Plan and the environmental analysis to include High Carbon Intensity Crude Oil (HCICO) provisions incorporated into law. This comment appears directed specifically to the separate activities associated with LCFS. Although the Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including the LCFS, each specific measure, including the LCFS, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. The LCFS regulation was adopted and approved in a separate regulatory proceeding. Accordingly, comments about particular components of specific emission reduction measures (such as the Low Carbon Fuel Standard) do not raise a "significant environmental issue associated with the proposed action" (see CCR section 60007[a] [emphasis added]) because the proposed action (i.e., the Proposed Scoping Plan) does not include adoption of the particular components of specific measures (such as a cap-and-trade regulation). Please refer to the ARB website for activities associated with the LCFS including the current effort to develop proposed amendments as well as the efforts of the LCFS Advisory Panel in supporting the program review at: <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>. Please refer to Response to Comment 82-4 as well.



**L70**



**District 12**

**Robert LaVenture**  
District Director

**Chris Youngmark**  
Assistant to the Director

July 28, 2011

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

RE: Regulation to Implement CA Scoping Plan and Transportation Fuels

Dear Chairman Nichols,

I write on behalf of the United Steelworkers and our members in the ten unionized California oil refineries who produce most of the fuels currently consumed by our state's motor vehicles.

As you know our organization has been a strong supporter of AB32 since its passage and worked actively to prevent its suspension by opposing Proposition 23 in last year's election. We remain firmly convinced that AB32's effective implementation will drive economic development in our state, create hundreds of thousands of new jobs and industries, and secure markets for energy-intensive products manufactured in our state to the highest standards possible.

We believe that this last outcome, however, will partly depend on the effective implementation of the law for the oil industry, in particular with the low carbon fuel standard. If the LCFS is implemented in such a fashion that its regulations don't guard against leakage by ignoring imported products, we will have replaced California produced products with those from states or countries that do little or nothing to regulate greenhouse gas emissions.

We are particularly concerned about "leakage" in the petroleum refining industry and would like to work with you to design provisions that would prevent the loss of CA refinery jobs to imported fuels from states and countries that do not participate in similar programs.

I will have my office contact you later this week to set up a meeting at your earliest convenience to review the effectiveness of the current proposed LCFS. We understand that several of our partners in the BlueGreen Alliance have supported the LCFS as part of AB32, and would also welcome their participation in these discussions to address our concerns.

Sincerely,

Director, District 12  
United Steelworkers (USW)

RL/jcl

United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union

3150 Carlisle Boulevard NE, Suite 110, Albuquerque, NM 87110 • 505-878-9756 • 505-878-0763 • [www.usw.org](http://www.usw.org)

70-1

Cc: The Honorable Edmond Brown, Governor  
Nancy McFadden, Cabinet Secretary  
Linda S. Adams, CA EPA Secretary  
Gary Beevers, International Vice President  
Dave Foster, Executive Director, Blue Green Alliance  
Chris Youngmark, Assistant to the District Director  
Rick Latham, Sub District Director

### **L70 Response**

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- 70-1      The commenter expresses support for the implementation of AB 32, and further raises issues specific to separate activities associated with the LCFS and concerns about “leakage.” The currently proposed action does not adopt any specific regulatory measure recommended nor does it adopt any particular design features or components of those measures. See response 69-2.

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**L71**

Transportation Solutions Defense and Education Fund

P.O. Box 151439 San Rafael, CA 94915 415-331-1982

"Solutions Is Our Middle Name"

July 28, 2011  
By E-Mail

Clerk of the Board  
Air Resources Board  
1001 I Street  
Sacramento, California 95814

Re: Supplement to Scoping Plan FED

Dear Sirs:

Our organization previously commented on the cursory and legally inadequate analysis of a carbon tax alternative in the FED, and provided comments on the merits of a carbon tax in our August 1, 2008 "Comments on CARB Draft Scoping Plan." (relevant section attached). We are appalled at the shoddy treatment given to the carbon tax alternative in the Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("Supplement"). It is obvious that Alternative 4 was designed to consider a carbon fee or tax in the most unfavorable possible light--a straw man meant to be knocked down. A fair and honest alternatives analysis would not treat an alternative this way--especially not the one preferred by successful plaintiffs.

As this Supplement will be under court scrutiny as a result of *Association of Irrigated Residents, et al. v. California Air Resources Board, et al.*, the Air Resources Board would be well advised to comply with CEQA in its response to comments. A mitigated Alternative 4 must be studied. While appropriate mitigations were identified in the text of the Supplement, they were neither studied nor developed in detail. If the ARB declines to study a Mitigated Alternative, the FED Supplement will be legally inadequate.

While regulated industries may prefer Cap-and-Trade to a carbon tax or fee, ARB should not draw any conclusions from that as to the efficacy of the control mechanism. On the contrary, it is at least equally likely that industry resists a carbon tax precisely because it is hard to game, which is another way of saying a carbon tax doesn't offer the opportunities for fraud presented by Cap-and-Trade. Clearly, industry's interest in reducing GHGs is solely a matter of regulatory compliance, rather than a recognition of responsibility for staving off global catastrophe.

71-1

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Page 2

Mitigations

On page 83 of the Supplement, the first obvious but unimplemented mitigation is identified: “unless special provisions were included in legislation or regulations for automatic adjustments.” Nonetheless, the text admits that “an automatic adjustment could be included in the original authorization.” (p. 95). Such provisions need to be designed, assumed in the definition of a mitigated alternative, and tested in the alternatives analysis. This is critical, because an unmitigated Alternative 4 “creates a substantial risk of either falling short of the target or over-complying” (p. 95), thus causing Alternative 4 to receive only Medium scores for Achiev[ing] Reductions and Ensur[ing] Reductions. Meanwhile, ARB’s favored alternatives scored High for these Project Objectives. (p. 112).

Page 88 admits that “a standard approach would be for all emissions in the covered sector to be subject to the fee or tax” yet selects the marginal fee or tax approach for study. (at 89). The purpose of environmental review here is to identify the optimal program for effective reduction of GHGs. If ARB suspects that a marginal approach would discourage leakage, it needs to demonstrate that through comparison to the “standard approach.” Given the simplicity of administering the “standard approach” as compared to the “marginal approach” and the ensuing protection it provides against gaming or manipulation, clearly these approaches need to be compared, either as sub-alternatives, or as separate alternatives.

The Supplement states that “If pursued, this Alternative would need to be designed to include administrative mechanisms to minimize the potential for leakage.” (p. 95). The unmitigated Alternative 4 was scored with a Low likelihood of Minimiz[ing] Leakage. (p. 112). When the document preparer acknowledges the potential for mitigation, a fair and honest alternatives analysis would employ mitigation to make it possible to compare a carbon tax or fee on a level playing ground. That was not done here.

The scoring for Avoid Disproportionate Impacts is unfair to a carbon tax or fee, because Alternative 4 is unmitigated for such impacts. A properly designed tax would typically include rebates that would offset the impact on low-income communities. Once again, the carbon tax or fee was not allowed to compete effectively with the favored alternatives.

Alternatives Analysis

Although the implementation of offsets would result in potential environmental impacts that were identified in the text, this was left out of Table 2.8-1 (at 112). If this table is not expanded to include all identified impacts, a new table summarizing the alternatives analysis is needed.

“The carbon fee or tax provides a clear, long-term signal of the price that parties will face for their GHG emissions, which allows for long-term operational planning.” (p. 96). This is a very major advantage of a carbon tax that was not factored into the alternatives analysis. Uncertainty as to the value of carbon credits has been harmful to the effectiveness of the EU-ETS.

71-2

71-3

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Page 3

While industry's acceptance of the regulatory program is certainly an issue, public confidence in the fairness of the program and in its resistance to gaming is at least equally important, and should be a formal evaluation criterion.

We disagree strongly with the evaluation of the likelihood of achieving the minimization of administrative burden at p. 112. It should be obvious that a carbon fee or tax would have the absolute minimum of an administrative burden, while Cap-and-Trade, and its variants, would have a high burden, as it would require the creation of at least one entirely new bureaucracy as well as a new market. "In theory, a carbon tax or fee may be more straightforward to design and administer, compared to other regulatory alternatives." (p. 91). "In theory, a key administrative advantage to taxes is that they may be levied and enforced through established tax collection methods..." (p. 92). An honest scoring for this objective would have been High and Low, respectively.

There is nothing inherent in a carbon tax or fee that would make it score Low on Link with Partners. Linking is solely a question of whether the partners select compatible mechanisms. British Columbia already implements a carbon tax. Due to California's market weight, its choice of GHG reduction methodology could influence the choices of its partners. With Australia's recent adoption of a carbon tax, these choices should not be considered fixed in stone. Accordingly, there is no justification for scoring a carbon tax as Low.

The scoring for Credit Early Action is equally suspect. Entities that have voluntarily reduced their GHG emissions prior to the implementation of regulations receive appropriate credit for early voluntary actions in the form of lower carbon tax or fee payments, which provide competitive advantages in the marketplace.

It was unreasonable to penalize Alternative 4 for Prevent Increases in Other Emissions by scoring it the same as the Cap-and-Trade Alternatives. Because it does not contain offsets, there is no likelihood of a carbon tax or fee resulting in increased emissions in already burdened communities. On the other hand, offsets could readily increase "direct, indirect, and cumulative emissions impacts from a market-based compliance mechanism, including localized impacts in communities that are already adversely impacted by air pollution." (p. 6) Therefore, the Cap-and-Trade Alternatives should have scored Medium or Low for Consider Emissions Impacts.

The Low score for Technologically Feasible and Cost-Effective for Alternative 4 is dubious, given the statement: "However, it is uncertain that Alternative 4 would result in the most cost-effective GHG emissions approach, because the level of the fee or tax would be set legislatively or administratively, rather than being easily adjusted to the market." (p. 95). That uncertainty, while not substantiating a High score, certainly doesn't justify a Low one. When evaluating cost-effectiveness, the potential for gaming the system must be analyzed. The European Cap-and-Trade system was plagued by gaming, making it very costly in terms of actual GHG reductions.

71-3  
Cont'd

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Finally, the scoring for Technologically Feasible and Cost-Effective was presented without any substantial evidence. Even if the scoring is the product of expert opinion, such opinion must be grounded in fact to qualify as substantial evidence. No facts were presented in the alternatives analysis to justify the scores given. The burden of presenting substantial evidence exists even at the programmatic level of environmental review.

71-3  
Cont'd

#### Faulty Analysis

The Supplement states on p. 90 that "Under a system that imposes the fee or tax further upstream, such pricing effects may not be as apparent to the downstream energy user (Niemeier et al 2008) because the charge is imbedded in the cost of the input, rather than directly assessed based on the activity of the downstream party." This is nonsense. The total price to the downstream user will provide plenty of incentive to seek energy efficiency improvements.

"One other possible advantage of downstream assessment is that it may be easier to target relief for low-income households if that is the point of regulation." On the contrary, existing programs benefitting low-income utility customers (e.g., CARE) offer an obvious means of providing relief in that sector, even if the tax were applied upstream.

71-4

The Supplement states on p. 91 that "For purposes of this analysis, the point of regulation of electrical generation and industrial sources would be the facility operator (i.e., the generation or industrial facility)." Given the preponderance of gas-fired electricity generation, regulation of such plants would appear unnecessary, due to the regulation of the gas feedstock.

#### Errors in Document Production

The Bay Area Air Quality Management District's carbon fee should never have been included in Table 2.6-1 on p. 86, as it was intended solely to recover regulatory costs, and not to reduce GHGs.

The last sentence on p. 89, "Therefore, in principle, there may be a reduction in administrative and monitoring costs, if assessed midstream" is a flawed duplicate of a sentence earlier in that same paragraph.

71-5

Table 2.6-3 on p. 90 has incorrect labels for the lefthand "Fee or Tax Assignment Point." It appears they should be Upstream, Downstream and Midstream, respectively.

#### Conclusion

The Supplement to the FED is legally inadequate as to its analysis of a carbon tax or fee alternative. The Supplement must be revised and recirculated to allow the public to comment on the new material added to the Supplement, as a fair and honest evaluation of such an alternative is likely to produce a different Environmentally Superior Alternative. ARB and its efforts to reduce GHGs deserve nothing less.

71-6



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Page 5

Sincerely,

/s/ DAVID SCHONBRUNN

David Schonbrunn,  
President

From our August 1, 2008 letter titled "Comments on CARB Draft Scoping Plan."

AB 32 Program Design Comments

While I am not an economist, I have been very struck by the website, carbontax.org which contains the writings of Charles Komanoff. Rather than offering a series of links to articles and publications there, I urge CARB to thoroughly explore the site. I see several very large advantages to carbon taxes, as compared to cap and trade programs:

Cap and trade will require the creation of new institutions and expertise, which will be very costly. The thousands of lawyers and investment bankers that will be needed to make it work will add tremendous cost to the emissions reduction process. Conferences currently being offered on the business opportunities that will be created by cap and trade suggest that vast sums that otherwise could go back to the public or into emissions reduction projects will be siphoned off by entrepreneurs. A carbon tax will be simple and inexpensive to administer and will not require an army of lawyers. The proceeds of the tax could be used to create cost-effective transit systems, as well as other low-carbon mitigations. Another possibility is to return the entire proceeds to taxpayers, to offset the increased cost of consumer goods.

Another tremendous problem with cap and trade is the potential for sophisticated gaming. (Think of how Enron manipulated the California energy market.) A carbon tax, on the other hand, is very straightforward. It should be easy to catch bad actors.

The chief benefit cited for cap and trade is the certainty that the target will be achieved. This is dubious: if the system is itself flawed, as was Europe's, or if it is gamed, it won't achieve its goal. On the other hand, a carbon tax can be adjusted in response to observations of energy consumption levels. This isn't rocket science!

I urge CARB to conduct a full public evaluation of the potential benefits of a carbon tax before being stampeded by the business community into adopting cap and trade. The very popularity of cap and trade with the business community should be enough to cause CARB to stop and evaluate whether implementing it would truly be in the public interest.

## **L71 Response**

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- 71-1      This comment provides a general introduction for the letter and makes a general assertion that ARB's treatment of the carbon fee alternative is inadequate and a "Mitigated Alternative" must be studied. Please refer to more specific responses below (71-2 through 71-6).
- 71-2      The commenter recommends specific "mitigations" that could be included in the discussion of the carbon fee alternative that would make it score higher for meeting the project objectives. Specifically, commenter recommends assuming automatic adjustments, comparing "standard approach" to "marginal approach" and assuming administrative adjustments to minimize potential leakage. The alternative as described in the Supplement includes both a marginal approach and assumes that administrative measures to minimize leakage are implemented with a fee. See also response 15-1.
- 71-3      The commenter asserts that the environmental impacts associated with offsets should be included in Table 2.8-1. Table 2.8-1 provides a summary of the likelihood of each alternative to meet the project objectives, not a summary of the environmental impacts associated with each alternative. The ability of each alternative to meet the project objectives is a separate consideration from the ability of each alternative to substantially reduce or eliminate the impacts associated with the project. The information about the environmental impacts associated with each alternative, including cap and trade which includes impacts of certain offset projects, is provided in text format under the discussion for each alternative. There is no table providing a summary comparison of the relative environmental impacts of each alternative.
- The commenter states: "Uncertainty as to the value of carbon credits has been harmful to the effectiveness of the EU-ETS." It is not entirely clear to what aspect of the EU-ETS the commenter refers. During the first, experimental phase of the EU-ETS, before the 2008 Kyoto commitments were to be met, there was very little information on the actual emissions of the covered entities due to lack of systematic inventories at that time. Countries developed their own allocation schemes with this limited information. As a result, emitters received too many trading allowances because emissions data, once developed, showed that actual emissions were lower than what had been assumed and allocated to permits (Ellerman, Convery, and de Perthuis 2010). The price quickly adjusted downward once the new data were provided to the market. But this is a one-time adjustment that need not repeat itself in California, which has required reporting of GHGs since 2008. Allowance prices in the Phase I

(2008-2012) EU-ETS have certainly fluctuated, but not wildly so and certainly not more so than other commodities that have moved in response to the global financial crisis in 2008-10 and to oil market volatility. One thing that is certain is that capped emitters under the EU-ETS face a declining cap, and therefore have certainty as to the reductions required.

The commenter asserts that the ability of the carbon fee or tax to provide a long term signal of price was not factored in the analysis. On the contrary, the Supplement does note this aspect of a carbon fee or tax (Supplement, pg. 83.) The commenter may be suggesting that providing a long term price signal be included in the list of project objectives. See below for more about the role of the project objectives.

The commenter recommends that public confidence in the fairness of the program and its resistance to gaming be a “formal evaluation criteria.” The evaluation of alternatives was done in accordance with ARB’s certified regulatory program and CEQA. ARB’s regulations require that the analysis address “feasible alternatives available that would substantially reduce any impacts associated with the proposed action” (CCR section 60006; see also Supplement, pg. 14). CEQA requires consideration of a “range of reasonable alternatives” that could feasibly attain most of the basic project objectives but would avoid or substantially lessen any significant impacts associated with the project (See CEQA Guidelines section 15126.6[a]). The objectives of the Scoping Plan are defined by AB 32 and are described in section 1.2 of the Supplement. The project objectives listed in the Supplement and Table 2.8-1 are not strictly “formal evaluation criteria” but a means to compare the relative ability to each alternative to meet the basic project objectives. The commenter’s suggestion to add other “formal evaluation criteria” are not included because they are not project objectives mandated by AB 32. When the Board considers alternatives, they may consider other factors besides the ability of the alternative to meet the project objectives or its ability to reduce or eliminate adverse impacts associated with the proposed project as described in the FED. The decision-makers’ determination includes a balancing of economic, environmental, social, technological and legal factors (See Public Resources Code section 21061.1). The commenter’s additional factors to consider are noted and included in the record for Board consideration.

71-4

The commenter states that ARB’s Preliminary Draft Regulation (PDR), released in November 2009 reflects the approach to cap-and-trade that was approved by the Board in the 2008 Scoping Plan. The PDR’s point of regulation proposes to target large sources that emit at least 25,000 tons of GHG emissions, including electricity generators, industrial and

transportation sources, a “midstream” approach. So a key issue is at what point in the chain from fuel extraction to combustion to end use is the fee directly applied? This is often referred to as the *point of regulation*.

The commenter describes research that suggests a downstream system aimed at end use may promote greater energy efficiency than an upstream approach aimed at extraction (Niemeier et al 2008) as “nonsense.” ARB’s economic modeling of the proposed Cap-and-Trade Regulation showed that savings from energy efficiency improvements significantly lowered the total compliance costs of the proposed Cap-and-Trade program.

It may be worth noting that the Niemeier et al 2008 study is just one among several efforts over a period spanning roughly one decade to study the question of whether a downstream system aimed at end use promotes greater energy efficiency than a system aimed at fuel extraction. As noted in a Congressional Budget Office (2001) comparison of upstream and downstream market design approaches, advocates of a downstream design “argue that businesses and households would be more likely to reduce their use of fossil fuels and energy-intensive goods in response to allowance requirements than in response to the incentives created by changes in fuel prices.” The idea that having to receive and hold allowances provides a stronger incentive than higher fuel costs passed down through upstream producers is not new. Knopman and Naimon 1999 suggest that a downstream system can be so effective in this regard that the point of regulation should be placed further downstream than the majority of cap-and-trade approaches suggest. Whereas California and the EU-ETS place the point of regulation on large emitters, Knopman and Naimon (1999) suggest regulating households and consumers, rather than large emitters, such as electricity generators.

The commenter says that it is unnecessary to use a system that targets electricity generators because of the “preponderance of gas-fired electricity generation...due to the regulation of the gas feedstock.” Presumably the commenter is arguing that regulations should be set upstream at the point of gas entry into the State’s energy system (wellhead or terminal) rather than the point of emission (plant, building or home). To clarify, the Supplement assumes that the point of regulation is midstream because the proposed Cap-and-Trade Regulation places the point of regulation under a cap on large sources that emit 25,000 or more tons per year of CO<sub>2</sub> or equivalent.

Please also refer to response 15-1.

71-5           The comment pertains to specific perceived flaws in the Supplement, and indicates that the Bay Area Air Quality Management District's fee should not be included as an example in the Carbon Fee or Tax Alternative in Table 2.6-1. ARB disagrees that this example should be deleted. The fee is an example of how the District defrays some the costs of the District's climate protection work, which includes but is not limited to environmental review, air pollution regulations and emissions inventory development.

Two other clarifications are requested. Comments are noted and the document is revised accordingly.

Please refer to response 15-1.

71-6           This comment expresses commenter's opinion that the analysis of the carbon fee alternative is inadequate and requires revision and recirculation. ARB disagrees for the reasons stated above in responses 71-4 through 71-6. Please also refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

Comment Log Display

## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp...> sp1...

**L72**



California Environmental Protection Agency  
**Air Resources Board**

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### Comment Log Display

BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

**COMMENT 72 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Reede  
Last Name: Stockton  
Email Address: reede@ccdecology.org  
Affiliation: Ctr for Community, Democracy & Ecology

Subject: Broad Coalition Urges Reconsideration of Cap-and-Trade

Comment:

The following letter is endorsed by a broad coalition of over 40 nonprofit groups concerned about ARB's proposed cap-and-trade program. The letter is addressed to Governor Brown, with a copy submitted to ARB here as a public comment. The letter urges Governor Brown to direct the Air Resources Board to prioritize CO2 reductions in communities already heavily impacted by toxic air contaminants and, prior to reaching a decision on a reconsidered GHG reduction program, to hold hearings on the revised proposal in those impacted communities.

Attachment: [www.arb.ca.gov/lists/ceqa-sp11/99-brown\\_sign\\_on\\_letter.pdf](http://www.arb.ca.gov/lists/ceqa-sp11/99-brown_sign_on_letter.pdf)

Original File Name: Brown sign on letter.pdf

Date and Time Comment Was Submitted: 2011-07-28 11:45:29

72-1

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July 28, 2011

The Honorable Edmund G. Brown, Jr.  
Governor of California  
State Capitol Building, Suite 1173  
Sacramento, CA 95814  
Phone: (916) 445-2841  
Fax: (916) 558-3160

Dear Governor Brown,

We are writing to request that you rescue the California Global Warming Solutions Act of 2006 (AB 32) from the uncritical trust in markets that characterized Arnold Schwarzenegger's approach to addressing climate change. Implementation plans for AB 32 have reached a critical juncture, and your intervention is now required to ensure the success of California's climate change program.

AB 32 created the opportunity for California to blaze a trail for the rest of the nation on comprehensive climate change action. The Scoping Plan created by the California Air Resources Board (ARB) to fulfill that promise is, in most respects, up to the task. There is, however, one key component of the program – ARB's recommendation that a cap-and-trade program be created and charged with producing roughly 20% of the greenhouse gas emissions reductions required by 2020 – that threatens to undermine an otherwise groundbreaking effort.

About the time of AB 32's passage in 2006, cap-and-trade reached its high point of support as a policy option to address climate change. New England's Regional Greenhouse Gas Initiative (RGGI) was in its formative stage, holding its first auction of emissions permits in 2008. The United Nations Clean Development Mechanism (CDM), which handles emissions offsets for developed countries under the Kyoto Protocol, was established in 2001 but saw limited use until Kyoto went into effect in 2005. The European Union Emissions Trading Scheme (EU ETS) began operation in 2005.

Although many of us warned of the inherent flaws of cap-and-trade and offsets, it is not surprising that AB 32 was passed with provisions that allowed the use of market mechanisms like cap-and-trade. Policy momentum seemed to favor cap-and-trade and there was scant evidence to suggest that our fears were warranted. The record of cap-and-trade schemes since then, however, has validated our concerns, as fraud, instability and ineffectiveness have plagued them. Offsets have proven not only to be fraud magnets, but have also generated human rights abuses and forced relocation of Indigenous Peoples. The death knell for cap-and-trade on a national level was sounded with the catastrophic failure of the Waxman-Markey approach to climate legislation to generate significant support in the Senate. Even the prospective carbon market brokers who have been circling the potential market in hopes of making a killing have begun to abandon their hopes that cap-and-trade has a bright future. In short, it is no longer possible to make the case that California can lead on climate action by creating a market

72-1  
Cont'd



for greenhouse gas emissions permits. It is now clear that leadership does not point in the direction of cap-and-trade. Nevertheless, Arnold Schwarzenegger's passion for market mechanisms lingers in ARB's cap-and-trade recommendation. It is time to exorcise Scharzenegger's ghost.

AB 32 permits, but does not require the use of market mechanisms like cap-and-trade and offsets. While sometimes appropriate, market mechanisms only make sense when we do not care how our goals are achieved, and are therefore willing to allow regulated entities to search for the cheapest way to meet their targets. Cap-and-trade systems and offsets, which typically measure their reductions in terms of equivalent carbon dioxide (CO<sub>2</sub>e), are based on the assumption that it does not matter where and how CO<sub>2</sub>e reductions are achieved. One ton of CO<sub>2</sub>e is assumed to equal another whether it is encountered as an actual reduction achieved in an urban context in California or an offset credit purchased from a project developed in a rural area outside of the state or even outside of the country. In the case of greenhouse gas reductions, however, we should care very much where and how emissions are achieved.

The assumption that all CO<sub>2</sub>e is equal is simply incorrect. Different greenhouse gases have vastly different profiles in terms of the length of time they remain in the atmosphere. That has huge implications for their importance in terms of global warming potential. Likewise, the various forms of carbon have wildly different risk profiles. A ton of carbon stored in forests may be released due to fire or land development, and a ton of carbon geologically sequestered through industrial processes may escape due to earthquake damage or leakage. Those possibilities, therefore, present far more risk than a ton of carbon locked up in the mountains of West Virginia in the form of coal deposits.

Most importantly, we care about where GHG reductions are achieved for reasons of equity. As ARB noted in the response to a question from the Center on Race, Poverty and the Environment, "local pollutants tend to be 'bundled' with GHG (especially CO<sub>2</sub>) emissions, so that changes in the production methods that lead to reduced GHG emissions also lead to lower emissions of local pollutants". In addition to this 'bundling' of GHG emissions with local pollutants, recent studies point to the amplification effect of local CO<sub>2</sub> emissions on ozone and particulate matter, two of the primary drivers of the health impacts of air pollution. Professor Mark Z. Jacobson, of the Stanford Department of Civil Engineering, found that

...reducing locally-emitted CO<sub>2</sub> will reduce local air pollution mortality even if CO<sub>2</sub> in adjacent regions is not controlled. This result contradicts the basis for air pollution regulations worldwide, none of which considers controlling local CO<sub>2</sub> based on its local health impacts. It also suggests that implementation of a "cap-and-trade" policy should consider the location of CO<sub>2</sub> emissions, as the underlying assumption of the policy is incorrect.

("The Enhancement of local air pollution by urban CO<sub>2</sub> domes", Mark Z. Jacobson, Dept. of Civil Engineering, Stanford University)

72-1  
Cont'd

Allowing heavy industrial polluters located near hotspots of toxic emissions, which are concentrated in communities of color and low-income communities, to buy or trade their way out of making local GHG reductions is unacceptable. Since the health impacts of air pollution are concentrated in those communities, abandoning the opportunity to maximize the co-benefits of GHG reductions that were noted by ARB and Dr. Jacobson amounts to a conscious decision to impose disproportionate health impacts upon low-income communities and communities of color.

AB 32 had something else entirely in mind. The legislation specifically directs ARB to avoid disproportionate impacts on communities of color and low-income communities and to ensure that GHG reduction activities complement existing air quality regulations and reduce toxic air contaminant emissions. To ensure that ARB took this direction seriously, the board was further directed to convene an environmental justice advisory committee “comprised of representatives from communities in the state with the most significant exposure to air pollution, including, but not limited to, communities with minority populations or low-income populations, or both.”

The Environmental Justice Advisory Committee (EJAC) convened by ARB has recommended against the establishment of a cap-and-trade program for many of the same reasons noted here. Unfortunately, ARB has chosen to disregard those recommendations. In a clear, but telling, indication of ARB’s working relationship with the Environmental Justice Advisory Committee, seven of the eleven members of EJAC are parties to the successful lawsuit against ARB challenging ARB’s cap-and-trade recommendation. It is impossible to regard this turn of events as anything other than an egregious failure of the Air Resources Board to meaningfully consult with EJAC, as was the clear intent of AB 32.

As Governor, you have the authority to direct the Air Resources Board to prioritize its analysis of cap-and-trade alternatives. In order to ensure that ARB does so, we would like to request that you direct ARB to take the following actions:

- Recognize the principle that all CO<sub>2</sub>e is not equal. The nature and location of emissions must be considered in the creation of a greenhouse gas reduction program.
- Prioritize CO<sub>2</sub> reductions in communities that are already heavily impacted by toxic air contaminants.
- Reconsider the recommendation to pursue a cap-and-trade program in light of the preceding principle and priority.
- Prior to reaching a decision on a reconsidered GHG reduction program, hold hearings to evaluate the recommendation in communities that are already heavily impacted by toxic air contaminants.

We hope we can count on you to intervene and keep California’s climate change leadership on track.

Thank you for your consideration.

72-1  
Cont'd

Bay Localize (California)  
Biofuelwatch (U.S., International)  
Biomass Accountability Project (Massachusetts)  
The Borneo Project (California)  
Carbon Trade Watch (International)  
Center for Biological Diversity (California, U.S.)  
Center for Community, Democracy and Ecology (California)  
Citizens Climate Lobby (California)  
Citizens for Environmental Safeguards (New Mexico)  
Citizens for Sanity (Florida)  
COECOCEIBA – Friends of the Earth Costa Rica (Costa Rica)  
The Corner House (U.K.)  
CounterCorp (California)  
Environmental Justice League of Rhode Island (Rhode Island)  
FERN (International)  
Food First/Institute for Food and Development Policy (California)  
Friends of the Siberian Forests (Russia)  
Global Alliance for Incinerator Alternatives (GAIA) (California, U.S., International)  
Global Community Monitor (GCM) (California)  
Global Exchange (California)  
Global Justice Ecology Project (GJEP) (California, U.S., International)  
Grassroots International (Massachusetts)  
Green Delaware (Delaware)  
Greenfire Farm (Ohio)  
Indigenous Environmental Network (U.S., Canada)  
International Development Exchange (IDEX) (California)  
Labour, Health and Human Rights Development Centre (Nigeria)  
Maison de l'Enfant et de la Femme Pygmee (Central African Republic)  
Movement Generation Justice & Ecology Project (California)  
Neighbors Against the Burner (NAB) (Minnesota)  
New York Climate Action Group (New York)  
Richmond Progressive Alliance (California)  
Rising Tide North America (U.S., Canada, Mexico)  
Saving Our Air Resource (SOAR) (Wisconsin)  
smartMeme (California)  
Society for Threatened Peoples (International)  
SOLJUSPAX (Philippines)  
Timberwatch Coalition (South Africa)  
Turtle Island Restoration Network (California)  
World Development Movement (U.K.)  
World Temperate Rainforest Network (International)

cc: California Air Resources Board

## **L72 Response**

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72-1      The commenter expresses concerns with the proposed Cap-and-Trade Regulation. The Supplement provides an expanded description and analysis of the five alternatives originally presented in the 2008 FED. Please refer to responses 1-1 and 3-1.

In addition, ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

Please also refer to response 4-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L73**

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**COMMENT 73 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Lauren  
Last Name: Rafelski  
Email Address: lauren.rafelski@gmail.com  
Affiliation:

Subject: Revenue-neutral Fee and Dividend  
Comment:  
Dear CARB,

I commend you for working to reduce greenhouse gas emissions in the state of California. However, I ask you to consider implementing a revenue-neutral fee on carbon emissions, in which 100% of the revenue is returned evenly to California residents, instead of a cap and trade system.

A carbon fee is much easier to implement than cap and trade. The fee could be set at a certain amount for the first year, and increase by a set amount every year. This could be implemented immediately, as opposed to a cap and trade system, which could take years to implement. Since right now we do not have an effective way of removing carbon dioxide from the atmosphere, the sooner we can start reducing emissions, the better off we'll be in the long run.

A carbon fee is also more transparent than a cap and trade system. A stable price of carbon would make it easier for businesses to predict their costs. Cap and trade, on the other hand, would create much higher volatility in carbon prices.

In these tough economic times, it is important to consider how a price on carbon would affect the poorest Californians, who spend a higher percentage of their income on carbon dioxide sources, such as transportation. A flat fee on carbon would disproportionately affect the poor. However, by returning 100% of the revenue evenly to California residents, the carbon fee would be progressive, rather than regressive, and people would be more insulated from rising costs.

A fee on carbon will achieve the same purpose as cap and trade: it will lower carbon dioxide emissions, while helping to level the playing field for renewable energy. A cap and trade system can be unnecessarily complicated, and can cause very high uncertainty in carbon prices. On the other hand, a revenue-neutral carbon fee and dividend is very simple, eliminates the potential for carbon price uncertainties, and helps insulate Californians from rising carbon prices.

Sincerely,  
Lauren Rafelski

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 11:39:34

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L73 Response**

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73-1            The commenter suggests a carbon tax. Please refer to response 15-1.

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# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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### Comment Log Display

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**COMMENT 74 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Melody  
Last Name: Mo  
Email Address: [melody@baylocalize.org](mailto:melody@baylocalize.org)  
Affiliation: Bay Localize

Subject: Cleaner Air for All Communities

Comment:

We need to pass an alternative/revision to the current cap and trade policy. This is especially because of the industrial polluters who can evidently take advantage of the "trade" part of the current cap and trade policies. Residents who live in proximity to these polluters (many of whom are currently allowed to continue their detrimental levels of pollution) suffer the most immediate health effects. This needs to be changed.

In a time of financial instability, those who have the privilege to make big changes through policy need to take advantage of their position to help create and sustain resilient communities. A community is resilient when its members are equipped with the tools (i.e. health) in order to self-sustain when global forces are not favorable. And one way to start is to ensure the formation and proper regulation of policies to have cleaner air for each and every community in California.

Thanks for your time,  
Melody Mo

Green Your City Intern, Bay Localize  
B.A. Political Economy, 2011 - University of California, Berkeley

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 12:17:22

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74-1

## **L74 Response**

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74-1           The commenter states that an alternative to the proposed Cap-and-Trade program should be passed. The Supplement provides an expanded description and analysis of the five alternatives originally presented in the 2008 FED.

In addition, ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. Please also refer to response 4-1.

**L75**

**ALSTON & BIRD LLP**

333 South Hope Street  
16th Floor  
Los Angeles, CA 90071-1410

213-576-1000  
Fax: 213-576-1100  
www.alston.com

Edward J. Casey

ed.casey@alston.com

(213) 576-1005

July 28, 2011

**VIA FACSIMILE  
(916) 445 5025  
& ELECTRONIC MAIL**

California Air Resources Control Board  
1001 "I" Street  
Sacramento CA 95814

Attn.: Clerk of the Board

Re: *Comments on Supplement to AB 32 Scoping Plan Functional Equivalent Document*

Dear Clerk:

On behalf of California Independent Producers Association, we are submitting this letter and the attached report from Environ Corp.<sup>1</sup> to provide additional comments on the Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("FED Supplement") published by the California Air Resources Board ("CARB") on June 13, 2011 in connection with CARB's environmental analysis of its proposed Scoping Plan and the additional measures proposed therein to reduce the level of greenhouse gases ("GHG") (the "Proposed Project").<sup>2</sup> These comments follow our earlier comments noting certain deficiencies arising under the California Environmental Quality Act ("CEQA") with respect to the information provided in the FED Supplement.

At the outset, we note that CARB has still not provided all of the information that is missing from the FED Supplement identified in our initial comment letter dated July 1, 2011. As explained in that letter, no member of the public can adequately review and comment on the FED Supplement without that necessary information and, therefore, the FED Supplement fails as an adequate informational document under CEQA. (*County of Amador v. El Dorado Water Agency* (1999) 76 Cal.App.4th 931, 946.) CARB attempted to provide some of that information in a document that it published on July 22, 2011 entitled "Status of Scoping Plan Recommended Measures." ("CARB Status Report.") Yet, as explained in the Environ Report, that document fails to provide the needed information and simply raises more questions than answers. Moreover, by waiting to

<sup>1</sup> Environ's comments on the FED Supplement are incorporated by reference in this comment letter.

<sup>2</sup> The scope of the Proposed Project is discussed further at page 4 of this letter.

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provide the information contained in this Status Report until the 40th day of the 45-day comment period, CARB has deprived the public of an adequate time to review and comment on all of the information relating to the FED Supplement. Consequently, CARB should extend the comment period by 40 days.

In addition, the FED Supplement fails to satisfy a number of other requirements of CEQA. Those requirements must be satisfied because “in implementing [a certified regulatory] program, the agency must adhere to the basic policies and substantive obligations established by CEQA.” (*Sierra Club v. State Board of Forestry* (1994) 7 Cal.4th 1215, 1236-1237.) In particular, and as further explained below, the FED Supplement fails to provide (1) an accurate environmental baseline, and (2) a candid and accurate assessment of the No Project Alternative.

I. The FED Supplement Fails To Provide An Accurate Baseline Because (A) The GHG Reductions Attributable To Other Programs Are Underestimated Or Omitted In the FED Supplement And (B) The Effects Of The Economic Recession On State-wide GHG Emissions Have Been Understated

The FED Supplement states that it has updated the baseline used in the original FED by “updating projected BAU [business as usual] emissions based on current economic forecasts (i.e., as influenced by the economic downturn) and [GHG] reduction measures already in place.” (FED Supplement at p. 10.) Based on that updated baseline, the FED Supplement states that “the shortfall from the AB 32 target that would need to be obtained by remaining measures in the Proposed Scoping Plan would be approximately 22 MMTCO<sub>2</sub>E.” (“MMT”) (FED Supplement at p. 12.)

However, as confirmed in the technical analysis prepared by Environ Corp. provided in the report attached hereto, CARB has 1) both underestimated and ignored numerous GHG reduction measures that will more than make up any current shortfall in achieving the AB 32 target, and 2) failed to describe the methodology for estimating the effects of the recession on state-wide GHG emissions and failed to fully account for those effects. For example:

► With respect to the “ongoing, proved or otherwise authorized [GHG reductions] measures that would occur even if no Scoping Plan measures were implemented” that are included in the FED Supplement, CARB’s estimated GHG reductions attributable to those measures are, without adequate explanation, much lower than estimates in earlier CARB reports.<sup>3</sup> If those earlier GHG reduction figures are used, the total GHG

<sup>3</sup> These comments are not intended to, and do not, endorse either the legal validity or effectiveness of the GHG reduction measures that CARB has approved. For purposes of this comment letter only, we assume that such measures are legally valid and will have the effectiveness at reducing GHG emissions asserted by the government agencies

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reductions from those measures would exceed the 58 MMT stated in the FED Supplement and could account for most or all of the 22 MMT shortfall CARB estimates, even assuming that estimate is not overstated. (Environ Report, pp. 1-2, Table 1.) The FED Supplement provides no adequate explanation as to why it significantly lowered the GHG reductions associated with these measures, and the CARB Status Report only provided conclusory reasons with no quantitative analysis.

► The FED Supplement does not include the GHG reductions associated with two measures that CARB has already adopted or is adopting, namely the Commercial Recycling Measure and the Energy Efficiency And Co-Benefits Assessment. (Environ Report, pp. 2-3.)

► The FED Supplement does not include any of the GHG reduction programs that CARB has proposed but not yet adopted. CARB has estimated that the GHG reductions attributable to those measures total 68 MMT, again exceeding the 22 MMT shortfall. (Refer to Table 2 in the Environ letter.) Yet, CARB provides no analysis in the FED Supplement as to the foreseeability of these measures or the likely effect those measures will have on achieving the AB 32 target.

► The FED Supplement ignores GHG reduction programs implemented or under development by the federal government and other state agencies such as the California Public Utilities Commission. (Environ Report, pp. 5-6.) Even though CARB states in the FED Supplement that it has updated the environmental baseline to account for events subsequent to the original FED prepared for the Proposed Project, CARB has not included these programs in its updated baseline. Accordingly, CARB's updated baseline is inflated and overstates any shortfall in achieving the AB 32 target. Indeed, proper accounting for these omitted programs could exceed the 22 MMT shortfall estimated in the Supplemental FED.

► Although the FED Supplement states that it has updated the environmental baseline by accounting for the effects of the recent economic recession on state-wide GHG emissions, there is no explanation, let alone any quantitative analysis, as to how CARB accounted for those recessionary effects. Indeed, the only information provided in the FED Supplement on this issue is a conclusory statement that CARB relied on the energy demand forecast provided in the 2009 "IEPR" prepared by the California Energy Commission ("CEC"). Yet, in findings issued in March 2011 – before the publication of the FED Supplement – the CEC acknowledged that its 2009 forecast substantially underpredicted the depth and duration of the recession. (Environ Report, p. 7.) Accordingly, CARB's baseline of GHG emissions is significantly overstated.

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responsible for the measures. These comments relate only to CARB's accounting for the current baseline of GHG emissions and for the effectiveness of existing, pending and proposed GHG control measures.

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Since the FED Supplement provides an inaccurate environmental baseline against which the impacts and alternatives associated with the Proposed Project are measured, as well as an inaccurate assessment of the need for the Proposed Project, the FED Supplement is legally defective. (See generally *Sunnyvale West Neighborhood Assoc. v. City of Sunnyvale* (2010) 190 Cal.App.4th 1351.) Indeed, these defects result from CARB's failure to apply its own methodology stated in the FED Supplement – recognizing the GHG reductions associated with federal and state programs and accounting for the effects of the recession – to the facts of this matter.

75-2  
Cont'd

II. The FED Supplement Fails To Adequately Analyze The No Project Alternative

CEQA requires that the No Project Alternative accurately assess “what would be reasonably expected to occur in the foreseeable future if a project were not approved, based on current plans. . . .” (CEQA Guideline § 15126.6(e)(2); see also *Dusek v. Redevelopment Agency of the City of Anaheim* (1986) 173 Cal.App.3d 1029.) The FED Supplement fails to carry out that mandate in a number of key respects. First and foremost, the FED Supplement misleads the public and the lead agency by wrongfully stating that “ARB cannot adopt the No Project Alternative described in this document because AB 32 requires ARB to prepare and approve a Scoping Plan.” (FED Supplement at p. 19.)

That statement is erroneous for two reasons. First, the “proposed project” is not the adoption of a Scoping Plan, but “the adoption and implementation of the Scoping Plan and the measures described in the plan.” (Refer to p. 20 of original FED; emphasis added.) The Scoping Plan itself results in none of the environmental impacts analyzed in the FED. Rather, the programs adopted by CARB pursuant to its original and Supplemental Scoping Plan result in the impacts against which any benefits of the measures in the Scoping Plan are to be weighed by the public and the lead agency.

Second, CARB's statutory authority under AB 32 is limited to taking the steps necessary to reduce the State's GHG levels to 1990 levels by 2020. (See, e.g., Cal. Health & Safety Code Section 38550.) As demonstrated by the Environ analysis, CARB can achieve that goal without adopting the additional GHG reduction measures called for by the Proposed Project. Even if one interprets AB 32 to require CARB to adopt a “Scoping Plan,” the Scoping Plan can, and should, provide that no additional GHG reduction measures are required and CARB should only be monitoring the effectiveness of the other GHG reduction measures already in place.

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Further, given the defects in CARB's updated baseline analysis, the FED Supplement's assessment of the environmental impacts of the No Project Alternative is also flawed. The FED Supplement states that “because Alternative 1, No Project Alternative, does not reach the reduction target mandated by AB 32, it would not be environmentally advantageous compared to the Scoping Plan, or the other action

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alternatives.” (FED Supplement at p. 110.) Yet, the No Project Alternative would more than achieve the reduction target mandated by AB 32 given current baseline conditions and the further effect of implemented, pending and proposed GHG reduction measures and programs. Accordingly, since the No Project Alternative would not lead to any of the environmental impacts associated with either the Proposed Project or the other alternatives, the No Project Alternative is the environmentally superior alternative. Further, since the No Project Alternative would achieve the key project objective – achieving the reduction target mandated by AB 32 – and cause no new impacts, CARB is legally precluded from adopting the Proposed Project. (See *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167; CEQA Guideline 15901.)

Given these significant defects in the analysis, CARB must revise the FED Supplement and recirculate it for public review and comment. Once that it is done, the public and lead-agency decisionmakers would recognize that the additional GHG reduction programs proposed in the Scoping Plan are not necessary to achieve the goals of AB 32 and, accordingly, that CARB should adopt the No Project Alternative.

Very truly yours,



Edward J. Casey

EJC/ysr

Enclosure

LEGAL.02/32757350v4

75-3  
Cont'd

E N V I R O N

July 28, 2010

Edward J. Casey, Attorney  
Alston Bird LLP  
333 South Hope Street  
16th Floor  
Los Angeles, CA 90071

**Re: Comments on the AB 32 Scoping Plan Supplemental FED**

Dear Mr. Casey:

In addition to those submitted with your letter to the Air Resources Board ("ARB") dated July 1, 2011, we have prepared the following comments based on our review of the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED). It should be noted that we did not receive the additional information based on our request as submitted by you on July 1, 2011, and therefore, our comments do not reflect the benefit of the requested information. Based on our review of the FED, we believe that ARB has not sufficiently discussed the basis for changes to the original scoping plan measures and the reduction in greenhouse gases (GHG) attributable to those measures. We also believe the FED does not provide sufficient information to evaluate the change in the GHG emission inventory projections. Further, we believe that the FED has not completely represented the potential for GHG reductions from various regulatory programs.

- 1. A detailed rationale for changes to the original scoping plan measures has not been provided other than a broad reference to the economic downturn.**

We have attached Table 1 which provides a comparison of the estimates for GHG reductions as reported in the original Scoping Plan and in the FED. As per our comments submitted on July 1, 2011, additional information is required to evaluate how these updated estimates were derived. We have also reviewed the latest information from ARB clarifying certain GHG reductions from the Scoping Plan.<sup>1</sup> This information provides insight on why some the measures were changed, but it does not provide information on how exactly they were changed or why a considerable number of other potential reduction measures were revised. Instead, ARB repeatedly states that the GHG reductions associated with these measures were lowered due to the economic downturn, but without a detailed explanation on how each of the measures was adjusted due to the recession.

Specific uncertainties are exemplified by looking at individual GHG reduction measures. For example, Measure E-1, Energy Efficiency was calculated to obtain 7.8 MMTCO<sub>2</sub>e in the FED while this measure was originally estimated to obtain a GHG reduction of 15.2 MMTCO<sub>2</sub>e. Some details are provided to support the original estimate in Appendix I, 2008 Scoping Plan Document<sup>2</sup>, but we have not found information to bridge the relationship to the new estimate.

<sup>1</sup>ARB, 2011. Status of Scoping Plan Recommended Measures. July 22.

<sup>2</sup>Available at: [http://www.arb.ca.gov/cc/scopingplan/document/appendices\\_volume2.pdf](http://www.arb.ca.gov/cc/scopingplan/document/appendices_volume2.pdf), See Appendix I, Accessed on July 7, 2011.



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In the first column of Table 1, the original scoping plan estimates for the BAU inventory of 596 MMTCO<sub>2</sub>e and the GHG reductions of 174 MMTCO<sub>2</sub>e are shown.<sup>3</sup> After reviewing ARB's July 22 Status of Scoping Plan Measures document, it appears that several rules have been developed and the rulemaking ISOR's have adjusted several of the scoping plan estimates. After considering these changes, the 174 MM ton figure on Table 1 can be adjusted to 169.5 MM tons. In the third column of Table 1, the FED estimates for a BAU inventory as 507 MMTCO<sub>2</sub>e (a decrease of 15%), and the GHG reductions as 62 MMTCO<sub>2</sub>e (a decrease of 55%).<sup>4</sup> It is not clear why there is this disproportionate change in the GHG estimates between the adjusted 2020 inventory and the adjusted GHG anticipated reductions.

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As shown in Table 1, there are changes to no less than 21 of the measures. These changes have similar transparency issues as those described for energy efficiency. Based on ARB's approach, the estimated gap in GHG emission reductions is important to substantiate the need for the AB 32 program as it is proposed.

**2. ARB's inventory does not include the Commercial Recycling measures (RW-3), which appear to be near adoption.**

ARB has not included the Commercial Recycling GHG reductions measure in the FED analysis. A workshop has been scheduled by CalRecycle for July and Hearings have been scheduled by the Air Resources Board for RW-3 for October. Legislation for this sector goes into effect on January 1, 2012.<sup>5</sup> The mandatory commercial recycling measure is designed to achieve a reduction in GHG emissions of 5 MMTCO<sub>2</sub>e.<sup>6</sup> If this measure was included in ARB's FED evaluation, the 22 MMTCO<sub>2</sub>e GHG reduction gap would be reduced to 17 MMTCO<sub>2</sub>e. This measure is an example of a regulatory measure that ARB could have included in its evaluation. It is not clear from the FED why this measure was not included in the GHG reductions of ongoing, adopted and foreseeable Scoping Plan measures.

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**3. The FED does not consider the potential reductions from CARB's Energy Efficiency and Co-Benefits Assessment.**

The ARB adopted a regulation to require an energy efficiency assessment of California's large industrial facilities to determine the potential for greenhouse gas emission reductions and other pollution reduction co-benefits.<sup>7</sup> This regulation will identify energy consumption and greenhouse gas, criteria pollutant, and toxic air contaminant emissions from the largest stationary facilities in the State, determine the potential opportunities available for improving energy efficiency that could result in emission reductions, and identify potential future actions for obtaining further reductions in greenhouse gas and co-pollutant emissions.

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The Compliance Pathway Analysis estimated approximately 5 MMTCO<sub>2</sub>e of potential emissions reductions from the industrial sector.<sup>8</sup> If we include this estimate in ARB's GHG emissions inventory in the FED, the 22 MMTCO<sub>2</sub>e gap would be further reduced. This measure is an example of a regulatory measure that ARB could have included in its evaluation. It is not clear from the FED why this measure was not included in the GHG reductions of ongoing, adopted and foreseeable Scoping Plan measures particularly since

<sup>3</sup>ARB, 2008. Climate Change Scoping Plan, December Table 2, Page 17.

<sup>4</sup>ARB, 2011. Supplement to the AB 32 Scoping Plan Functional Equivalent Document. June 13.

<sup>5</sup>See Project Timeline, Available at: <http://www.calrecycle.ca.gov/Climate/Recycling/default.htm>, Accessed in July, 2011

<sup>6</sup>Available at: <http://www.calrecycle.ca.gov/Climate/Recycling/default.htm>, Accessed: July 2011.

<sup>7</sup>ARB, 2011. Supplement to the AB 32 Scoping Plan Functional Equivalent Document. June 13, page 67.

<sup>8</sup>Available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/capv3appf.pdf>, Accessed July 15, 2011

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the FED states that improvement in efficiency for boilers and other heat sources is also under consideration and CARB's Energy Efficiency and Co-Benefits Assessment will be available mid-2012.<sup>9</sup>

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**4. ARB excludes various measures from the Scoping Plan which may help the State reach the 2020 goals without a cap-and-trade program.**

The FED includes an estimate of 22 MMTCO<sub>2</sub>e for the difference between the revised 2020 baseline forecast and the 2020 emissions target (i.e., 1990 level) taking into consideration the reduction (58 MMTCO<sub>2</sub>e) from measures other than Cap-and-Trade and Clean and Advance Clean Cars.<sup>10</sup> This estimate does not include a number of measures identified in the Scoping Plan from direct regulation of GHG emissions as listed in the Scoping Measures Implementation Timeline.<sup>11</sup>

Based on the estimated 2020 GHG emissions reductions in ARB's own timeline, ARB has estimated potential GHG reductions from a number of potential regulatory measures not included in the FED which could help the state achieve meaningful GHG reductions. Using ARB's estimates, it appears that approximately 68 MMTCO<sub>2</sub>e of reductions can be achieved from numerous measures that are not included in the FED (see Table 2).<sup>12</sup> Based on our review of other programs outside of California, we believe that many of these programs excluded by ARB actually have promise and thus do not need to be excluded. For example, the state of Connecticut Climate Action Plan contains several measures that would achieve a reduction of greater than 7 MMTCO<sub>2</sub>e and included in this estimate are bulk purchases of appliances, pilot fuel switching projects, high performance buildings and shared savings program for government agencies all of which have been implemented. This appears to correspond to several programs that are not included in the foreseeable measures of the FED including, for example, Measures GB-1, Greening New Residential and Commercial Construction and Greening Existing Homes and Commercial Buildings for which emissions reductions are not yet identified and are therefore classified as "to be determined".<sup>13</sup> Other neighboring states such as Oregon have also identified several regulatory measures that have a significant impact in reducing GHG emissions including a program establishing standards for high efficiency/low rolling resistance tires, implementing cost-effective electricity measures for electric users and for natural gas users.<sup>14</sup> This appears to correspond to Measure T-4 Tire Tread Program, which is not included in the list of foreseeable measures by ARB.<sup>15</sup> If the ARB was more inclusive with its projections in the FED about what programs have a chance for implementation, then the GHG balance to reaching the 2020 goals could be very different.

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<sup>9</sup>ARB, 2011. Supplement to the AB 32 Scoping Plan Functional Equivalent Document. June 13.

<sup>10</sup>CARB, 2011. Supplement to the AB32 Scoping Plan Functional Equivalent Document. June 13. Page 12.

Available at: [http://www.arb.ca.gov/cc/scopingplan/document/Supplement\\_to\\_SP\\_FED.pdf](http://www.arb.ca.gov/cc/scopingplan/document/Supplement_to_SP_FED.pdf). Accessed: July 2011

<sup>11</sup>CARB, 2010. Scoping Plan Measures Implementation Timeline. October 28. Available at: [http://www.arb.ca.gov/cc/scopingplan/sp\\_measures\\_implementation\\_timeline.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf). Accessed July, 2011.

<sup>12</sup>Note that this assumes there are no overlapping reductions from various programs.

<sup>13</sup>CARB, 2010. Scoping Plan Measures Implementation Timeline. October 28. Available at: [http://www.arb.ca.gov/cc/scopingplan/sp\\_measures\\_implementation\\_timeline.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf). Accessed July, 2011.

<sup>14</sup>Available at: <http://www.oregon.gov/ENERGY/GBLWRM/Strategy.shtml>. Accessed July, 2011

<sup>15</sup>ARB, 2010. Greenhouse gas Reductions from Ongoing, Adopted and Foreseeable Scoping Plan Measures, Last Updated: 10/28/2010



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**5. ARB has not included federal GHG programs that might impact or supplement the California programs.**

Several GHG emission reduction programs have been initiated and implemented at the federal level, yet the FED does not appear to discuss whether or how the federal programs have been accounted for in reducing GHG emissions in California. For example, we did not see how the FED accounted for the Clean Air Act Permitting requirements for GHG emissions. EPA's final Tailoring Rule<sup>16</sup> includes provisions to install state-of-the-art control technology at new or existing plants that are undergoing a major modification. In addition, the EPA has proposed New Source Performance Standards (NSPS) for Utility Boilers and Refineries for GHG emissions. It is not evident that consideration has been given as to how these programs will reduce GHG emissions through 2020.

Following are three additional programs that may lead to further GHG reductions in California that were not accounted for in ARB's estimate of GHG reductions:

- i) EPA and National Highway Traffic Safety Administration (NHTSA) will initiate two joint rulemakings: a) to improve fuel efficiency and reduce GHG emissions for commercial trucks, and b) to adopt the second-phase of GHG and fuel economy standards for light-duty vehicles. EPA's preliminary analysis indicates that the heavy-duty standards under consideration have the potential to reduce GHG emissions by approximately 250 million metric tons and save over 500 million barrels of oil over the life of vehicles produced in the first five years of the program.<sup>17</sup>
- ii) EPA has initiated a voluntary program seeking to reduce the environmental impact of power generation by promoting the use of combined heat and power (CHP). The Partnership works closely with energy users, the CHP industry, state and local governments, and other clean energy stakeholders to facilitate the development of new projects and to promote their environmental and economic benefits.<sup>18</sup>
- iii) The Natural Gas STAR program is a USEPA voluntary partnership that encourages oil and natural gas companies to adopt proven, cost-effective technologies and practices that improve operational efficiency and reduce methane emissions.<sup>19</sup> The program covers oil production and all sectors of the natural gas industry, from drilling and this program, the oil and natural gas industry, in conjunction with Natural Gas STAR, has pioneered some of the most widely used, innovative technologies and practices that reduce methane emissions. These innovative technologies have been documented with costs, methodologies and actual methane reductions that have been approved in practice.<sup>20</sup>

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**6. The Supplement does not consider potential reductions from the California Public Utilities Commission (CPUC) for Combined Heat and Power (CHP) from the utility sector.**

For the electricity sector, the CPUC promulgated a decision to reduce emissions from the utility sector with the increased reliance on CHP facilities as one of the principle strategies for reducing GHG emissions. As described below, the CPUC is evaluating the potential GHG reductions from CHP but this does not appear to be included in ARB's 2020 forecast

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<sup>16</sup>EPA, June 3, 2010. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 40 CFR Parts 51, 52, 70 and 71. Available at: <http://www.gpo.gov/fdsys/pkg/FR-2010-06-03/pdf/2010-11974.pdf#page=1>

<sup>17</sup> Available at: <http://epa.gov/otaq/climate/regulations.htm>. Accessed: July 2011.

<sup>18</sup> Available at: <http://www.epa.gov/chp/index.html>. Accessed: July 2011.

<sup>19</sup> Available at: <http://www.epa.gov/gasstar/tools/recommended.html>. Accessed: July 2011.

<sup>20</sup> Available at: <http://www.cpuc.ca.gov/PUC/energy/Climate+Change/chp.htm>. Accessed: July 2011.

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for GHG emissions inventory in the FED. This CPUC program is specifically attempting to address AB32 goals, as stated in its Final Opinion on Greenhouse Gas Regulatory Strategies the CPUC states that: "Our goal is to estimate, using best-available information, the overall level of reductions that may be expected from the electricity and natural gas sectors within AB 32's 2020 timeframe; which resource areas, generally, those reductions will derive from and the associated costs."<sup>21</sup>

The FED includes measures for energy efficiency and conservation, but it is unclear if the GHG reductions from CHP are included from the CPUC promulgated decision. The FED now states that the reductions have been reduced (from the original estimate of 26.3 MMTCO<sub>2</sub>e) to 7.8 MMTCO<sub>2</sub>e (electricity) and 4.2 MMTCO<sub>2</sub>e (natural gas). The release by CARB of the status of recommended measures<sup>22</sup> indicates that the CPUC approved settlement identifies 4.8 MMTCO<sub>2</sub>e of incremental GHG emission reductions by 2020 from this measure. It is also stated that due to accounting differences between the Scoping Plan and the settlement, actual reductions in 2020 may differ from the 4.8 MMTCO<sub>2</sub>e. It is then unclear if the additional benefits from the CPUC's CHP program have been included in the revised estimates or not.

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**7. ARB's economic adjustment may under estimate the overall impact of the current economic recession.**

The FED indicates: "ARB staff derived the updated emissions estimates by projecting emissions from a past baseline estimate using three-year average emissions, by sector, for 2006-2008 and considering the influence of the recent recession and reduction measures that are already in place. Growth factors specific to each of the different economic sectors were used to forecast emissions to 2020. This three-year average of known emissions dampened unusual variations in any single year that would make the baseline year unrepresentative for forecasting."<sup>23</sup> As part of the evaluation, the ARB relied upon the 2009 Integrated Energy Policy Report electricity demand forecast.<sup>24</sup>

However, the California Energy Commission (CEC) released findings in March 2011 that indicated that the 2009 Integrated Energy Policy Report (IEPR) under-predicted the effect of the recession.<sup>25</sup> In the CEC's report, they indicate that the peak demand forecasts for 2011 and 2012 average about 3.8 percent less (for PG&E, SCE and SDG&E) than the forecasts used for the 2009 IEPR. A comparison of the 2009 IEPR and the October 2010 employment growth projections showed higher unemployment rates and lower personal income projections as compared to the 2009 IEPR. These facts suggest that ARB's BAU inventory as reported in the FED may be too high.

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Based on the State's continued economic struggles it appears that the ARB's forecasting would need to be revised to address future GHG emission levels in light of this documented under-prediction of the recession in the 2009 IEPR. Our previous letter raised this point and the document released July 22, 2011 on the Status of Scoping Plan Recommended Measures did not provide further explanation.

<sup>21</sup>Final Opinion on Greenhouse Gas Regulatory Strategies, Rulemaking 06-04-009, 10/22/2008.

<sup>22</sup>ARB, 2011. Status of Scoping Plan Recommended Measures. July 22.

<sup>23</sup>ARB, 2011. Supplement to the AB32 Scoping Plan Functional Equivalent Document. June 13. Page 10.

<sup>24</sup>Cap-and-Trade, ISOR, Volume 3, APPENDIX F, Compliance Pathways Analysis, pg. 33.

<sup>25</sup>Available at: <http://www.energy.ca.gov/2011publications/CEC-200-2011-002/CEC-200-2011-002-CTF.PDF>. Accessed: July 2011.

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**8. The FED has not adequately evaluated the leakage potential for the Alternatives.**

The FED and handout materials provided by ARB suggest that cap-and-trade will be the most effective to minimize leakage. Minimizing leakage is defined as minimizing, to the extent feasible, leakage of emissions to states and countries without a mandatory GHG emissions cap. When comparing the likelihood of leakage, the ARB identifies Alternatives 2 and 5 as having a high likelihood of minimizing leakage whereas Alternatives 3 and 4 are identified as having a low likelihood of minimizing leakage (see Table 2.8-1 of the FED<sup>26</sup>). There is little explanation or discussion for these conclusions.

The ARB has focused on addressing leakage with the cap-and-trade alternative. However, it has not adequately addressed whether leakage can be minimized under the other alternatives as well as cap-and-trade programs. During the July 8, 2011 workshop a member of the Legislative's Analyst Office asked: "...it seems in part because Cap-and-Trade Regulations you're making a lot of the decisions to reduce leakage and risk, for example. Couldn't leakage and risk also be addressed under direct regulation or carbon tax?"<sup>27</sup> ARB responded: "This is one of the questions that we are going to be looking at in our response to comments."

The comments included are based on the best available information we have identified to date. To the extent that additional information becomes available, our comments may change accordingly. Please contact Eric Lu ((949) 798-3650) or Steven Messner ((415) 899-0747) if you have any questions regarding this matter.

Very truly yours,



Eric Lu, MS, PE  
Senior Manager



Steve Messner  
Principal

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cc: Ron Friesen, ENVIRON

Enclosures: Table 1 – Comparison of Original GHC Reductions to Current Estimates  
Table 2 – List of Measurements Not Included in the Ongoing, Adopted and Foreseeable Scoping Plan Measures

<sup>26</sup>ARB, 2011. Supplement to the AB 32 Scoping Plan Functional Equivalent Document, page 111.

<sup>27</sup>ARB, 2011. Public Workshop Transcript, July 8. Available at:  
<http://www.arb.ca.gov/cc/scopingplan/meetings/070811/transcripts.pdf>. Accessed: July 2011.

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Table 1. Comparison of Original GHG Reductions to Current Estimates

Measure No.	Category	Original Scoping Plan Reductions <sup>1</sup> MMCO <sub>2</sub> e	Timeline Table 2020 Reductions <sup>2</sup> MMCO <sub>2</sub> e	Revised GHG Measures Table 2020 Reductions <sup>3</sup> MMCO <sub>2</sub> e	Difference in Estimates 2020 Reductions MMCO <sub>2</sub> e
<b>Measures in Capped Sectors</b>					
<i>Transportation</i>					
T-1	Pavley 1 (2009-2016)	31.7	27.7		
	Pavley II LDV				
T-1	Advance Clean Cars (2017-2020)		5.1	3.8	1.3
T-2	Low Carbon Fuel Standard	15	16	15	1
T-3	Regional Targets	5	5	3	2
	Vehicle Efficiency	4.5			
	Goods Movement	3.7			
T-4	Tire Pressure Program		0.74	0.6	0.14
T-5	Ship Electrification		0.2	0.2	0
	Medium/Heavy Duty Vehicles	1.4			
	Heavy Duty GHG Emission				
T-7	Heavy Duty Aerodynamics		0.93	0.9	0.03
T-8	Medium/Heavy Hybridization		0.5	0	0.5
T-9	High Speed Rail	1	1	1	0
	Sub-total	62.3	57.17	24.5	4.97
<i>Electricity and Natural Gas</i>					
E-1	Energy Efficiency and Conservation	26.3	15.2	7.8	7.4
CR-1	Energy Efficiency and Conservation		4.3	4.1	0.2
CR-2	Solar Hot Water (AB 1470)		0.1	0.1	0
E-3	Renewable Electricity Standard (20-33%)	21.3	13.4	11.4	2
E-4	Million Solar Roofs	2.1	2.1	1.1	1
	Sub-total	49.7	35.1	24.5	10.6
<i>Industry</i>					
I-1	Energy Eff. and Co-Benefits, Large Sources	0.3	N/A	N/A	N/A
	Additional Reductions to Achieve Cap	34.4		22	
	Sub-total	34.7	N/A	N/A	N/A
<b>Measures in Uncapped Sources/Sectors</b>					
H-1	Motor Vehicle A/C Refrigerants		0.26	0.2	0.06
H-2	SF6 Limits on non-utility an non-semiconductor		0.1	0	0.1
H-3	Reduce PFCs in Semiconductor Mfg		0.18	0.2	-0.02



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Measure No.	Category	Original Scoping Plan Reductions <sup>1</sup> MMCO <sub>2</sub> e	Timeline Table 2020 Reductions <sup>2</sup> MMCO <sub>2</sub> e	Revised GHG Measures Table 2020 Reductions <sup>3</sup> MMCO <sub>2</sub> e	Difference in Estimates 2020 Reductions MMCO <sub>2</sub> e
H-4	High GWP use in Consumer Products	20.2	0.23	0.2	0.03
	Industrial Measures	1.1			
H-5	Enforce Fed Ban on A/C servicing emissions		0.2	0	0.2
	Enforce Fed Ban on A/C dismantling emissions		0.1	0	0.1
	A/C leak test during smog check		0.5	0	0.5
H-6	Refrig. Track/Report/Repair/Deposit		8	5.8	2.2
H-6	SF6 Leak Reduction and Recycling			0.1	
F-1	Sustainable Forests	5	5	5	0
RW-1	Landfill Methane Capture	1	1.5	1.5	0
	Sub-total	27.3	16.07	13	3.17
	<b>Total Reductions towards target</b>	<b>174</b>	<b>80.64</b>	<b>62</b>	<b>18.74</b>
<b>Other Recommended Measures</b>					
	State Government Operations	1.50			
	Local Government Operations	0			
	Green Buildings	26			
	Recycling and Waste	9			
	Water Sector Measures	4.8			
	Methane Capture at Large Dairies	1			
	Sub-total	42.30	0	0	0
<b>Overall Percent Reductions</b>					
	GHG Emissions Projection 2020	596		507	
	<b>Percent Difference in Projections</b>			<b>15</b>	Per cent
	Total Reductions towards target	139.3		62	
	<b>Percent Difference in reductions</b>			<b>55</b>	Per cent

Footnotes:

- 1 From Table 1.2-1, Greenhouse Gas Reduction Measures and Estimated Reductions as Originally Proposed in 2008.
- 2 From Scoping Plan Measures Implementation Timeline, October 28, 2010. Available at: [http://www.arb.ca.gov/cc/scopingplan/sp\\_measures\\_implementation\\_timeline.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf) From Greenhouse Gas Reductions from Ongoing, Adopted and Foreseeable Scoping Plan Measures.
- 3 From Greenhouse Gas Reductions from Ongoing, Adopted and Foreseeable Scoping Plan Measures. Available at: [http://www.arb.ca.gov/cc/inventory/data/tables/reductions\\_from\\_scoping\\_plan\\_measures\\_2010-10-28.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/reductions_from_scoping_plan_measures_2010-10-28.pdf)

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Table 2. List of Measures Not Included in the Ongoing, Adopted and Foreseeable Scoping Plan Measures

Scoping Plan Measure	Measure #	Responsible Agency (ies) (Lead in Bold)	Type of Action (Regulatory, Voluntary, etc.)	MMT CO2E Reductions in 2020
Port Drayage Trucks	T-6 <sup>1</sup>	ARB	Regulation	3.5
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1 <sup>2</sup>	ARB	Regulation	0
Commercial Recycling**	RW-3 <sup>4</sup>	ARB Cal-Recycle	Regulation	5
Alternative Suppressants in Fire Protection Systems	H-6	<b>ARB</b> , CalFire	Regulation	0.1
Foam Recovery and Destruction Program	H-6	ARB	Regulation	0.3
Mitigation Fee on High GWP Gases	H-7	ARB	Regulation	5
Natural Gas Transmission and Distribution GHG Emission Reduction	I-3	<b>ARB</b> , Local Air Districts	Regulation	0.9
Oil and Gas Extraction GHG Emission Reduction	I-2	<b>ARB</b> , Local Air Districts	Regulation	0.2
Refinery Flare Recovery System Improvement	I-4	<b>ARB</b> , Local Air Districts	Regulation	0.33
Removal of Methane Exemption from Existing Refinery Regulations	I-5	<b>ARB</b> , Local Air Districts	Regulation	0.01
Transport Refrigeration Units Cold Storage Prohibition and Energy Efficiency	T-6 <sup>1</sup>	ARB	Regulation	0
Goods Movement System-Wide Efficiency Improvements	T-6 <sup>1</sup>	ARB	Voluntary	0
Methane Capture at Large Dairies**	A-1 <sup>4</sup>	ARB	Voluntary	1
Vessel Speed Reduction	T-6 <sup>1</sup>	ARB	Voluntary	0
Cargo Handling Equipment- Anti-Idling, Hybrid, Electrification	T-6 <sup>1</sup>	ARB	Voluntary	0
Commercial Harbor Craft-Maintenance and Design Efficiency	T-6 <sup>1</sup>	ARB	Voluntary	0
Clean Ships	T-6 <sup>1</sup>	ARB	Voluntary/Regulation	0
Residential Refrigeration Early Retirement Program	H-6	ARB	Voluntary Incentive	0.1
Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers	H-5	ARB	Regulation/Program	0.2
Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems	H-5	ARB	Regulation Partnership	0.1
Air Conditioner Refrigerant Leak Test During Vehicle Smog Check	H-5	ARB, BAR	Partnership	0.5
Sustainable Forest Target	F-1	Board of Forestry and Fire Protection	Various	5
Forest Conservation, Forest Management, Afforestation/Reforestation, Urban Forestry, and Fuels Management**	NA <sup>4</sup>	CalFire	Various	2



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Scoping Plan Measure	Measure #	Responsible Agency (ies) (Lead in Bold)	Type of Action (Regulatory, Voluntary, etc.)	MMT CO <sub>2</sub> E Reductions in 2020
State Government**	NA <sup>4</sup>	Cal/EPA, ARB, DGS	Various	2
Tire Tread Program	T-4	CEC	Regulation	0.3
Increase Renewable Energy Production (from Water sector)**	W-5 <sup>4</sup>	CEC, CPUC	Voluntary	0.9
Greening Existing Homes and Commercial Buildings	GB-1 <sup>3</sup>	CEC, CPUC	Voluntary/Incentive	0
Greening New Residential Homes and Commercial Buildings	GB-1 <sup>3</sup>	CEC, CPUC	Voluntary/Incentive	0
Water System Energy Efficiency	W-3 <sup>4</sup>	CEC, CPUC, DWR, SWRCB	Voluntary	2
Increasing the Efficiency of Landfill Methane Capture	RW-2 <sup>3,4</sup>	CalRecycle	Voluntary	0
Increase Production and Markets for Compost (studies underway for data development)**	RW-34	CalRecycle	Voluntary	2
Extended Producer Responsibility (EPR)	RW-3 <sup>4</sup>	CalRecycle	Voluntary	0
Anaerobic Digestion**	RW-3 <sup>4</sup>	CalRecycle	Voluntary	2
Environmentally Preferable Purchasing (EPP)**	RW-3 <sup>3,4</sup>	CalRecycle, DGS	Voluntary	0
Increasing Combined Heat and Power Use by 30,000 GWh	E-2	CPUC, CEC, ARB	Various	6.7
Greening New and Existing State Buildings	GB-1 <sup>3</sup>	DGS	Voluntary	0
Greening Public Schools	GB-1 <sup>3</sup>	DGS	Voluntary	0
Green Buildings**	GB-1 <sup>4</sup>	DGS, ARB, CEC, CPUC, HCD	NA	26
Public Goods Charge for Water	W-6 <sup>2</sup>	DWR, ARB, CPUC, SWRCB	Regulation	0
Water Use Efficiency**	W-1 <sup>4</sup>	DWR, SWRCB, CEC, CPUC, ARB	Various	1.4
Reuse Urban Runoff**	W-4 <sup>4</sup>	SWRCB	Regulation	0.2
Water Recycling**	W-2 <sup>4</sup>	SWRCB, DWR	Regulation	0.3
Total				68.04

Footnotes:

1. All the T-6 measures together add up to 3.5 MMTCO<sub>2</sub>e
2. Measure description indicates that reductions are not applicable (N/A)
3. Several measures indicate reductions are TBD

\*\*Not counted toward the 2020 total of 174 MMTCO<sub>2</sub>e

Source: CARB, 2010. Scoping Plan Measures Implementation Timeline. October 28. Available at:  
[http://www.arb.ca.gov/cc/scopingplan/sp\\_measures\\_implementation\\_timeline.pdf](http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf), Accessed July, 2011

## **L75 Response**

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75-1 This comment reiterates a comment submitted earlier (Comment 2) that ARB failed to provide information commenter asserts is missing from the FED. Please refer to response 2-1.

75-2 The commenter asserts that the Supplement fails to provide an accurate baseline and references an attached technical analysis by Environ that provides a different assessment of the AB 32 target shortfall. The commenter asserts that the FED Supplement fails to provide an accurate baseline because (A) the GHG reductions attributed to other programs are underestimated or omitted from the FED Supplement, and (B) the effects of the economic recession on Statewide emissions have been understated.

The baseline and “No Project” Alternative presented in the FED Supplement are based on the most current reduction estimates prepared by ARB in October 2010 and based on the CEC 2009 IEPR.

AB 32 stipulates that a formal update of the Scoping Plan shall be prepared every 5 years, with the first update of the entire plan to be adopted in 2013. In the interim, ARB has routinely updated the emission reductions from individual Scoping Plan measures as they are adopted. In October 2010, ARB completed an interim update of most reduction estimates. The 2010 revisions are not intended nor represented as the 2013 Scoping Plan update, but only as an update of the reduction estimates to reflect new economic information contained in the 2009 Integrated Energy Policy Report (IEPR) released by the CEC. The document represents the latest and most current comprehensive source of information available at the time.

As should be expected, the majority of the estimated reductions that must be attained by 2020 are dependent upon those measures which ARB believes have the greatest potential for success, notably measures that have been approved, are ongoing, or reasonably foreseeable. ARB posted the list of these measures, their respective reductions, and the accompanying GHG Emission Inventory in October 2010.

Documentation of the calculation of estimated reductions for 2008 Scoping Plan measures is presented in the document entitled the *Climate Change Proposed Scoping Plan Appendices. Volume II: Analysis and Documentation. October 2008. Appendix I*. Updated estimates of estimated reductions are described at:

[http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf)

This list has not substantially changed since October 2010 and represents the measures that ARB is recommending at this time. There are other measures identified in the Proposed Scoping Plan and under development, but it is uncertain that those measures would be able to achieve the needed reductions by 2020. Accordingly, ARB has taken a conservative approach and recognizes reductions from measures that have a higher potential for successful implementation by 2020. However, it should be noted that even many of the Proposed Scoping Plan measures that are adopted or foreseeable have an element of uncertainty. For example, achievement of the emission reductions associated with electricity efficiency programs depends on continued funding and successful implementation of these efficiency programs. On page 56 of the 2008 Scoping Plan, the estimated value of reductions is identified as TBD (To Be Determined). An estimated reduction has never been estimated for this measure.

The 2013 Scoping Plan update would evaluate the progress of existing measures, and consider new measures and strategies that may contribute to future reductions as needed. GHG reduction programs and regulations inevitably overlap and share a level of duplicity, and cannot be simply added together without introducing double-counting of reductions. As appropriate, new programs and regulations would be incorporated into the formal Scoping Plan update which would entail complete analysis of the relationship between programs and regulations to ensure an accurate accounting of estimated reductions.

75-3 The commenter indicates that the FED Supplement misleads the public saying ARB cannot adopt the No Project Alternative and that ARB is not required to adopt a Scoping Plan. The proposed action includes adoption of the Proposed Scoping Plan and its reduction measures. The commenter further indicates that ARB is limited to approving reductions only to the 1990 level, and that the FED assessment of No Project Alternative is flawed. The commenter then states that ARB must revise the FED Supplement and recirculate it, and then should adopt the No Project Alternative as the environmentally superior alternative.

ARB is required to adopt a Scoping Plan, and furthermore, AB 32 provides the authority for ARB to adopt other measures, as appropriate, even if they are not identified in the Proposed Scoping Plan.

Health & Safety Code section 38561(a) states,

- (a) On or before January 1, 2009, the state board shall prepare and approve a scoping plan, as that term is understood by the state board, for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from sources or categories of sources of greenhouse gases by 2020 under this division.

As noted by the commenter, on page 20, the original FED indicates that, “The Proposed Project is adoption of the Scoping Plan and the measures described in the plan.” These statements are not inconsistent. As required by HSC section 38561(a), the Scoping Plan is designed to achieve the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources. The required reductions are defined by a suite of recommended measures. For the purposes of the programmatic level CEQA analysis, the potential environmental impacts of those measures are evaluated. Essentially the list of measures is approved as part of the Scoping Plan, but each individual measure is subject to the rigors of additional analysis as warranted by the appropriate approval process whether undertaken by ARB or other implementing agencies. For example, many measures are regulatory in nature and require preparation of a Staff Report (ISOR) and are subject to the Administrative Procedure Act regulatory approval process.

The commenter asserts that ARB’s statutory authority under AB 32 is limited to taking the steps necessary to reduce the State’s GHG levels to 1990 levels by 2020. Consistent with HSC section 38550, ARB approved the 2020 target of 427 MMTCO<sub>2</sub>E in 2006. Preparation of the Scoping Plan is required by HSC section 38561(a) as noted above. HSC section 38561(a) does not establish a limit on the reductions that may be recommended in the Scoping Plan. To the contrary, HSC section 38551 indicates that the statewide GHG emissions limit is intended to remain in effect beyond 2020 and stipulates that ARB shall make recommendations to continue reductions beyond 2020.

California Health & Safety Code section 38551 states:

- (a) The statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.
- (b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.
- (c) The state board shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.

Recommendation of measures to reduce GHG emissions below the 2020 levels is consistent with Executive Order S-3-05, signed on June 2005, This Executive Order establishes the following GHG emission reduction targets for California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.

As noted in the FED Supplement on page 21 and explained on pages 20-37, the No Project Alternative would result in an estimated 58-62 MMTCO<sub>2</sub>E of reductions by 2020, leaving a shortfall of an estimated 18-22 MMTCO<sub>2</sub>E. Thus, the No Project would achieve approximately 75 percent of the reductions and incur the associated environmental impacts of those reductions, but not achieve the fundamental object of the Proposed Project.

75-4 Please refer to response to comment 2-2 for a list of the Proposed Scoping Plan measures, their associated estimated reductions, and an explanation of the reason for any change.

Individual economic sectors were affected differently by the economic downturn, some more severely than others. Accordingly, the revised reduction for individual measures reflects the change within the appropriate sector. However, the revised estimated reductions attributed to the Proposed Scoping Plan measures are largely proportional to the overall drop in the 2020 baseline. The projected 2020 baseline statewide emissions (called the BAU in the 2008 Scoping Plan) was 596 MMTCO<sub>2</sub>E. Following the economic downturn, the projected 2020 baseline dropped to 545 MMTCO<sub>2</sub>E, representing an approximate 9 percent drop in statewide GHG emissions. In the 2008 Scoping Plan, the newly added baseline measures plus the Adopted, Ongoing, and Reasonably Foreseeable measures were predicted to provide an estimated 110 MMTCO<sub>2</sub>E of reductions. The updated reduction estimates for these measures are predicted to achieve 100.1 MMTCO<sub>2</sub>E of reductions, a 9 percent drop consistent with the overall economic downturn.

75-5 The commenter states that ARB's inventory does not include the commercial recycling measure (RW-3), which appears to be near adoption.

Measure RW-3 is presented in Table 2, Recommended Greenhouse Gas Reduction Measures (page 17 of the 2008 Scoping Plan) under "Other Recommended Measures". As stated in the 2008 Scoping Plan, this measure and other recommended measures have never been counted as reductions toward the 2020 target. On page 16, the 2008 Scoping Plan explains,

“Table 2 also lists several other recommended measures which will contribute toward achieving the 2020 statewide goal, but whose reductions are not (for various reasons including the potential for double counting) additive with the other measures”.

75-6 The FED does not consider the potential reductions from ARB's Energy Efficiency and Co-Benefits Assessment.

The Energy Efficiency and Co-Benefits Assessment is a process to identify actions that may be implemented to achieve reductions at individual facilities. On page 56 of the 2008 Scoping Plan, the estimated value of reductions is identified as TBD (To Be Determined). An estimated reduction has never been estimated for this measure. This measure was adopted in 2010.

75-7 ARB excludes various measures from the Scoping Plan that may help the State reach the 2020 goals without a cap-and-trade program.

The AB 32 Scoping Plan is a non-regulatory document prepared by ARB to recommend an overall policy direction and recommended measures that would ensure the reduction of GHG emissions to the AB 32 target level of 427 MMTCO<sub>2</sub>E by 2020. The 2008 Scoping Plan was the culmination of more than three years of coordination with agencies, organizations, and extensive public participation. The measures and reductions identified in the 2008 Scoping Plan are a snapshot that reflects the information available at that time. Measures in the Scoping Plan have origins from within ARB as well as from other agencies and the public. Some measures are well-defined or part of ongoing regulatory processes, and have been implemented. Other measures were more conceptual in nature and are still under development and/or review to determine if they represent realistic reductions by 2020 and are considered uncertain at this time. ARB has not eliminated any measures from consideration, although a few measures have been consolidated, e.g. High GWP Mobile A/C is now part of Advanced Clean Cars.

As should be expected, with the 2020 target deadline growing ever closer, it is increasingly important that reduction measures relied upon to achieve the goal be well developed and provide a level of relative assurance. To that end, ARB has identified measures that are approved, ongoing, or reasonably foreseeable as the foundation for 2020 reductions. There are other measures identified in the Proposed Scoping Plan and under development, but it is uncertain that those measures would be able to achieve the needed reductions by 2020. Accordingly, ARB has taken a conservative approach and recognizes reductions from measures that have a higher potential for successful implementation by 2020, although

even these measures contain an element of uncertainty, such as the example provided in 75-2.

The Scoping Plan has always recognized that the recommended measures and estimated reductions would evolve, subject to changing conditions and information. On pages 9 and 10, the 2008 Scoping Plan indicates,

“Some of the measures in the plan may deliver more emission reduction than we expect; others less. It is also very likely that we will figure out new and better ways to cut greenhouse gas emissions as we move forward. New technologies will no doubt be developed, and new ideas and strategies will emerge. The Scoping Plan puts California squarely on the path to a clean energy future but it also recognizes that adjustments will probably need to occur along the way and that as additional tools become available they will augment, and in some cases perhaps even replace, existing approaches.”

and,

“ARB will adjust the measures described here as necessary to ensure that California’s program is designed to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas emission reduction programs. (HSC section 38564)”

As additional information becomes available, and measure development continues, it is likely that additional measures and reductions can be added to the list of actions expected to achieve emission reductions by 2020. However, at this point in time, the list of approved, ongoing and foreseeable measures represents the compilation of those measures most likely to provide emission reductions by 2020.

75-8      The commenter states that ARB has not included federal GHG programs that might impact or supplement the California programs. Existing federal requirements, such as fuel efficiency standards for new vehicles are either incorporated into the baseline or are accounted for in recommended measures in the Proposed Scoping Plan. The other measures cited by the commenter are voluntary and should not be counted toward achievement of the 2020 goal.

75-9      The commenter states that the Supplement does not consider potential reduction from the CPUC for CHP from the utility sector. The commenter is asked to refer to the revised language provided on pages 27 and 70 of the Final Supplement, which follows:

**Page 27:**

The California Public Utilities Commissions (CPUC) recently promulgated a Decision to approve a settlement on CHP that had been negotiated by utilities and CHP proponents. The settlement requires investor owned utilities (IOUs), electrical service providers (ESPs), and community choice aggregators (CCAs) to reduce emissions from the electrical sector by retaining existing CHP and contracting with new CHP to secure a portion of the Proposed Scoping Plan's 6.7 MMTs of GHG reductions from CHP. The IOUs, ESPs, and CCAs have until 2020 to meet the Settlement's 4.8 MMTCO<sub>2</sub>E emission reduction target. One of the purposes of the settlement was to develop a method for CPUC jurisdictional utilities to achieve their portion of the Proposed Scoping Plan CHP measure. The electricity demand forecast in the 2011 Integrated Energy Policy Report being prepared by the California Energy Commission will include GHG reductions from CHP.

**Page 69:**

Progress has been made recently to encourage the development and installation of efficient CHP. The CPUC has adopted a settlement that establishes a CHP Program designed to preserve resource diversity, fuel efficiency, GHG emission reductions, and other benefits and contributions of CHP. Through July 17, 2015, a large portion of the GHG emission reduction benefits of the existing CHP fleet will be retained through the procurement of approximately 3,000 MW of existing CHP. Consistent with the 2008 Scoping Plan, the CHP Program also establishes an incremental GHG emission reduction target of 4.8 MMTCO<sub>2</sub>E for the IOUs, ESPs, and CCAs that will require the installation of approximately 3,000 MW of new CHP by 2020. The Settlement assumes the remainder of the Proposed Scoping Plan's CHP emission reductions will come from the installation of new CHP systems at POUs to achieve the Proposed Scoping Plan's 6.7 MMTCO<sub>2</sub>E of emission reductions due to the installation of 4,000 MW of new CHP.

Also, refer to Responses to Comment 13.

75-10

The commenter states that ARB's economic adjustment may underestimate the overall impact of the current economic recession.

In October 2010, ARB completed an interim update of most reduction estimates. The 2010 revisions are an interim update of the reduction estimates to reflect the changed economic information contained in the 2009 Integrated Energy Policy Report (IEPR) released by the California Energy Commission (CEC). The document represents the latest and most current comprehensive source of information available at the time.



75-11      The commenter requests an explanation as to why the FED Supplement identifies Alternatives 2 and 5 as having a high likelihood of reducing leakage while Alternatives 3 and 4 are identified as having a low likelihood of reducing leakage.

Fundamental economics accepts the premise that consumers will normally choose to purchase goods or services at the most competitive price when there is no discernable difference between the products being purchased. Consumers will pay higher prices for products perceived as being of higher quality or supporting worthwhile causes. Leakage in the context of the FED Supplement alternatives analysis presumes that products are of comparable quality and businesses will elect to obtain goods or services at the most competitive price.

Implementation of any of the alternatives would result in increased costs to regulated entities, notably for the installation and operation of new equipment, processes and technology to reduce emissions. All of the alternatives require the same level of reductions to achieve the 427 MMTCO<sub>2</sub>E target except the “No Project” alternative which does not achieve the target. The amount of the cost increase that would be passed on to customers would be affected by many variables and differ by industry and business. In response to higher prices, consumers would be expected to seek more competitive priced products from other sources. Because California does not have the authority to impose emission reduction requirements or levy costs on entities located beyond its’ borders, less expensive products would presumably be available from out-of-state sources that are not subject to the GHG reduction regulation. The purchase of such goods or services would represent leakage. The amount of leakage would vary depending on many variables including the difference in price and the availability of alternative suppliers and products.

AB 32 requires that ARB minimize leakage to the extent possible. Generally, there are two approaches to minimizing leakage impacts: implement measures to keep in-state products competitively priced (subsidies) or adopt actions that prevent less expensive products from entering the market (tariffs). The ability to implement and use subsidies or tariffs to protect leakage exposed sectors is equally complicated, potentially infeasible, and varies for each of the alternatives. Crafting regulations to protect exposed sectors from leakage is potentially constrained by a number of other laws. Interstate tariffs conflict with the federal interstate commerce laws. Taxes can only be implemented by voter approval and must be used to specifically benefit the taxed entities. Fees and penalties represent additional costs above those required for compliance, further elevating overall cost. Consequently, minimizing the

costs of compliance to regulated entities may be the more practical and reasonable approach to minimizing leakage.

Less expensive costs result in less price difference which could equate to reduced potential for leakage. Based on the above reasoning, Alternatives 3 and 4 would generally contribute to fixed and elevated costs, while Alternatives 2 and 5 allow regulated entities to seek the least expensive method of compliance whether within the sector or through allowances and offsets from other economic sectors. Alternative 3, source-specific regulation using a facility cap could realize some of the benefits of a market-based system, but if trading were limited to facilities within the same industry the limited number of participants might not be able to deliver the same reduced compliance costs as a larger multi-sector pool. Further, from the regulatory implementation perspective, Alternative 2 provides greater opportunity to reduce compliance costs through the use of free allowances to moderate pricing for leakage-exposed sectors.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 76 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: John  
Last Name: Andrew  
Email Address: [jandrew@water.ca.gov](mailto:jandrew@water.ca.gov)  
Affiliation: Assistant Deputy Director, DWR

Subject: DWR comments on Supplemental FED for AB 32 SP

Comment:

The Department of Water Resources (DWR) has broad responsibilities for water management and planning for California, as well as for the operation of the State Water Project (SWP). DWR is a member of the Governor's Climate Action Team, has achieved Climate Action Leader status from The Climate Registry, and is actively assisting the California Air Resources Board in implementing the AB 32 Scoping Plan. The Department respectfully submits these comments on the Supplement to the Functional Equivalent Document for the AB 32 Scoping Plan, related to the California Water Plan Update and the SWP.

First, the subject document includes unclear statements and mischaracterizations about the California Water Plan Update, the state's strategic plan for water resources. Specifically, the Supplement states that the Water Plan presents three potential scenarios for conditions in 2050, and that all three scenarios indicate a growing demand for water. In fact, one of the three plausible scenarios, called "Slow and Strategic Growth," indicates less overall demand for water. More importantly, though, these scenarios are intended to be the basis for measuring the resiliency of future water policies and actions, rather than to simply underscore how much water demand is expected to grow (or not). The document also states, without reference, that water shortages in California may get worse at a rate of approximately two to three percent per year. Without citation, it is unclear the basis for this prediction, one that is not included in the Water Plan.

Second, DWR remains concerned regarding the allocation of allowances under the Cap & Trade element of the Scoping Plan, as proposed in the current draft regulation. The concern specifically relates to: 1) the equity of declining to provide DWR with allowances reflecting its energy consumption, and instead giving away those allowances to public and private utilities; and 2) the lack of analysis of the potential environmental and economic impacts of Cap & Trade on the SWP and the agencies and consumers that receive SWP water.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 13:21:59

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## **L76 Response**

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- 76-1      The commenter acknowledges that the Department of Water Resources (DWR) is a partner on the Governor's Climate Action Team and it is submitting comments on the Supplement related to the California Water Plan Update. ARB appreciates DWR's partnership and responses to specific comments are provided below.
- 76-2      As noted by the commenter, the California Water Plan Update 2009 examined three scenarios extending to the year 2050: Current Trends, Slow & Strategic Growth, and Expansive Growth. These scenarios consider a range of key variables including population, land use, agricultural practices, environmental water needs, and climate change. Overall future water demand is projected to increase if California continues to grow consistent with current trends, but a slow and strategic approach to growth could reduce future water demand. The fundamental purpose of the water plan scenario analysis is to measure the resilience of future water policies and actions. The sentence pertaining to water shortages getting worse is being deleted from the final Supplement. The corrected narrative below would replace the previous discussion of the water sector starting on page 28 of the Supplement. These corrections do not alter the results of the environmental impact analysis.

### **Water**

Most of California's water supply originates and is stored as snow. The variability of annual precipitation, compounded by changing climatic conditions, can dramatically affect the availability of water from year to year. The allocation of water to satisfy competing urban, agricultural, and environmental interests represents a significant challenge for water managers. Notably, the allocation of water from the Colorado, Delta, and Klamath water supply systems has been subject to numerous legal challenges.

Water and energy are intricately linked. Water generates electricity, while electricity is required to distribute and treat water. In California, hydropower provides about 15 percent of the total electricity while approximately 19 percent of the state's electrical demand comes from transporting, treating and using water.

The California Water Plan is the State's strategic plan for management of water resources. The California Water Plan Update 2009 examined three scenarios extending to the year 2050: Current Trends, Slow & Strategic Growth, and Expansive Growth. The fundamental purpose of the water

plan scenario analysis is to measure the resiliency of future water policies and actions. The scenarios consider a range of key variables including population, land use, agricultural practices, environmental water needs, and climate change. Overall future water demand is projected to increase if California continues to grow consistent with current trends, but a slow and strategic approach to growth could reduce future water demand (DWR 2009; California Water Plan Update 2009, Volume1 – Strategic Plan, pp. 5-22 to 5-36).

Long-term solutions to balancing California's water supply and use will require a combination of improved efficiency and use, conservation, and infrastructure improvements, none of which are anticipated to be completed by 2020.

76-3

The commenter expresses concern regarding the allocation of allowances under the proposed Cap-and-Trade Regulation, specifically as it relates to DWR. This comment appears to assume that ARB staff is recommending that ARB adopt a cap-and-trade regulation with specific components as part of the reconsideration of the adoption of the Proposed Scoping Plan and its alternatives analysis. ARB's reconsideration of the Proposed Scoping Plan and its alternatives analysis does not involve the adoption of specific reduction measures, including a cap-and-trade regulation, as part of this decision. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but any specific measure, including a cap-and-trade regulation, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Consequently, no decision on allocation of allowances is being made at this time.

To clarify, the Cap-and-Trade program recommended in the 2008 Scoping Plan was proposed as a rule in October 2010 (see <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>) and will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of the regulation as proposed, including information about allocation of allowances (see <http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). Concerns about the allocation of allowances to DWR in that proposed regulation are properly addressed in that separate rulemaking activity and ARB welcomes communication with DWR on the topic in that rulemaking process.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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COMMENT 77 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Marianne  
Last Name: Hedrich  
Email Address: [marianne@baylocalize.org](mailto:marianne@baylocalize.org)  
Affiliation:

Subject: Carbon Tax system

Comment:

I believe in the Carbon Tax system to force firms' to finally take responsibility in gas emissions and make polluter's pay! Allowing companies to "buy credit" is not going to help us to achieve a better environment as fast as we could. Also, I agree that it is important to combine such a system with better policies to have a clean and healthy environment for us and for the next generations.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 13:37:22

77-1

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### **L77 Response**

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77-1      The commenter suggests a carbon tax. The commenter cites forest clear cutting as an example of counterproductive outcomes that could result from a cap-and-trade program. Please refer to response 15-1.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 78 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Richard  
Last Name: Tomaselli  
Email Address: [tmslbwrs@earthlink.net](mailto:tmslbwrs@earthlink.net)  
Affiliation:

Subject: Cap and trade.

Comment:

Basically I believe that a carbon tax would be a much more effective means of cutting carbon emissions. The potential travesty of having forest clear cuts qualify under cap and trade is only one example of counterproductive outcomes that could result from cap and trade. A carbon tax, loathsome as it might be to industry, would be simpler, fairer, more effective and possibly more remunerative than cap and trade. Yes, new taxes!

Sincerely  
Richard Tomaselli  
1199 Cornell Ave.  
Berkeley, CA 94706

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 13:36:25

78-1

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**L78 Response**

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78-1            The commenter suggests a carbon tax. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 79 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Anja  
Last Name: Miller  
Email Address: [AnjaKMiller@cs.com](mailto:AnjaKMiller@cs.com)  
Affiliation:

Subject: City-based climate action plans: Baseline

Comment:

1) Our small City of Brisbane (pop. 3,800) has been told by San Mateo County consultants that we will be responsible for creating a Climate Action Plan that "remediates" the greenhouse gases emitted by all the traffic on the 3 miles of US 101 running through our town. Please make sure that any simply geographically-generated baseline criteria are formulated to reflect such regional, not local pollution.

2) Local baselines should include credit for actions already taken by individual citizens to reduce emissions. These could come from DMV data on local per-capita ownership of electric or hybrid vehicles and bicycles as well as permit records issued for installed solar generation.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 13:45:26

79-1

If you have any questions or comments please contact [Clerk of the Board](#) at (916) 322-5594.

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## **L79 Response**

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79-1           The commenter refers to local climate action planning. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.



**L80**

*VIA E-MAIL*

July 28, 2011

Clerk of the Board  
California Air Resources Board  
1001 I Street, Sacramento  
California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Re: **Supplement to the AB32 Scoping Plan Functional Equivalent Document**

Dear Sir/Madam:

Valero Refining Company – California and Ultramar Inc (collectively “Valero”) appreciate this opportunity to provide comments regarding the California Air Resources Board (“ARB”) Supplement to the AB32 Scoping Plan Functional Equivalent Document (FED), as posted for public comment on June 13, 2011. Valero owns and operates two refineries in the state of California, with a combined throughput capacity of over 305,000 barrels per day. Valero refines and markets products on a retail and wholesale basis through an extensive bulk storage and pipeline distribution system. Additionally, Valero’s affiliates own and operate one of the nation’s largest retail operations, which have a significant presence in California, as well as 37 other states. Valero, on behalf of itself and its affiliates, is providing comments to relay the significant deficiencies in the FED and the impact this will have not only on our California operations, but the people and economy of California as well as other States.

1. **The alternatives discussed in the FED, combined with the revisions to the Scoping Plan, highlight continued shortcomings in meeting the stated goals and objectives of AB32.**

From a general perspective, we find that the FED is a hastily prepared document lacking in critical details that draws upon a foregone conclusion that California must have a cap-and-trade regulation to meet the goals of AB32. When considered beside the significant changes to the underlying basis of the Scoping Plan, Valero contends that the FED fails to meet both CEQA criteria and ARB goals and objectives on numerous issues:

- **Piecemeal approach to regulation:** The economic impacts of the measures outlined under the Scoping Plan must be viewed in totality. Isolated economic impacts of the regulations, or regulations conceived in a vacuum without addressing the collateral effect of other regulations, lead to a disjointed and deceptively-simple picture of the impact of AB32 as a whole on the State of California. CEQA requires that ARB provide a comprehensive and holistic analysis of all aspects of implementation of AB32 in order for both citizens and industry to understand the costs and impacts associated with this initiative.

- Incomplete Rulemaking: ARB has multiple initiatives under AB32 which as of mid-year are still not final. Lacking in a set of clear requirements, it is difficult to understand how ARB can provide a satisfactory analysis under CEQA wherein the lack of rule provisions hinder understanding of the cumulative impacts of AB32. Given the revisions to the Scoping Plan foundation, the basis of the implementing regulations are further called into question, demanding a much more detailed review and analysis than ARB has provided in the FED.
- Balance: ARB fails to take a “balanced” review of the GHG reductions measures in the Scoping Plan in light of the significant changes to the underlying reductions targets and baseline. It is in the interest of all parties for ARB to review all the measures under consideration such that the legal obligations for reductions are redistributed and balanced among the regulated community. ARB’s lack of assessment in this capacity calls into question the legitimacy of the FED and ARB’s CEQA analysis of the Scoping Plan.
- Leakage: The issue of leakage continues to be of significance for multiple industrial sectors, including the petroleum refining sector. However, when ARB discusses this issue it does so in only highly generalized and subjective terms. ARB repeatedly makes statements regarding the “minimization of leakage,” or how leakage is a greater possibility under one alternative than another, but fails to adequately describe in quantitative terms the actual risk and degree of leakage to industry in each of the scenarios. Furthermore, rather than fully considering alternatives to Cap and Trade to minimize the leakage issue, ARB has cited additional potential regulatory policy options to complement cap and trade that have not been evaluated under the FED and whose impacts have not been considered. This information is critical to any reasonable assessment under CEQA.
- No legal mandate for 2050 Goals: We note that throughout the FED there are references to Executive Order S-03-05, which targets an 80% reduction below 1990 level by 2050. We also note to ARB that there is no enabling legislation driving, requiring, or otherwise forcing ARB to consider this goal when crafting GHG regulations. Consequently it is premature and improper to consider this 2050 goal under the Scoping Plan.

80-1  
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2. **Crafting the FED to meet the requirements of CEQA i.e., *Association of Irrigated Residents, et al. v. California Air Resources Board (CARB)*, is insufficient given the scope of revisions.**

ARB has ostensibly prepared the FED in order to satisfy the court’s finding that an appropriate CEQA analysis for cap-and-trade alternatives must be prepared. However ARB uses this revision to the FED to introduce significant revisions to the GHG emissions baseline, targets, and necessary reduction measures under the overall Scoping Plan. These additional revisions are highly significant to the overall strategy for complying with AB32 and require a much deeper analysis and discussion than that offered by ARB: all revisions need to be fully vetted to allow stakeholders an opportunity to understand and comment on the basis for these significant revisions. The

80-2

ARB must expand the focus of the FED to address the broader issues and impact presented by the significant revisions therein.

80-2  
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**3. ARB does not provide a sufficiently unbiased and quantitative discussion to justify the alternatives presented.**

The expanded discussion of cap-and-trade alternatives in the FED is largely qualitative in nature and not quantitative. The generalized statements employed throughout the analysis makes an impartial and scientifically-sound review of the alternatives impossible.

For instance:

- Alternative 2 Impact Discussion (pg 51): *“Leakage would be minimized by the market-driven pricing of carbon and the availability of lower cost offsets for a portion of the reductions to help manage allowance prices. The allocation strategy would also include free allowances for trade-exposed industries. Many co-benefits would occur with an effective market-driven GHG reduction program, such as energy conservation and efficiency, reduced fossil fuels use, reduction of regional co-pollutants, and job-forming economic opportunities related to facility modifications and development of energy efficiency technologies.”* There is no support for this conclusory statement.
- *“Although localized air quality impacts resulting from compliance responses by covered entities and the development of offset credits related to Alternative 2 are highly unlikely, they cannot be entirely ruled out.”* (pg 53). This conclusory statement is not supported or justified. Many of the measures ARB is considering for GHG reductions, including Carbon Capture and Sequestration (CCS) and Cogeneration, will have local criteria pollutant impacts due to the energy penalty involved in the process to recover CO<sub>2</sub>.
- *“To address the possibility of unanticipated localized air impacts caused by the cap-and-trade program, ARB would incorporate an adaptive management program into the alternative. This means that ARB would be committed to monitoring the data on localized air quality impacts and to adjusting the program, if warranted.”* (pg 53). ARB has provided no details or insights into how such an “adaptive management program” will be crafted or deployed. This is a new development under AB32 that has not been vetted by the regulated community and consequently cannot be accurately assessed as an alternative.
- The discussion of Compliance and Enforcement in Alternative 2 lacks sufficient substance to fully evaluate. The evaluation only states that “ARB staff could consult with legal and enforcement staffs from state and federal agencies to gain insight in this area”, which does not provide the ability to fully evaluate the impact on the regulated community or resources needed by the State to administer a program. This means the full cost of implementation cannot be estimated which does not allow the State to consider the broad range of public benefits (as stated in the objectives) or cost

80-3

effectiveness of the program since the administration costs will be passed onto the regulated community and/or the public.

- ARB states in Alternative 3 that Carbon Capture and Storage (CCS) is developing as a technology, but has yet to be proven as a cost-effective and viable GHG reduction technology. We agree with this assertion. However, the command and control approach of Alternative 3 will target stationary sources, requiring industry to cover the 22 MMTCO<sub>2</sub>e reductions needed, *with the expectation that the regulatory limit will drive technology*. This position, that the regulations will drive the necessary technology to meet imposed limits, is unproven and consequently fails to meet the criteria of this CEQA analysis. There is no basis for ARB's assertion that previously-unproven technology can suddenly become viable simply by imposing sufficiently stringent limits. Further, the discussions in Alternative 3 fail to address the impact of federal regulations on reductions in GHGs (See Transportation and the lack of discussion regarding the federal regulation of fuel efficiency of new vehicles).
- ARB's discussion of Alternative 4 (Carbon Tax) provides an unsupported, unfair and biased analysis of this market mechanism. Unqualified positions such as: the limited ability of a tax to control emissions, or the need to limit the affected sources to a small industrial subset for administrative purposes, belies the position that ARB has performed a sufficiently detailed review of the carbon tax market mechanism to eliminate further consideration. We note that ARB's own analysis lists 15 different instances where a carbon tax is being applied – yet ARB concludes that this is not the best approach. We find this conclusion ill-informed given the comparative number of cap-and-trade systems enacted, as well as ARB's statement that none of the listed programs can assessed for successful implementation.
- Finally, we note the quotation from the July 8 FED Workshop Presentation, Slide 4, bullet 3, that the CEQA analysis:

“Must describe anticipated adverse and beneficial environmental impacts associated with proposed action”.

The impacts discussed must therefore include all detrimental and beneficial impacts that may result from climate change. In implementing its endangerment finding the U.S. Environmental Protection Agency acknowledged that there were beneficial environmental impacts from climate change likely to occur in many geographic regions, including the United States<sup>1</sup>. ARB has failed to appropriately describe these beneficial impacts in California, making a balanced assessment of the alternatives, including the “no further action” option, impossible. Unless and until ARB provides a more detailed, thorough, and fact-driven analysis of all benefits, we contend the FED does not present an adequate analysis of the alternative to cap-and-trade and consequently does not meet the requirements of CEQA.

80-3  
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<sup>1</sup> Federal Register, Vol. 74 No. 239, Tuesday December 15, 2009, Pg 66531  
Federal Register, Vol. 74 No. 239, Tuesday December 15, 2009, Pg 66532



4. **ARB does not provide sufficient economic analysis of the alternatives in light of the revisions to the Scoping Plan Baseline and Reduction Targets**

Given the significant changes to the Scoping Plan Baseline, the targeted reduction strategy, and the apparent changes in effectiveness of various emission reduction strategies, ARB has changed the “playing field” to such an extent that a re-evaluation of the compliance strategy and economic consequences under the Scoping Plan is necessary in order to satisfy CEQA objectives. This evaluation should include the alternatives discussed in the FED. Prior economic analyses were based specifically on the roadmap outlined by the Scoping Plan in order to meet the established baseline and reductions. With this foundation now changed, the impacts of the measures considered, or not considered, must be revisited to ensure a compliance path is chosen that will not cripple the California economy and send industry and jobs out of state.

80-4

5. **ARB does not provide sufficient discussion or documentation to quantify the changes in the scoping plan targets and baseline.**

With regards to the changes in the updated BAU projections, emission baseline, and overall reduction targets, ARB has not provided sufficient information for stakeholders to understand the origin and context of these changes and consequences thereof. Multiple emission reduction measures now have tonnage-reductions assigned to them that differ from the original Scoping Plan. Some measures appear to be omitted without explanation or combined with others. The structure of the FED is such that a direct comparison to the reduction measures and estimated reductions in the original Scoping Plan is not possible. Even to the extent that some discussion is provided, further analysis to understand the attendant impacts is not provided. For instance:

*“The 2008 Scoping Plan also included a measure to reduce GHG emissions from high global warming potential (GWP) gases via a fee. However, staff’s evaluation of this measure since the 2008 Scoping Plan was initially developed, indicates that at this time a regulation to levy a fee to reduce emissions from high GWP gases would not be feasible. Therefore, this measure will no longer be pursued as part of the Proposed Scoping Plan (see discussion under Alternative 3).” (pg 11)*

80-5

The discussion under Alternative 3 provides little insight as to the underlying cause to abandon this measure. Greater details are necessary to justify positions such as this, considering that this measure would have offset over 22% of the reductions now targeted under the proposed cap-and-trade system. This “decision” has a market value consequence of approximately \$40 million/yr to the California economy, based on proposed market floor price of \$10/MT.

As a further example, the information presented in tables such as 1.2-3 and 2.7-1 is not adequately discussed such that it is clear what measures ARB is proposing or their effectiveness. Appendix F fails to provide sufficient backup documentation to understand the derivation of the compliance pathways to account for the recession in the revised BAU/target reduction case. Unless and until ARB can provide stakeholders with

this information, and in a form that is comparable and commensurate with the original Scoping Plan, a reasonable analysis of the FED is untenable.

80-5  
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**6. ARB's analysis of the Cap-and-Trade alternative fails to acknowledge the economic impact to the State of California**

The revised BAU case, baseline, and overall reduction targets that ARB presents here call into question ARB's reliance on a cap-and-trade program to address the "shortfall" that remains after all other measures are implemented. The revised BAU case for 2020 reduces emission levels from 596 MMTCO<sub>2</sub>e to 507 MMTCO<sub>2</sub>e. The emission reductions necessary to meet target have accordingly been reduced from 174 MMTCO<sub>2</sub>e to 80 MMTCO<sub>2</sub>e – a reduction of over 54%. A reduction of this magnitude in the regulatory burden of the state should drive ARB to reassess all programs under the Scoping Plan to determine how this burden can be equitably applied across the reduction measures identified. However, despite this huge reduction in the GHG burden that California industry must bear, ARB claims that a further 18 MMTCO<sub>2</sub>e must still come from cap-and-trade. The magnitude of these reductions is not commensurate with the tremendous costs associated with this program.

- Cap-and-trade (including complementary measures), continues to be slated as a program that will cover 85% of the GHG emissions in the California economy. This amounts to 399 MMTCO<sub>2</sub>e (based on the 2002-2004 data used in the Scoping Plan). The market value of these emissions at the minimum floor price of the proposed regulation (\$10/MT) is \$3.9 billion. The market value of the reductions that ARB claims the cap-and-trade system will produce amount to \$180 million. This means that the cap-and-trade system will cost the people of California \$3.9 billion to reduce \$180 million-worth of CO<sub>2</sub> emissions. For perspective, California will pay over 20 times the market value of these emission reductions. This is the very definition of "cost-ineffective" and belies the agency's position that cap-and-trade is positive for the economy and the necessary solution to address the "shortfall".
- Given these market implications, it will be critical for ARB to review the suite of measures available for GHG reductions, regardless of whether currently promulgated or otherwise, and make an equitable assessment and adjustment to find a reduction of 80 MMTCO<sub>2</sub>e without burdening the CA economy in such an extreme fashion. Significantly, the inclusion of fuels under the cap-and-trade program will be one of the primary reasons this approach will impact consumers in such a negative financial way. ARB must include discussion of these impacts in the CEQA analysis for there to be educated dialogue on the best approach for California. We call upon ARB to re-evaluate the Scoping Plan and delay implementation of AB32 until a scientifically-sound and equitable suite of reduction measures can be found.
- Finally, we note that in the "Scoping Plan Objectives" discussion (Pg 4), ARB has omitted as an objective HSC38562 (b)(5), which requires ARB to "Consider cost-effectiveness of these regulations". While ARB frequently references "cost effective reductions", this is not the same as "cost effective regulation", as the above discussion illustrates. ARB is required by Statute to include this requirement in the Scoping Plan Objectives, and we formally request ARB to include discussion,

80-6

analysis, and detailed documentation regarding the execution of this goal to ensure the Scoping Plan comports with Statute.

Valero strongly urges ARB to not only reconsider the CEQA analysis in the FED, but to reassess the Scoping Plan and associated regulatory development process so that the totality of the impacts can be meaningfully reviewed by the regulated parties. Valero believes that, if crafted consistent with our recommendations, ARB would be minimizing the impact of AB32. We look forward to working with ARB on the Scoping Plan and the FED in a manner that is reasonable, technically feasible, cost effective, and considers the practical impact of AB32 on jobs, the economy, and the consumer. On behalf of Valero and its affiliates, please contact me at (210) 345-4620 should you have any questions or need clarifications concerning our comments.

Sincerely,



Matthew H. Hodges  
Senior Manager, Regulatory Affairs  
Corporate Environmental  
Valero Companies

80-6  
Cont'd

## **L80 Response**

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- 80-1      The commenter makes a general assertion about the inadequacy of the alternatives analysis and “revisions to the Scoping Plan.” These comments are generally directed at concerns about economic impacts which are not the focus of a CEQA analysis of alternatives. See response 82-4. The updated inventory reflects the downturn in the economy, and although the emissions have changed, the Proposed Scoping Plan measures remain consistent in their characterization. See response and 69-1. The commenter further critiques the “highly generalized” discussion of leakage, in particular as it relates to the petroleum refining sector. The Supplement’s discussion of the potential for leakage is sufficiently detailed for a program-level FED. The level of detail in a program-level environmental document need not be greater than that of the plan being analyzed (see CEQA Guidelines, CCR section 15152[b]). The level of detail requested by commenter regarding the actual risk of leakage to particular industries caused by various measures is appropriate for the next tier of environmental analysis prepared at the stage when each measure is taken up as a proposed rule in a separate rulemaking process. See generally response 4-1. The commenter also states that it is improper to consider the 2050 reduction goal from Executive Order S-03-05 under the Scoping Plan. The Supplement properly identifies the 2020 target as the primary objective of the Scoping Plan and does not rely on the Executive Order target.
- 80-2      This commenter does not state a specific concern or question regarding the sufficiency of the environmental analysis contained in the Supplement; it is directed at the updated emissions information relied upon in the analysis in the Supplement. The focus of the Supplement is the description and environmental analysis of potentially feasible alternatives to the Proposed Scoping Plan that are potentially capable of reducing or avoiding the significant environmental impacts associated with implementation of the Plan. As indicated under the sources of the information in the tables in the Supplement, the numbers in the tables are based on updated information made available by ARB in October 2010. On July 22, 2011, ARB posted a document entitled Status of Scoping Plan Recommended Measures which provides narrative details about the revised projections for emissions and reduction estimates. The focus of the circulation of the Supplement was to solicit comment on the environmental analysis of feasible project alternatives.
- 80-3      The commenter asserts that the analysis in the Supplement is deficient because it provides a largely qualitative discussion rather than a quantitative one. Some of the comments request additional detail

regarding aspects of Alternative 2 such as adaptive management, compliance and enforcement. See response 80-1 regarding the appropriate level of detail for a program-level document. The commenter also requests support for statements presented in the Supplement regarding leakage, co-benefits, and localized air quality impacts. Additional information can be found in the Staff Report (ISOR) for the proposed Cap-and-Trade Regulation. The commenter states that ARB asserts that previously unproven technology can suddenly become viable by imposing stringent limits. ARB does not make this assertion in the Supplement. Existing federal measures, such as fuel efficiency standards for new vehicles are either incorporated into the emission baseline, or are already accounted for in Proposed Scoping Plan measures. The commenter also states that ARB must discuss all detrimental and beneficial impacts that result from climate change. ARB disagrees. The purpose of the Supplement is to discuss the impacts of the proposed project, i.e., the Proposed Scoping Plan to reduce GHG emissions, not the impacts of climate change. Please refer to response 15-1 regarding a carbon fee approach. Please refer to responses to comment letter 37 and response 106-4 regarding adaptive management.

80-4 The commenter expresses the opinion that ARB does not provide sufficient economic analysis of the alternatives in light of the revisions to the Scoping Plan baseline and reduction targets. AB 32 stipulates that a formal update of the Scoping Plan shall be prepared every 5 years, with the first update of the entire plan to be adopted in 2013. In the interim, ARB has updated the 2020 emission reductions for individual Proposed Scoping Plan measures, as appropriate to reflect adoption of regulations. In October 2010, ARB completed an interim update of most reduction estimates. The 2010 update is not intended nor represented as the 2013 Scoping Plan update, but only as an interim revision of the reduction estimates to reflect new economic information contained in the 2009 Integrated Energy Policy Report (IEPR) released by the CEC.

CEQA does not require that an alternatives analysis be as detailed as that of the proposed project. The alternatives evaluated in the FED Supplement are the same as those presented in the FED prepared for the 2008 Scoping Plan, but examined in greater detail with revised and updated information. Preparation of a new economic analysis of the proposed project is not necessary for the supplemental alternatives analysis.

80-5 The commenter asserts that ARB does not provide sufficient discussion of documentation to quantify the changes in the Scoping Plan targets and baseline. Please refer to the response 2-2.

- 80-6            The commenter suggests that ARB's analysis of the proposed Cap-and-Trade alternative fails to acknowledge the economic impact to the State of California. The FED appropriately limits its discussion of the economic impacts of the alternatives. Under CEQA, economic impacts are not considered significant environmental effects and are applicable in an environmental analysis only as they can be traced to physical changes in the environment. The commenter is confusing allowance value with abatement cost. The difference is also explained on page 22, Figure 1, in the Allocating Emissions Allowances Under a California Cap-and-Trade Program: Recommendations to the California Air Resources Board and California Environmental Protection Agency from the Economic and Allocation Advisory Committee (Final EAAC Report).



**L81**

July 25, 2011



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Environment

**California Air Resources Board**  
1001 I Street  
Sacramento, CA 95814

Attn: Clerk of the Board  
Re: Public comments concerning AB32

My comments concern the international offsets component of AB32. Specifically, I am writing on behalf of Global Justice Ecology Project—an international ecological justice organization—to raise concerns that the international offsets protocol within AB32 will lead – indeed, is already leading – to clear abuses of human rights and the rights of Indigenous Peoples.

Upon learning of the international forest offsets protocol within AB32, and the Memorandum of Understanding signed between former Governor Schwarzenegger and Governor Juan Sabines, of Chiapas, Mexico, I traveled to Chiapas to do research as part of a fact-finding delegation with Global Justice Ecology Project. What we found is that the promise of funding from California's forest carbon offsets protocol is exacerbating rural conflicts over land tenure, and has already led to the eviction of several indigenous communities from their homes. As many observers have predicted, implementation of the policy of Reducing Emissions from Deforestation and forest Degradation (REDD) appears to be exacerbating long-standing conflicts over land tenure.

In Chiapas, while REDD will be implemented in several regions, one area of clear concern is the Montes Azules Biosphere Reserve. In 1971, the Mexican government gave some 600,000 hectares of land in the Lacandon jungle to the 66 families of the Lacandon tribe. A second decree in 1976 made the greater part of the rainforest into a UNESCO World Heritage site, the Montes Azules Biosphere Reserve. In order to enclose a million-and-a-half acres of forest, 26 villages of indigenous Tzeltal and Ch'ol people—over 2,000 families—had to be displaced from their homes. The tension and conflict that resulted made it impossible, for decades, for the Mexican government to successfully delimit the land in question. Today, with the promise of financing under REDD, work is underway again to delimit the land.

In February of this year, Chiapas Governor Juan Sabines began distributing payments of 2,000 pesos a month to members of the Lacandon community as part of the state's Climate Change Action

81-1

Program. Governor Sabines said in May that the funds are coming "from a tax on vehicle registration, because, as of yet, California is not able to put up the money."

The money is given in payment for the Lacandon tribe to protect and police the forest against illegal settlers; in order to inventory and protect the jungle to generate carbon credits, the government must not only delimit its boundaries – it must evict anyone living there who may not have legal land title. The village of Amador Hernandez, within the Montes Azules Reserve, is one such irregular settlement under threat of removal.

Global Justice Ecology Project visited the village of Amador Hernandez this past March. While there, we had the opportunity to attend a village meeting. At the meeting, a young man named Santiago Martinez read out a document in which the government threatened to send a team to evict irregular settlers – meaning the villagers themselves. He then gave his own analysis of the problem: "They are promoting the idea of giving carbon credits to industries in California so they can continue contaminating."

From the other angry voices at that village meeting we learned that, a year before our visit, all medical services, including vaccinations, had been cut off to the community. Several elderly people and children had died due to lack of medical attention.

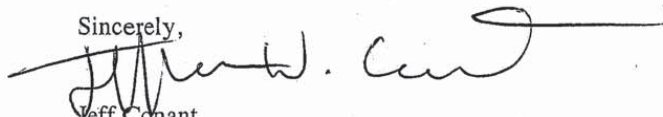
"The fact that they did this after we refused to enter into any of their plans makes us believe that it has to do with our lands," said Martinez. "They're attacking our health as a way of getting access to our land."

Under international law, indigenous peoples can only be displaced from their homes under conditions of Free, Prior and Informed Consent. From all appearances, it seems that the state government of Chiapas plans to use funds from California to institute forest protection programs that violate international law by submitting Indigenous communities to relocation, without any process of consultation or Free, Prior, Informed Consent, as guaranteed by the United Nations Declaration of the Rights of Indigenous Peoples.

Enclosed with this written comment is a seven-minute video from Amador Hernandez, which Global Justice Ecology Project is submitting as testimony to the Air Resources Board. I urge you to watch this video, and to consider the distant implications that the international offsets component of AB32 may have.

As an organization with an office in California that is concerned about environmental protection, social justice and human rights, Global Justice Ecology Project cannot support legislation that may be implicated in the involuntary displacement of Indigenous Peoples from their lands. The international forest offsets protocol being developed within the Cap and Trade rules of AB32 threatens to do just that.

Sincerely,



Jeff Conant  
Communications Director  
Global Justice Ecology Project

81-1  
Cont'd



## **L81 Response**

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- 81-1      The commenter discusses international forest offsets. The letter and an attached DVD do not provide comment on the Supplement or the adequacy of the environmental analysis. REDD as part of a cap-and-trade program would have to be developed under a separate rulemaking process and brought before the Board for approval. The rulemaking process to include REDD would have a full public process and environmental review.

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**L82**

Western States Petroleum Association  
Credible Solutions • Responsive Service • Since 1907

**Catherine H. Reheis-Boyd**  
President

July 28, 2011

Electronic Posting: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

**Re: Comments on Supplement to AB 32 Functionally Equivalent Document (FED) Dated  
June 13, 2011 regarding the Scoping Plan**

Dear Clerk of the Board:

The Western States Petroleum Association (WSPA) is a trade group representing twenty-seven companies that explore for, develop, refine, market, and transport petroleum and petroleum products and natural gas in California, Arizona, Nevada, Hawaii, Oregon and Washington. Our companies have operations within California and are significantly affected by regulations proposed by ARB.

Because of the possible impact of AB32 on WSPA members as well as its possible impact on energy supplies and the economy, WSPA has been an active participant in the public policy discussions about the implementation of AB 32. We have reviewed the Supplement to the AB 32 Functionally Equivalent Document (SFED) and recognize that the document prepared by ARB is comprehensive and addressed the issues concerning comprehensiveness of the previously-prepared FED.<sup>1</sup>

#### **Support for Market-Based Approaches Including Cap and Trade (C/T)**

After reviewing the SFED, our position remains unchanged. WSPA strongly believes that use of a well-designed market-based program is essential in order to implement AB 32 in an efficient and cost-effective manner. If ARB feels that a cap and trade (C/T) program is the most appropriate approach to

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<sup>1</sup> WSPA will concentrate our comments on issues of concern to our industry and where we have special knowledge. We are leaving comments on aesthetics, land use, water use, etc to others, but have an interest in ARB's responses to all comments.

implement the objectives of AB 32, then we will continue to engage in efforts to initiate that program efficiently and cost-effectively. We note that ARB, in the FED, has identified the C/T program as the option most viable in the short-term and, given the challenges facing the ARB and the State, we agree with that assessment.

82-1  
Cont'd

We note that other alternatives have been suggested as options to consider in the future. We support looking at market-based options to buttress the initial approach identified by ARB as efforts to implement AB 32 progress.

### **Source-Specific Regulations Are Not Appropriate**

We continue to believe that source-specific regulations to achieve the goals of AB32 are not appropriate given the State's need to move quickly. If source-specific regulations are to be developed correctly, control technologies have to be identified that recognize unique operating requirements and performance of various facilities within the State. As ARB and local agencies have seen in the past, this is a time-consuming effort if it is to be done correctly under AB32 and applicable California law.

82-2

Moreover, we believe that source-specific regulations are not appropriate for California as it strives to lead the country and the world to address GHG reductions. California acting alone does nothing to address the need for significant global GHG reductions nor would source-specific regulations promote linkage with other programs which is a key tenet, and indeed a necessary and enacted goal, if AB 32 is to be successfully implemented.

### **Need for Detailed Environmental Analyses**

Implementation of the AB 32 Scoping Plan can have varying and significant environmental impacts and can be anticipated to generate varying economic impacts. For example, the Low Carbon Fuel Standard (LCFS) included within Alternative 1 can be expected to have a significant impact on the manufacture and distribution of transportation fuels and their environmental and economic impacts. This impact may be exacerbated by the impact of the High Carbon Intensity Crude Oil (HCICO) alternative being explored by ARB. We remain convinced the current HCICO policy will lead to crude shuffling and in most cases an increase in GHG emissions. The ARB should conduct a peer-reviewed study of the potential increase in emissions and provide the results in the SFED.

82-3

We offer some detailed comments on each of the SFED Alternatives in the Attachment.

Responses to Comments on the  
Supplement to the AB 32 Scoping Plan FED

2.0 Responses to Comments

Thank you for considering these comments. We look forward to working with ARB in the future as efforts to implement AB 32 continue.

Best Regards,

A handwritten signature in blue ink, reading "Catherine A. Boyd". The signature is fluid and cursive, with the first name "Catherine" being the most prominent.

cc: CARB Board Members  
CARB Executive Officer  
CEC Commissioners  
CalEPA Secretary

**Comments on Individual Alternatives**

Alternative #1: No project

It seems clear that ARB must develop a program, or programs, to implement AB 32. A key aspect that must be determined in conjunction with the many stakeholders is the timing, approach and environmental and economic impacts associated with strategies to ultimately achieve the goals of AB 32.

Projects (i.e., early actions, landfill methane, LCFS, building standards, refrigerant, RPS – see Table 2.3-1 P.22) included within the No Project Alternative are important and ARB should NOT minimize the significance of these projects under CEQA. Indeed, many of these projects – despite the misnomer of being included within the No-Project alternative– can pose a potentially huge environmental and economic impact to the State. Hence, both the anticipated environmental impacts AND their potential economic impact must be carefully considered.

With specific reference to the High Carbon Intensity Crude Oil (HCICO) alternative, WSPA is concerned that the approach will lead to a greater reliance on oil from foreign suppliers, many of whom are unfriendly to U.S. interests and/or located in parts of the world subject to political and social upheaval. In short, the current HCICO policy will likely result in Canada's crude oil being exported to China or other emerging economies while California refiners will be forced to purchase ever increasing amounts of oil from distant producers. Such an impact would clearly increase GHG and other emissions and frustrate the core objectives of AB 32 as well as other environmental programs within the State.

We continue to see that the current crude oil policy creates unnecessary risks of fuel supply disruptions. The ARB's approach to crude oil treatment could also lead to changes in the production of conventional fuels and in refinery operations, which in turn could have negative environmental and job impacts. ARB through its SFED should evaluate if either or both of these outcomes might directly or indirectly, increase GHG emissions.

**Recommendation.** WSPA recommends that ARB prepare as part of the SFED an environmental and economic analysis of the impacts of the LCFS including the High Carbon Intensity Crude Oil Pathway (HCICO). At a minimum, the SFED should clearly present an evaluation of the emissions impacts associated with HCICO and the potential for crude-shuffling or on refinery operations and alternatives to the current HCICO policy.

82-4

Alternative #2: Adopt a Cap and Trade Program

As stated earlier, WSPA is supportive of well-designed market-based approaches to implement AB 32 targets. We support implementation of a Cap and Trade Program if that approach is ultimately chosen by ARB.

82-5

As the ARB well understands, there are a myriad of issues that must be resolved if the C/T program is to be implemented efficiently and cost-effectively. We have seen in the Discussion Draft (and anticipate in the upcoming 15-day packages) some clarification of the processes, procedures, and requirements in the C/T program. However, it is clear that even these documents will not provide all of the detail needed to evaluate specific environmental and economic impacts. Given this situation, the SFED should consider the broad policy impacts that could occur and not speculate on unproven or undocumented impacts.

WSPA has identified several broad policy issues that should be addressed:

- It seems clear that if a C/T program is to work effectively, it must start with an appropriate benchmark for all affected industries. The issue of how benchmarks will be developed is an on-going discussion that is extraordinarily important to all stakeholders and market participants and has significant environmental impacts.

**Recommendation.** The SFED should review criteria for developing a benchmark that is equitable and results in a fair and competitive environment for all C/T participants. The SFED should also evaluate the environmental implications for choosing among various benchmarking alternatives.

- The C/T program should start with equitable initial allocations. ARB's proposed approach to reduce the initial allocations by 10% (more in some cases, less in others) puts many sources in compliance or economic jeopardy at the start of the program and promotes leakage. Initial allocations between and among industries and industry sectors must be equitably distributed.

**Recommendation:** The SFED should consider the implications of the "10% haircut" in initial allocations as this may pose an unreasonable risk to the program and result in significant environmental impacts at the very onset of C/T activity. The SFED should pay particular attention to inequities or unintended consequences of various alternative benchmarking procedures as well as resource commitments that may result and the overall effectiveness of the program and its environmental impact.

- The Energy Efficiency Audit (EEA) Report regulation calls for an assessment of Energy Efficiency opportunities at facilities that would be used to inform ARB and the facilities on potential CO<sub>2</sub> and co-pollutant reductions at facilities. Reports are due at the end of 2011. Implementation of opportunities or projects identified in the report is not mandated by the existing regulation.

**Recommendation.** The SFED should consider the environmental and economic impacts of mandated implementation of projects based on the EEA audit – especially given the competitively sensitive data and project planning that is inherent in these evaluations. The SFED should particularly consider the possibly adverse impacts associated with the market should details of prospective project planning as well as project scheduling be divulged to competitors. The SFED should specifically address the risk of leakage.

82-5  
Cont'd

- Processes, procedures, rules, registrations and details concerning compliance, enforcement and penalty (CEP) provisions must be adequately defined. As stated earlier, program details have not been finalized at this time. Yet, even with the one-year deferral in the start of the program, such details must be defined promptly if the C/T program is to begin on –time and in an efficient manner.

**Recommendation.** The SFED should include progress made to date on this issue and evaluate progress made by the staff involved in Mandatory Monitoring Recordkeeping and Reporting (MRR), and enforcement. The SFED should quantify and discuss the risks of leakage from alternative CEP policies.

- Fuels should NOT be included within the Cap as there are simply too many details that need resolution and insufficient time remains for those issues to be resolved.

**Recommendation.** The SFED should evaluate the alternative where fuels are NOT included within the Cap, and the environmental and economic impacts of this key alternative.

82-5  
Cont'd

### Alternative #3: Source Specific Regulations

Source-specific regulations are an inappropriate and inefficient approach to implement AB 32. It can preclude linkage with sources in other regions – a principle design assumption for AB 32. This is especially the case with respect to refineries as each is a unique entity with its own set of operating and design features that effect GHG emissions and energy efficiency. Moreover, source-specific controls can increase the risk of leakage to an already trade-exposed industry. This is especially true if the ARB suggests limits to production as a means to implement emission reductions.

WSPA agrees with the ARB where they state,” However, it is uncertain that Alternative 3 would result in the most cost-effective GHG emissions approach, because performance standards would be set administratively and not based on the market. (Emphasis added). Most importantly, the effectiveness of the approach would likely be hindered by substantial leakage, which would not be consistent with AB 32 itself and the Scoping Plan objectives and may not *ultimately meet the environmental objectives or other substantive requirements of AB 32.*” Later on, ARB adds:

82-6

*“However, implementation of this Alternative could result in substantial leakage for industrial sources and electricity generation, because the performance standards placed on the covered sectors are not defined by market conditions. For example, replacing high carbon fuels (e.g., coal) with lower carbon fuels (e.g., natural gas) could result in out-of-state electricity now being used by California being sold in other markets.”*

*Source specific regulation would reduce in-state GHG and potentially co-pollutant emissions, but also increase out-of-state production and importation/transportation potentially resulting in increased out-of-state and transportation emissions. Consequently, implementation of this Alternative could result in adverse regional and local air quality impacts out-of-state*



*associated with construction (e.g., use of heavy-duty equipment) and operational (e.g., higher facility production levels) increases in criteria air pollutants and TACs.”*

**Recommendation:** The SFED should more clearly highlight the environmental risks and dis-benefits of a source-specific approach to implementing AB 32.

Alternative #4: Combination of Strategies

This approach has raised some interest within WSPA. It seems clear that depending upon the mix of strategies chosen, this alternative has the potential for identifying efficient and flexible approaches to achieve goals set forth by AB 32.

**Recommendation:** The SFED should note the need for ongoing research and investigation to identify combinations of approaches or strategies that may be suitable for implementation in the long-term.

82-6  
Cont'd

## **L82 Response**

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- 82-1      The commenter expresses that the Supplement is comprehensive and addressed the issues concerning comprehensiveness of the 2008 FED. The commenter also states agreement with ARB that a cap-and-trade regulation is the most viable option in the short-term. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.
- 82-2      The commenter expresses that source-specific regulations are not appropriate. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.
- 82-3      The commenter indicates that detail is needed, and further indicates that the No-Project Alternative should have examined the LCFS in Alternative 1, as it can be expected to have significant impact on manufacture and distribution of transportation fuels and their environmental and economic impacts.

The commenter states that the environmental and economic impact of the LCFS may be exacerbated by the impact of the High Carbon Intensity Crude Oil (HCICO) alternative being explored by ARB, and the commenter expresses concern that the policy would lead to crude shuffling and cause an increase in GHG emissions. A peer-review study is recommended to determine whether an increase in emissions and provide the results in the Supplement.

This comment makes suggestions for specific design elements for the LCFS regulation and does not comment on the adequacy of the environmental analysis of the alternatives presented in the Supplement.

82-4 The commenter indicates that that many of the measures in the Scoping Plan are important and ARB should not minimize the significance of these projects under CEQA. ARB has not. ARB prepared a programmatic environmental analysis for the 2008 Scoping Plan. Each measure that has a rulemaking associated with it must have an environmental analysis prepared in accordance with CEQA. CEQA does not require an economic analysis to be prepared for a project or rulemaking, but the Administrative Procedure Act does require an economic impacts analysis to be included in a Staff Report (ISOR).

The commenter indicates that the HCICO should be included in the No-Project Alternative analysis. The potential environmental and economic impacts from the use of HCICO have already been considered by the Board in its separate rulemaking to adopt the Low Carbon Fuel Standard in 2009. In that rulemaking, the Board adopted provisions for addressing the use of HCICO. ARB staff is currently reviewing those provisions to determine if they remain appropriate as regulatory amendments to the LCFS are currently being discussed with stakeholders in an open public process. If that HCICO provision is amended in the future, the potential environmental impacts from such a regulatory amendment would be evaluated at the time the staff report is developed for that rulemaking.

82-5 This commenter makes recommendations for specific design features for the proposed Cap-and-Trade Regulation currently under development under a separate rulemaking. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but any specific measure, including a cap-and-trade regulation, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. The commenters specific comments are directed at the proposed Cap-and-Trade Regulation proposed in October 2010  
(<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>)

that will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of the regulation as proposed including information about auctions, allowances, returning revenues to households, and the offsets program (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). The commenter's concerns about aspects of the 15 day packages associated with that separate rulemaking activity are properly addressed in that separate rulemaking process. Please also refer to response 4-1.

82-6 The commenter indicates that source-specific regulations are an inappropriate and inefficient approach to implement AB 32, and can preclude linkage with sources in other regions under a cap-and-trade program. The commenter further indicates that source specific regulations could increase the risk of leakage to an already trade-exposed industry. The commenter recommends that this Supplement more clearly highlight the environmental risks and dis-benefits of a source-specific approach to implementing AB 32, and further should note the need to identify combinations of approaches or strategies that may be suitable for implementation in the long-term.

Because the Scoping Plan is a broad planning document that recommends measures, and each measure will undergo its own separate review, including consideration of alternatives, the level of detail in the discussion of alternatives as provided in the Supplement is sufficient for the decision-maker's consideration of these policy level alternatives at this stage. ARB is not required to perform all research or studies requested by commenters (see CEQA Guidelines, CCR section 15204).

Please also refer to responses 4-1, 15-1, 36-1, 36-2, and 99.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

Comment Log Display

## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp>

**L83**

sp1...



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COMMENT 83 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Rachel  
Last Name: Ginis  
Email Address: rfginis@gmail.com  
Affiliation: Citizens Climate Lobby

Subject: Cap and Trade for California ceqa-sp11

Comment:

To whom it may concern,  
Thank you for considering this perspective. Cap and Trade is a bad idea for California for a variety of reasons. For one it destabilizes the energy market. See the video "The Huge Mistake". Cap and Trade was an effective method for acid rain because it called for relatively simple fixes within the existing infra structure. Energy is an entirely different deal for one thing you never know how much will be needed in a given season it is completely variable. Every time C & T has been applied it destabilizes the energy market. Higher prices will fall on the backs of the lower and middle classes. Also we need to create a new infra structure to move us away from carbon creating fuels, cap and trade does not set a clear market signal for the development of clean renewable energy. And finally the additionality of offsets completely undermine the system and can not be verified. When cap and trade has been applied it actually increases the amount of carbon by forcing industry to ship there production to another location then ship it back which is not calculated under the cap.

My favorite summation of the insanity of cap and trade is that it aims to correct the carbon problem through the regulation and trade of the lack of creating an invisible substance - think about it - we almost brought down the world economy because we could not manage home loans appropriately, now we are talking about solving the climate crises through the careful monitoring of and market exchange of the lack of creating an invisible substance. DOES THAT REALLY SOUND LIKE A GOOD IDEA TO YOU !!!!!

Plan B - Carbon Fee and Dividend, put a steadily rising price on carbon creating fuels as they enter the economy, at the mine, the well, the port of entry and return 100% of the revenue from that fee to household in the form of an equally divided green check with each individual getting one share and up to two kids getting half a share each. This creates a clear and transparent market signal that will move us into the clean energy economy. Under this plan 60 - 80% of the people will be breaking even or actually making money. This protects people from the rising cost of fossil fuels while we make this delicate transition.

I do not however feel that any state should take on the burden of putting a price on carbon alone and disadvantage its business community compared to other states. California should use its considerable influence in the House of Representatives to get Congress to act on energy legislation that will move this country away from it's dependence on fossil fuels that mostly come in from countries that are not particularly fond of us. Because Carbon Fee and Dividend works through existing agencies it could go into effect overnight. This strategy would create millions of new jobs. I am in the home remodeling business, LEED Ap, Green Point Advisor, general contractor and residential designer. This proposal would do an incredible amount to create the demand for more efficient homes and businesses that California is working so hard to achieve. The forces that be keep trying to create the change by incentivizing business/industry (Energy Upgrade Cal) but it is a complex and out of balance strategy. You have to incentivize the whole market. You need to make PEOPLE as well as industry want to go green. By doing this you will create massive growth in the energy efficiency, renewable energy and transportation sectors, to name just a few!!!

83-1

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

Comment Log Display

## 2.0 Responses to Comments

<http://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=ceqa-sp1...>

This country is in desperate need of a common goal that will get us working again, secure our economy and our nation from foreign threats and re-energize America. Let's do this people! Cap and trade is the wrong solution. Carbon Fee and Dividend will win the day, it is capable of getting the support on both sides of Congress and winning the heart and minds of the American people (not to mention their pocket books). We need California to lead the way that it historically has and point this country in the right direction. For more information you can go to Citizensclimatelobby.org and carbontax.org. You can also contact me, Rachel Ginis [rfginis@gmail.com](mailto:rfginis@gmail.com). Thank you so much for all you doing!!! I was writing fast, so sorry about any creative spelling.

Attachment: [www.arb.ca.gov/lists/ceqa-sp11/112-carbon\\_fee\\_proposal\\_support\\_boxer.pdf](http://www.arb.ca.gov/lists/ceqa-sp11/112-carbon_fee_proposal_support_boxer.pdf)

Original File Name: Carbon fee proposal\_Support\_Boxer.pdf

Date and Time Comment Was Submitted: 2011-07-28 14:02:25

83-1  
Cont'd

If you have any questions or comments please contact [Clerk of the Board](#) at (916) 322-5594.

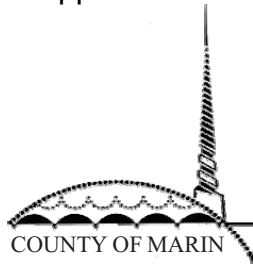
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FAX (415) 499-3645  
TTY (415) 499-6172  
w.co.marin.ca.us/bos

June 7, 2011

The Honorable Barbara Boxer  
United States Senate  
112 Hart Senate Office Building  
Washington, D.C. 20510

Re: Support for Carbon Fee and Dividend Legislation

Dear Senator Boxer:

On behalf of the Marin County Board of Supervisors, I write to thank you for the political leadership that you provide our great state. Here in Marin County, we are working toward creating local clean and renewable energy through the recently created Marin Energy Authority. We know that policies that are good for the environment are also good for creating jobs, improving our economy, and increasing our energy security.

Our Board was recently contacted by the Citizens Climate Lobby (CCL), an advocacy group of informed citizens who seek sponsorship for proposed federal legislation that would put a price or fee on carbon. This legislation would be a fast and effective solution to climate change.

The leadership you provide has set a standard for the move toward local, clean, and renewable energy. Our Board encourages you to review CCL's proposed legislation and present it to your colleagues for consideration. As President Obama has made clear, comprehensive energy legislation will be necessary to prepare our nation for the challenges of this century. Our Board believes fees on the production of carbon could be a wise approach for such legislation.

CCL volunteers are taking this message to elected officials throughout our state and your support could make a difference. Please contact Rachel Ginis, founder of the Marin Chapter of the Citizens Climate Lobby at [rfginis@gmail.com](mailto:rfginis@gmail.com) if you have any questions.

Thank you for your consideration of our input.

Respectfully submitted,

Susan L. Adams, President  
Marin County Board of Supervisors

cc: Senator Dianne Feinstein  
Congresswoman Lynn Woolsey

83-2

PRESIDENT				VICE PRESIDENT		CLERK
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SAN RAFAEL	SAN ANSELMO			SAN GERONIMO	NOVATO	
1ST DISTRICT	2ND DISTRICT	3RD DISTRICT		4TH DISTRICT	5TH DISTRICT	

### **L83 Response**

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- 83-1            The commenter expresses a preference of a cap and dividend program over a cap-and-trade program. Please refer to responses 5-1 and 15-1.
- 83-2            ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.



**L84**



International Warehouse Logistics Association

### International Warehouse Logistics Association

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SONWIL Distribution Center

**IWLA CONVENTION & EXPO**  
March 18-20, 2012  
San Francisco, CA

July 27, 2011  
Chairman Mary Nichols  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

RE: Public Hearing to Re-consider the Regulation to Implement CA Cap and Trade

Dear Chairman Nichols:

The International Warehouse Logistics Association (IWLA) is a non-profit trade association representing the value-added warehousing and logistics industry, third-party logistics and warehousing service providers. IWLA members are committed to warehousing and protecting the free flow of products across international borders. IWLA submitted comments regarding placing diesel fuel under a declining cap as part of the Cap and Trade Program in 2015. We believe that the declining cap on diesel fuel would cause warehousing in California irreparable harm. You ignored our comments and moved ahead. This policy is a train wreck for California's transportation sector, the only sector of the economy that is holding its own during this time of 12.3 percent unemployment in the state.

The loss of cargo and the associated value-added services that California warehouse and supply-chain partners provide to other ports, specifically Seattle, Houston, Panama and Canada does not equate to an improvement in carbon emissions. In fact, the policy can actually make this problem worse: Commodities like fuel will have to move further to get to markets.

The California Air Resources Board (CARB) must repeal placing transportation fuels under a declining cap. This economically devastating regulation on California warehouse businesses has steamrolled ahead without any understanding of goods movement or any careful economic monitoring. This policy will kill California's last viable industry – light manufacturing and transportation.

AB 32 requires CARB to adopt cost-effective measures. The combination of a diesel low-carbon fuel standard (LCFS) and placing diesel fuel under the cap in 2015 is an economically devastating scenario for California's economic recovery. IWLA stated this on December 16, 2010. Here we are six months before these regulations start with no recipe to make these low-carbon fuels. In addition, the largest tax ever placed on transportation fuels is hidden in cap and trade as "fuels under the cap." We urge you to re-evaluate this carbon tax – if a tax needs to be levied at all. Perhaps these charges could be passed on to the consumer, not placed heavily on the backs of small businesses.

IWLA members have participated in many recent CARB workshops about the LCFS and placing diesel fuel under the declining carbon cap. IWLA members asked simple questions: They still await answers. LCFS and placing transportation fuels under a

84-1

declining cap are plans not ready for prime time. They, even now, are premature and short sighted. IWLA's December 16, 2010, comments that these regulations were not ready were spot on. It is time for CARB to face reality.

IWLA and its members are also very concerned about the high-carbon-intensity crude oil restrictions under the LCFS. The restrictions have the potential to disrupt the crude-oil market for refineries in California. If HCICO restricts the refineries from running the most economic crude oil, the higher cost will be passed on to our members: Either they will face higher diesel prices or they will be required to purchase more expensive imported fuel.

This change would actually hurt the environment as a result of leakage through crude shuffling or imported fuels. California-only fuels did not work in 1993 or in 1996 for criteria pollutants: The restrictions certainly will not provide any greenhouse gas reductions. Arguably, they will increase worldwide carbon emissions. California third-party logistics providers (3PLs) are not only trade exposed – but they also represent California's international trade lanes.

Continuing on the current path and placing diesel fuel under a declining cap in California will do the following to the businesses left in the state:

- 1) Create volatile carbon prices that are recognized only in the California supply chain. This will require 3PLs to redesign shipping lanes and warehouse locations. California will be left with the trucks and the pollution from other states – but none of jobs.
- 2) Create a repeat of the state fuel crises of 1993 and 1996, defined by a price shock in the beginning of the second compliance period negatively impacting overall allowance prices for the entire program.
- 3) Decrease actual volumes of low-carbon fuel sold and burned in the state while increasing the sales of diesel fuel from other states created by the redesign of shipping lanes. The leakage in interstate fuel burned in the state will increase the criteria pollutants that have actual health impacts rather than symbolic carbon reductions from California.
- 4) Become a marketing campaign for the 2014 Panama Canal opening, creating speculative movement of freight out of California before the 2015 introduction.
- 5) Make diesel transportation users the highest cost sector for compliance under the scoping plan while ignoring the low-cost method of engine-efficiency standards. Fuel reformulation is not cost effective either through the LCFS or the placement of fuels under the cap. Adopting them both in the same year is punitive to the transportation sector.
- 6) Drive up the allowance price for utilities and refineries leading to increased fuel prices and electricity prices. Commercial electricity users left behind in allocation of residential free allowances will shoulder increased rates caused by renewable energy mandates for utilities. Every commercial business in the state, including local warehousing, will be faced with increased electricity costs.

The \$5.25 billion project to widen the Panama Canal is underway. Proponents market this improvement as an option to high-priced California operations. When completed in 2014, the canal's capacity will be doubled and the largest containerships in service today, which only visit Los Angeles/Long Beach, will be able to transit the canal. Placing transportation fuels under the cap in itself is devastating to the economics of California 3PL providers: Doing it in 2015 is foolish.

84-1  
Cont'd

To avoid a program that is mired in legal challenges and economic harm to California, CARB must adhere to the statutory definition of cost effectiveness. Applying the lowest cost means of achieving the goals of AB 32<sup>1</sup> is not an option: It is a law. In plain English that means "cost effective" is defined in terms of \$/mt CO<sub>2</sub>e reduced; yet, this regulation chooses to adopt the highest cost transportation fuels with full awareness that goods movement is a mobile industry.

CARB is trying to micromanage commodities by picking the winners and the losers. This program is an electric vehicle mandate on the backs of the transportation sector. No state has followed – and no state will. This is reminiscent of CARB diesel: an economic failure without any environmental benefit.

IWLA requests that CARB abandon placing transportation fuels under a declining cap. There are no safeguards that will stop the significant damage to the industry, just as IWLA outlined in 2010. In fact, the simple items we asked CARB to have market ready before the implementation (a state-only LCFS and placing transportation fuels under that cap) are much further off now than they seemed in 2010. Here is what we asked for:

- 1) Work to ensure a robust offset program to achieve compliance obligations post 2015 and ensure linkage to other programs.
- 2) Wait until 2018 to place diesel fuel under the cap and reopen the discussion prior to 2015. Discuss placing fuels under the cap to ensure a reliable, adequate, affordable supply of fuels to the consumers.
- 3) Expand offsets from 8 percent to 25 percent so that warehousing can engage in distributed-energy solutions for dealing with climate change instead of expensive fuel mandates.

Please do not continue to ignore the transportation sector. When a program fails to meet its milestones in the business community, it is abandoned.

CARB doesn't have the luxury of implementing a program that has failed every milestone. The California economy cannot take another blow. And the outcome of moving ahead as planned would be nothing short of an economic crisis in the transportation sector in California. Please stop!

If you have questions, please feel free to call me at (916) 704-2392.

Sincerely



Mike J. Williams  
Executive Director, California Government Affairs

The Honorable Jerry Brown, Governor  
Nancy McFadden, Governor's Office  
Matt Rodriguez, California EPA  
James Goldstene, Executive Officer, CARB  
California Assembly Members  
California Senate Members

<sup>1</sup> Section 38501 (h) and Section 38505(d) define cost-effective or cost-effectiveness to mean "the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential."



## L84 Response

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84-1      The commenter requests ARB remove transportation fuels from under the cap in the proposed Cap-and-Trade Regulation. This comment is not directed at the adequacy of the environmental analysis included in the Supplement as it focuses on a particular aspect of the proposed Cap-and-Trade Regulation proposed in October 2010 and being developed under a separate rulemaking process. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures, including a cap-and-trade regulation, but any specific measure, including a cap-and-trade regulation, can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Accordingly, comments about particular components of specific emission reduction measures (such as a cap-and-trade regulation) do not raise a "significant environmental issue associated with the proposed action" (see CCR section 60007[a] [emphasis added]) because the proposed action (i.e., the Proposed Scoping Plan) does not include adoption of the particular components of specific measures (such as a cap-and-trade regulation).

To clarify, the Cap-and-Trade program recommended in the 2008 Scoping Plan was proposed as a rule in October 2010 (<http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>) and will be considered for final adoption in October 2011. The Staff Report (ISOR) for the proposed Cap-and-Trade Regulation explains the agency's rationale for choosing the design of the regulation as proposed including information about the inclusion of fuels under the cap (<http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>). Please also refer to response 37-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L85** sp1...



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**COMMENT 85 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Timothy  
Last Name: Kline  
Email Address: [timklinesd@gmail.com](mailto:timklinesd@gmail.com)  
Affiliation: Citizens Climate Lobby

Subject: Carbon Tax not properly explored

Comment:

I do not believe that a carbon tax was given due credit. The organization was so invested in cap and trade, it felt scared to explore a better alternative. The Carbon Tax in British Columbia appears to be working. Australia may implement a carbon tax. I think this is the better option and the Board should adopt a carbon tax for California.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 15:13:42

85-1

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### **L85 Response**

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85-1            The commenter expresses that a carbon tax is a better option. Please refer to response 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 86 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Kristina  
Last Name: Pistone  
Email Address: [rabidchipmnk@gmail.com](mailto:rabidchipmnk@gmail.com)  
Affiliation:

Subject: Better alternative to cap and trade: fee and dividend

Comment:

There are a number of reasons to implement a carbon fee and dividend system over one of cap and trade. First and foremost is that a straight fee on carbon emissions is far simpler than setting up a cap and trade system, which could take years to implement, and even longer to see significant reductions in emissions. As the European system shows, there is no guarantee a cap and trade system would be effective in reducing emissions. A carbon fee could be implemented fairly quickly into the tax code, producing emissions cuts much sooner. A fixed price on carbon scheduled to increase at a certain rate allows businesses to better plan and budget for emissions reductions. The environmental benefits and the businesses who must comply are not at the mercy of market speculators as in a cap and trade system. And in a revenue-neutral system (in which the collected fees are redistributed to each citizen equally), Californians who are hardest hit by this economy will receive the largest proportional benefit. It's a win-win all around.

I also agree with the many points brought up by Mr. Richter; I refer you to his sources as well.

Thank you for your time!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 15:15:03

86-1

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### **L86 Response**

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86-1            The commenter advocates a Carbon Fee and Dividend alternative, and indicates that there is no guarantee that a cap-and-trade program would be as effective. Please refer to responses 5-1 and 15-1, and 42-4.



July 28, 2011

**L87**

California Air Resources Board  
1001 I Street  
Sacramento, CA 95812

**Re: Comments on the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED)**

Dear CARB Board Members and Staff:

Thank you for this opportunity to comment on the revised alternatives analysis (henceforth referred to as “the Analysis”).

We believe that this new document is a sufficiently thorough project level analysis of the environmental impacts of alternatives to the Proposed Scoping Plan. We note that this is not the end of the necessary assessment of the program’s environmental effectiveness: this is a program level FED and that each of the measures included in the Scoping Plan the Board ultimately adopts will undergo their own more detailed environmental analysis. In addition, we urge CARB to commit to periodic review and update of the Co-Pollutant Emissions Assessment (Assessment) included in the initial statement of reasons. An ongoing, updated assessment of criteria pollutant emissions using real data from facilities included in the cap and trade program is important in order to get a clearer picture of how the cap and trade program is actually impacting pollution emissions in communities as the implementation process rolls out and to capture any localized impacts not included in the initial analysis.

Given the alternatives to the Proposed Scoping Plan detailed in the Analysis, we believe the Proposed Scoping Plan is the best option for achieving AB 32’s goals (described in pages 4-6 of the Revised Alternatives Analysis), and we urge the Board to move forward with on-time implementation of the Proposed Scoping Plan.

In particular, we support these aspects of the Proposed Scoping Plan which are not all found in any of the alternatives.

**We support inclusion of a hard cap**

As the analysis notes, intensity-based regulations do not provide a hard cap and therefore do not guarantee emission reductions (P.61). Intensity-targets limit pollution per unit of production, but not for total production-related emissions. We believe it is essential that the program guarantee that the cap goal will be met.

**We support including fuels in the cap.**

As the Analysis notes, transportation is the largest source of GHG emissions in California (P.64.). Capping emissions from fuel providers is an important step in de-carbonizing transportation fuels that will work in harmony with the Low Carbon Fuel Standard, the Clean Cars Initiative and regional transportation demand planning. Excluding it from the cap undermines much of the benefit of putting a hard cap on emissions thereby guaranteeing overall emission reductions.

87-1

**We support inclusion of the Advanced Clean Cars Program**

As noted above, the transportation sector is the largest source of GHG emissions in California, so we must use every strategy we can to reduce those emissions. The advanced clean cars program is a key part of this strategy and should not be left out of the plan that CARB adopts and pursues in order to meet AB 32's goals.

**We still urge improvements to the Proposed Scoping Plan**

Our support for adopting the Analysis and moving forward with the Proposed Scoping Plan as the best alternative does not signify that we believe that plan is perfect. To the contrary, we will be actively participating in continuing regulatory process to implement the various programs under the Proposed Scoping Plan. At this time, many of the undersigned groups are preparing comments in the 15-day process to advocate for important improvements to the cap and trade program.

**Conclusion**

We believe the Analysis is a sufficient program level FED, and urge the Board to adopt it and to move forward with implementation of the Proposed Scoping Plan.

Sincerely,

Bonnie Holmes-Gen  
American Lung Association in California

Andy Katz  
Breathe California

Susan Stephenson  
California Interfaith Power and Light

Betsy Reifsnider  
Catholic Charities, Diocese of Stockton

Jane Valentino  
Center for Resource Solutions

Barry Vesser  
Climate Protection Campaign

Tyson Eckerle  
Energy Independence Now

Timothy O'Connor  
Environmental Defense Fund

Kristen Eberhard  
Natural Resources Defense Council

87-1  
Cont'd

Responses to Comments on the  
Supplement to the AB 32 Scoping Plan FED

Michelle Passero  
The Nature Conservancy

Paul Mason  
Pacific Forest Trust

Jasmin Ansar  
Union of Concerned Scientists

2.0 Responses to Comments

## **L87 Response**

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- 87-1      The commenter indicates that the Supplement is sufficient, and suggests certain design features as ARB moves forward with the proposed Cap-and-Trade program. Please refer to response 4-1. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 88 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Francisco  
Last Name: Hernández Maldonado  
Email Address: kjell.kuehne@gmail.com  
Affiliation: Ejido Amador Hernández, Ocosingo, Chiapas

Subject: Desde Chiapas:NO a REDD+ con Nuestra Selva/From Chiapas,Mexico:NO to REDD+ with Our Forest

Comment:  
Ejido Amador Hernández, Municipio de Ocosingo, Chiapas.

a 26 de Julio de 2011.

Nosotros somos una comunidad indígena y campesina que vivimos en el corazón de la Selva Lacandona, conviviendo con la Madre Tierra, luchando por existir como cultura y contra la histórica explotación, despojo, discriminación y olvido a la que se nos ha sometido por siglos.

Para nosotros que vivimos en estas tierras la respetuosa y armónica convivencia entre la naturaleza y las otras comunidades indígenas que habitamos la selva es fundamental, pero desde la promoción del proyecto REDD plus en nuestro Estado que hace el gobierno sin nunca consultarnos a nosotros, sentimos que está causando conflictos entre nuestros pueblos, ya que en la práctica beneficia a unos y por el otro lado intenta despojar y criminalizar la forma de vida de quienes en verdad nos dedicamos a vivir y convivir con la tierra y no estamos a favor de los mecanismos de REDD plus como solución al cambio climático. Al no consultarnos se violan nuestros derechos humanos y también los convenios internacionales como la Declaración de Naciones Unidas sobre los Derechos de los Pueblos Indígenas. Nosotros no concebimos la vida sin nuestra Selva, ella ha sido quien nos ha alimentado y curado, ahora han vivido nuestros abuelos y queremos que también nuestros hijos, no queremos renunciar a la memoria y a la lucha de nuestros abuelos a existir como pueblos indígenas, nuestro camino es la tierra y nuestro modo el comunitario y queremos que se nos respete.

Como pueblos campesinos que somos sabemos que el clima está cambiando y que es necesario hacer algo para garantizar la vida de este planeta que no solo incluye a la especie humana, pero creemos que el camino del REDD no es el indicado, nosotros somos y siempre hemos sido indígenas pobres y sin embargo no necesitamos del dinero de ningún gobierno ni empresa para conservar el medio ambiente, porque entendemos que es responsabilidad de todos los que vivimos en este planeta cuidarlo y protegerlo. Ponerle precio a los árboles y a las Selvas es violar un principio respetuoso y sagrado con la naturaleza y la soberanía de nuestro país, es integrar a nuestras Selva a un modelo que ha sido el principal causante del cambio climático, no es posible apagar el fuego con mas fuego, no queremos que se haga de la Selva un negocio de los árboles y la biodiversidad.

Por la vida de nuestra madre tierra y de los pueblos decimos No REDD plus.

Atentamente

Francisco Hernández Maldonado  
Comisariado Ejidal de la Comunidad Amador Hernández

Translation:

Ejido Amador Hernández, Municipality of Ocosingo, Chiapas, Mexico.

on July 26th 2011

We are an indigenous and peasant community who lives in the heart

88-1

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

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of the region called "Selva Lacandona" (Lacandon Rainforest). We live from and with Mother Earth, struggling to exist as a culture and struggling against the historical exploitation, dispossession, discrimination and neglect to which we have been subjected for centuries.

For us who live on this land, the respectful and harmonious coexistence with nature and with the other indigenous communities that inhabit the forest is critical. But the promotion of REDD plus in our state, which the government is doing without ever consulting us, is causing conflict between our peoples, because in practice it benefits some and on the other side tries to dispossess us and criminalize the lifestyle of those who truly dedicate ourselves to live and coexist with the earth and are not in favor of the mechanisms of REDD plus as a solution to climate change. By failing to consult us, our human rights are violated as well as international agreements such as the United Nations Declaration on the Rights of Indigenous Peoples. We do not conceive life without our Forest, she has fed and healed us, our grandparents have lived here and we also want our children to live there. We do not want to give up the memory and the struggle of our ancestors to exist as indigenous peoples. Our road ahead is the earth and our way of life is communitarian and we want you to respect us.

As rural people that we are we know that the climate is changing and that we need to do something to ensure the life of this planet which includes not only the human species, but we believe that the way of REDD is not the indicated one. We are and have always been poor indigenous people and yet we do not need the money from any government or company to preserve the environment because we understand that it is the responsibility of all who live on this planet to care for it and protect it. Putting a price on trees and forests is violating a sacred principle of respect for nature and violates the sovereignty of our country. It is to integrate our Forest into a model that has been the main cause of climate change. It is not possible to extinguish the fire with more fire, we do not want the Forest to be turned into a business of trees and biodiversity.

For the life of our mother earth and the people we say No to REDD plus.

Attentively

Francisco Hernandez Maldonado  
Representative (Comisariado Ejidal) of the Community Amador Hernandez

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 14:46:13

88-1  
Cont'd

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## **L88 Response**

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- 88-1      The commenter expresses concerns over a REDD program. ARB has reviewed this comment. ARB has determined that it does not state a specific concern or question regarding the adequacy of the environmental analysis of the alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record. The concerns raised in the comment are directed towards the inclusion of REDD offset credits in the proposed Cap-and-Trade program. REDD offset credits are not currently proposed to be included in the program. Any proposals to include REDD offset credits would be part of a separate rulemaking. That rulemaking would include a full public process, environmental review, and Board consideration. This comment is noted and included in the public record. Please refer to response 81-1.

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**L89**

**CENTER ON RACE, POVERTY & THE ENVIRONMENT**

47 KEARNY STREET, SUITE 804, SAN FRANCISCO, CA 94108 TEL 415-346-4179 FAX 415-346-8723

1302 JEFFERSON STREET, SUITE 2, DELANO, CA 93215 TEL 661-720-9140 FAX 661-720-9483

WWW.CRPE-EJ.ORG

July 28, 2011

*Via electronic submittal*

Chairman Mary Nichols  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95812

**Re: Comments on the Supplement to the AB 32 Scoping Plan Functional Equivalent Document**

Dear Chairman Nichols and Members of the Board:

The Center on Race, Poverty & the Environment (CRPE) submits these comments regarding the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (“Supplement”) on behalf of the undersigned organizations and individuals.<sup>1</sup> CRPE is a non-profit environmental justice organization that, for over 20 years, has provided legal and technical assistance to grassroots groups in low-income communities and communities of color fighting environmental hazards.

As described in detail below, the Supplement does not comply with the letter or the spirit of CEQA or with the Superior Court’s May 20, 2011 order. The Supplement is nothing more than a *post hoc* rationalization of the Board’s 2008 decision to adopt a cap and trade regulation, rather than a true exercise in public participation and informed decision-making. ARB has squandered another opportunity to make an honest, good-faith analysis of greenhouse gas reduction strategies that work for *all* Californians – including our most vulnerable and overburdened population. We ask that the Board direct staff to go back and perform a meaningful and comprehensive alternatives analysis. The Board must also halt implementation of the Cap and Trade regulation if the alternatives analysis is to be anything more than an empty gesture.

<sup>1</sup> We incorporate by reference the comments submitted by Communities for a Better Environment.

**THE SUPPLEMENT IS A *POST HOC* RATIONALIZATION OF THE BOARD'S 2008  
DECISION AND PERFORMED IN BAD FAITH**

ARB has repeatedly made it known that it does not agree with the Superior Court's May 20, 2011 decision finding that its alternative analysis was not sufficient and that it violated CEQA.<sup>2</sup> ARB has appealed the decision, but also "voluntarily" completed the Supplement to "remove any doubt about the matter, and congruent with ARB's interest in public participation and informed decision-making."<sup>3</sup> It is hard to understand how ARB can claim the supplemental analysis will inform decision making, when it continues to implement the very plan for which it is reviewing alternatives. ARB's actions to move forward with the Cap and Trade regulation during the creation of the Supplement contradict any claims of legitimate, meaningful, and good faith efforts at informed decision-making and public participation. ARB instead demonstrates the type of *post hoc* rationalization that directly violates CEQA.

The Superior Court ordered ARB to perform an adequate alternatives analysis that was sufficient to meet the requirements of CEQA. The purpose of the alternatives analysis is to examine a reasonable range of alternatives that feasibly meet most of the project's basic objectives while avoiding or substantially reducing the significant effects of the project. The selection of alternatives should foster informed decision making and public participation.<sup>4</sup> The analysis should allow the Board to evaluate, compare, and choose the best option to move forward with implementing AB 32. It should not be used to rationalize actions already taken by the Board. CEQA prohibits such *post hoc* analysis. "The Board must begin anew the analytical process required under CEQA and must not attempt to give post hoc rationalizations for actions already taken in violation of CEQA, even if done in good faith."<sup>5</sup>

Unfortunately, the fact that the Supplement is a *post hoc* rationalization of the Board's 2008 decision to use cap and trade is self-evident. The entire time ARB staff has been working on the Supplement, ARB has fought to continue with its Cap and Trade regulation, eventually persuading the First Appellate District Court of Appeal to grant a Petition for Writ of Supersedeas that stayed enforcement of the Superior Court's injunction prohibiting such conduct. ARB's supplemental alternatives analysis cannot be defined as a good faith effort to meaningfully analyze alternatives. The Board cannot claim that this process honestly evaluates cap and trade alternatives, when at the same time it implements cap and trade. ARB's conduct continues to offend the letter and spirit of CEQA.

This illegitimate process is exactly what the Superior Court ordered ARB not to do, finding that the consideration of alternatives is "central to the analysis and decision-making process of determining GHG reduction methodology," and that CARB intended to "create a *fait accompli* by premature establishment of a cap and trade program before alternatives can

<sup>2</sup> Supplement to the AB 32 Scoping Plan Functional Equivalent Document ("Supplement"), Air Resources Board, June 13, 2011, p. 2.

<sup>3</sup> *Id.*

<sup>4</sup> 14 CCR § 15126.6(a).

<sup>5</sup> *City of Santee v. County of San Diego*, 214 Cal.App.3d 1438, 1456; *see also Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal. 3d 376, 394. ("A fundamental purpose of [CEQA review] is to provide decision makers with information they can use in deciding whether to approve a proposed project, not to inform them of the environmental effects of projects that they have already approved.")

be exposed to public comment and properly evaluated by CARB itself.”<sup>6</sup> The Superior Court concluded:

Continued rulemaking and implementation of cap and trade will render consideration of alternatives a nullity as a mature cap and trade program would be in place well advanced from the premature implementation which has already taken place. In order to ensure that ARB adequately considers alternatives to the Scoping Plan and exposes its analysis to public scrutiny prior to implementing the measures contained, the Court must enjoin any further rulemaking until ARB amends the FED in accordance with this decision.<sup>7</sup>

ARB continues to proceed in its single-minded march toward cap and trade despite CEQA and what is best for California. The Legislative Analyst’s Office (LAO) also considers ARB’s tactics to usurp AB 32’s goals, and recommends the ARB stop implementation and perform an adequate alternatives analysis:

It appears to us, however, to be premature to continue development of the [cap and trade] program before the analysis is complete, *as the analysis, if done comprehensively and meaningfully, should usefully inform what role, if any, a cap-and-trade program should play in meeting AB 32’s goals*. Regardless of the court order, we think that it is important for ARB to conduct such analysis to ensure that the mix of measures to address AB 32’s goals maximizing cost-effectiveness as required by AB 32.... The cap-and-trade program is a significant part of the AB 32 Scoping Plan. There are numerous policy considerations associated with its implementation, and, as such, proceeding with its implementation before completing the analysis discussed above is premature. Therefore, we recommend that the Legislature direct the ARB to cease all work on the cap-and-trade program until it has completed the required analysis of potential alternatives and presented the results to the Legislature.<sup>8</sup>

ARB’s actions and its inadequate Supplement call in to question whether it has lost sight of its goals to “base decisions on best possible scientific and economic information” and to “provide safe, clean air to all Californians.”<sup>9</sup>

ARB’s decision to continue implementing the Cap and Trade regulation, instead of performing a true alternatives analysis is even more questionable when we take into consideration the current information about the reduction in greenhouse gas emissions due to the economy and the high cost of implementing the regulation. According to the LAO the total emission reductions required to meet AB 32’s target is far lower than assumed in the 2008 Scoping Plan. “... [T]he total amount of emission reductions required from the 2020 emissions baseline is now about 80 MMTCO<sub>2</sub>e, instead of the 174 MMTCO<sub>2</sub>e emission reduction target that had originally been identified in the 2008 Scoping Plan.”<sup>10</sup> The LAO analysis also called

<sup>6</sup> Order Granting In Part Petition for Writ of Mandate, March 17, 2011, 30: 22-24, 32: 1-3. Attached as Exhibit 1.

<sup>7</sup> *Id.* at 35:4-9.

<sup>8</sup> See Summary of LAO Findings and Recommendations on the 2011-12 Budget, [http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department\\_Number=-1&KeyCol=429&Yr=2011](http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department_Number=-1&KeyCol=429&Yr=2011) (emphasis added). Attached as Exhibit 2.

<sup>9</sup> ARB Mission and Goals, <http://www.arb.ca.gov/html/mission.htm>.

<sup>10</sup> Legislative Analyst’s Office letter to Sen. Steinberg and Speaker Perez, June 9, 2011, p. 3. Attached as Exhibit 3.

89-2  
Cont'd

89-3

into question the amount of reductions that are even required from cap and trade, “[t]hus, the ARB’s updated estimates potentially overstate the targeted level of emission reductions that will be required from the cap-and-trade measure. This is because the complementary measures, when comprehensively updated and scored, are likely to provide a higher total level of emission reductions, thus lowering the estimate of the emission reductions required from cap-and-trade.”<sup>11</sup> Additionally, there is a significant cost associated with this regulation. The total cost of cap-and-trade development and implementation in the 2011-2012 budget is \$9 million.<sup>12</sup>

Given the minimal reductions that are to come from cap and trade and the high cost associated with its development and implementation, ARB has no legitimate reason why it cannot halt implementation while it reviews whether cap and trade is the best method to meet AB 32. Taking time to do a proper analysis should not affect meeting the 2020 emissions deadline. In fact, Chair Nichols announced at a Select Committee Hearing on June 29<sup>th</sup> that enforcement of the Cap and Trade regulation would be delayed until January 2013.<sup>13</sup> ARB has the time to do this right, and it should take it. Currently, ARB’s Supplement evidences bad faith, violates CEQA and disregards the Superior Court’s order.

#### **THE SUPPLEMENT FAILS TO ADEQUATELY ANALYZE ALTERNATIVES AS REQUIRED BY CEQA**

As explained above, ARB’s *post hoc* rationalization does not comply with the requirements of CEQA. Instead of a new analytical process, the Supplement merely shores up the 2008 FED with more and current information. ARB must comply with *all* of CEQA when it performs the court-ordered alternatives analysis, and may not simply find more evidence to support its already-made decision to continue with cap and trade. ARB has once again chosen to take the shortest and most direct route to its goal and will miss the opportunity to complete a new alternatives analysis, that could have truly informed ARB’s decision making and the public’s right to meaningfully participate in the process. Having an analysis of alternatives sufficient for informed decision making not only includes more detailed information on the chosen alternatives, but it requires a review of all feasible alternatives, including those suggested by the public.

##### *The Analysis of the Five Alternatives in the Supplement Is Insufficient*

In considering alternatives for a second time, ARB continues to skew the information to justify its decision to choose cap and trade. It compares a perfect-world scenario of cap and trade, where measures are put in place to minimize leakage and minimize economic impacts, to standard versions of direct regulation and carbon fee/tax. ARB then goes on to tout cap and trade as the superior option because it minimizes leakage and economic impacts to industries. What ARB fails to analyze are direct regulations or carbon fees/taxes that also control for leakage and economic impacts. Cap and trade comes out on top, because ARB’s fingers tip the scales.

In addition, ARB skews the alternative analysis by using project objectives that

<sup>11</sup> *Id.* at p. 4.

<sup>12</sup> See Summary of LAO Findings on 2010-2011 Budget.

<sup>13</sup> Margot Roosevelt, *California delays its carbon trading program until 2013*, LA Times (June 30, 2011), available at <http://www.latimes.com/news/local/la-me-cap-trade-20110630,0,2108482.story>. Attached as Exhibit 4

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presuppose a market-based mechanism. ARB derived twenty objectives from AB 32 to develop and evaluate the proposed project and alternatives.<sup>14</sup> Three of these objectives assume a market-based mechanism<sup>15</sup>:

1. Achieve real emission reductions in market-based strategies
2. Achieve reductions over existing regulation using market-based strategies
3. Complement direct measures

ARB cites to Health & Safety Code section 38562(d) for the legislative authority behind the choice of these goals. However, this section describes the requirements for “[a]ny regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570).”<sup>16</sup> Section 38570 clearly states that “[t]he state board *may* include . . . the use of market-based compliance mechanisms to comply with the regulations.”<sup>17</sup> There is no reason to conclude from these regulations that the creation of a market-based strategy was a goal of the legislature in enacting AB 32, and ARB provides no authority for its determination that a market-based strategy was an appropriate goal. The establishment of these goals has thus inappropriately skewed ARB’s analysis in favor of a market-based strategy.

Under CEQA, ARB must examine a reasonable range of alternatives to the proposed project that feasibly meet most of the project’s basic objectives while avoiding or substantially reducing the significant effects of the project.<sup>18</sup> CEQA also makes clear that the purpose of the alternatives analysis is to focus on alternatives that are capable of “avoiding or significantly lessening any significant effects of the project, even if those alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”<sup>19</sup> Thus, a feasible environmentally superior alternative need not meet every project objective. In evaluating alternatives, the ARB must include “sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project.”<sup>20</sup>

In the Supplement, ARB again only identified five alternatives: (1) no project, (2) cap-and-trade for the sectors included in the cap, (3) source-specific regulatory requirements, (4) a carbon fee or tax, and (5) a variation of the proposed strategies or measures.<sup>21</sup>

#### 1. No Project

The section generally describes sector by sector the business as usual impacts compared to the proposed cap-and-trade regulation and is required by CEQA. Given that AB32 prohibits ARB from choosing this “alternative,” it brings the analysis of real potential alternatives down to only four.

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<sup>14</sup> Supplement at 4-6.

<sup>15</sup> *Id.* at 5-6.

<sup>16</sup> H&S Code § 38562(d).

<sup>17</sup> H&S Code § 38570(a) (emphasis added).

<sup>18</sup> 14 CCR § 15126.6(a).

<sup>19</sup> 14 CCR § 15126.6(b).

<sup>20</sup> *Id.*

<sup>21</sup> Supplement at 17-19.



2. Cap-and-Trade for the Sectors Included in the Cap

This alternative contemplates a “cap-and-trade program as the primary source of GHG emission reductions for the 22 MMT shortfall [the amount of additional GHG reductions necessary to meet the goals of AB 32].”<sup>22</sup> The alternatives provided in an alternatives analysis should “represent enough of a variation to allow informed decisionmaking.”<sup>23</sup> Here, the proposed program is cap-and-trade, which is not a variation of cap-and-trade. Again, this “alternative” can hardly be considered a true alternative to the proposed program.

When summarizing existing cap-and-trade programs, ARB mentions that New Jersey has withdrawn from the Regional Greenhouse Gas Initiative (RGGI).<sup>24</sup> However, there is no discussion of the criticisms of cap-and-trade that caused Governor Christie to announce New Jersey’s withdrawal. According to Christie, RGGI is “a failure” because “power suppliers have easily met their caps, and carbon allowances are trading at bottom-level prices.”<sup>25</sup> RGGI carbon prices once took a free fall to \$3.07 per ton (a floor was finally set in RGGI at \$1.86, less than a gallon of gas, to prevent free carbon credits).<sup>26</sup> Governor Christie claims that New Jersey’s recent decrease in carbon dioxide emissions is not because of its involvement with RGGI, “but because it is relying more on natural gas and less on coal to fill its energy needs.”<sup>27</sup> However, ARB does not discuss this recent criticism of RGGI.

ARB devoted only one paragraph to the problems experienced by the European Union – Emissions Trading System (EU-ETS).<sup>28</sup> For example, while over-allocation was discussed, there was no consideration of the hotspots, cumulative impacts, and distributive justice issues learned from this program and others.<sup>29</sup> AB 32 commands ARB to “consider all relevant information pertaining to GHG emission reduction programs in other states, localities, and nations, including the northeastern states of the United States, Canada and the European Union” in deciding whether to recommend cap-and-trade or other mechanisms or incentives to accomplish the goal of achieving maximum feasible and cost effective reductions of GHGs by 2020.<sup>30</sup> By not including this information in its discussion of cap and trade, ARB is not fulfilling the mandate of AB 32.

ARB uses the RECLAIM program as another example of a successful cap and trade program, however, the Environmental Protection Agency (EPA) found a number of issues with this program. EPA’s analysis of the data suggested that the program has produced far less emission reductions than either were projected for the program or could have been expected from a direct regulation program.<sup>31</sup> EPA also determined that “market-based programs require

<sup>22</sup> *Id.* at 37.

<sup>23</sup> *Mann v. Cmty. Redev. Agency* (1991) 233 CA3d 1143, 1151.

<sup>24</sup> Supplement at 42.

<sup>25</sup> Mireya Navarro, *Christie Pulls New Jersey From 10-State Climate Initiative*, N.Y. Times, May 26, 2011, available at <http://www.nytimes.com/2011/05/27/nyregion/christie-pulls-nj-from-greenhouse-gas-coalition.html>. Attached as Exhibit 5.

<sup>26</sup> See “Are We Saving the World Yet? RGGI Starts and So Does the Spin,” available at <http://ejmatters.org>

<sup>27</sup> *Christie Pulls New Jersey From 10-State Climate Initiative*, *supra* note 26.

<sup>28</sup> Supplement at 45.

<sup>29</sup> *Id.*

<sup>30</sup> H&S Code § 38561(b)-(c).

<sup>31</sup> An Evaluation of the South Coast Air Quality Management District’s Regional Clean Air Incentives Market - Lessons in Environmental Markets and Innovation November, 2002, US EPA Region 9, p. 57. Attached as Exhibit 6

significant planning, preparation, and management during development and throughout the life of the program.”<sup>32</sup> EPA cautioned that “[m]arket-based programs cannot necessarily resolve political issues and are not a universal solution. Thus, expectations of market-based programs must be managed.”<sup>33</sup>

ARB approved the Cap and Trade regulation in December 2010 and has continued to develop that regulation, including the recent 15 day changes released this month. Since ARB insisted on continuing to develop and implement the Cap and Trade regulation while it performed this analysis, it should have included specific and up to date information about what that regulation looks like in this analysis. Doing so would have allowed a greater analysis of the impacts of the actual regulation in comparison with the other alternatives. However, ARB chose to use theoretical, perfect world scenarios, as it did in 2008 before it had a well-developed cap and trade regulation.

Finally, “[t]he purpose of an EIR’s discussion of alternatives and mitigation measures is to identify ways to reduce or avoid significant environmental impacts.”<sup>34</sup> Despite this requirement of different environmental impacts, ARB admits that “Alternative 2, which uses a Cap-and-Trade Program to achieve the 22 MMTCO<sub>2</sub>E reduction shortfall, would result in environmental impacts *similar to* the Proposed Scoping Plan, where Cap-and-Trade is also a central feature.”<sup>35</sup> This again demonstrates that Alternative 2 is not a true alternative under CEQA to the proposed plan.

### 3. Program Based on Source-Specific Regulatory Requirements with No Cap-and-Trade Component

This alternative discusses the possibility of using direct regulation “to make up the emissions reductions that the Proposed Scoping Plan identifies as coming from Cap-and-Trade and Advanced Clean Car regulations.”<sup>36</sup> While the Supplement touts the benefits to California’s environment caused by direct regulations,<sup>37</sup> it suggests at the outset of the analysis that it may not be suitable for GHG emission reduction.<sup>38</sup> ARB states that “[t]he emissions of CO<sub>2</sub>, the most common GHG, are somewhat unlike pollution that California has controlled successfully with direct regulation.”<sup>39</sup> However, the creation of a cap-and-trade program is similarly unprecedented in California, and will force ARB to solve at least as many new problems as a direct regulation on CO<sub>2</sub>. ARB also comments on the extensive process through which a regulation is promulgated,<sup>40</sup> but fails to mention the significant process required for a cap-and-trade regulation.

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<sup>32</sup> *Id.* at 66

<sup>33</sup> *Id.*

<sup>34</sup> Stephen L. Kostka and Michael H. Zischke, *Practice Under the California Environmental Quality Act*, CEB, 2d ed., 2011, at 703 (*construing Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* (1988) 47 C3d 376, 403).

<sup>35</sup> Supplement at 110 (emphasis added).

<sup>36</sup> *Id.* at 60.

<sup>37</sup> *Id.* at 61-62.

<sup>38</sup> *Id.* at 62.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* at 63.

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Direct regulations have several advantages that were not analyzed in the Supplement. Direct regulations have regulatory certainty, opportunities for public participation, transparency and enforceability. In addition, ARB has existing expertise, capacity, and a history of proven reductions in air pollution with direct regulations. ARB points to the possibility of leakage, which as mentioned above could be addressed in the regulation – just as ARB has attempted to address the problem in the cap and trade regulation.

#### 4. Carbon Fee

This alternative discusses one form of a carbon fee or tax that could be utilized to meet AB 32's goals, while acknowledging that there are many other versions of a carbon fee that could be used. After discussing the "indirect cost savings advantages, in terms of spurring efficiency improvements"<sup>41</sup> and "relief for low-income households"<sup>42</sup> that would be possible with a downstream taxing approach, ARB chooses to analyze an upstream tax approach because it would be "the most administratively cost effective approach."<sup>43</sup> It is unclear why this decrease in costs outweighs the beneficial aspects of a downstream taxing approach, which may have allowed this alternative to accomplish more of AB 32's goals.

ARB's environmental impacts analysis finds many areas of no significant impact with a carbon fee. It is unclear why a cap-and-trade program would be superior overall to a carbon fee, with the exception of the three objectives identified by ARB that state a goal of utilizing a market-based program.

#### 5. Variation of the Combined Strategies or Measures

This alternative is actually a range of alternatives that ARB tries to analyze as one alternative. Due to the infinite number of combinations included within this one alternative, it is almost impossible to compare this alternative with the proposed cap-and-trade program. It is unclear why ARB decided not to compare multiple variations, which would have allowed for a more meaningful comparison between this alternative and the proposed program.

#### *The Range of Alternatives Reviewed in the Supplement is Insufficient*

ARB states that it used the same five alternatives because the Superior Court did not find the number and nature of the alternatives insufficient. First, it is important to note that the Superior Court cannot tell ARB how to do a CEQA compliant analysis; it can only remand it back to the agency to exercise its discretion in accordance with CEQA.<sup>44</sup> Second, ARB takes a limited view of the Superior Court order, which found that it "failed to proceed in a manner require (sic) by law by inadequately describing and analyzing Project alternatives sufficient for informed decision making and public participation."<sup>45</sup> A review of the hearing transcript shows a lengthy discussion of whether the alternatives analysis was anything more than a statement of why cap and trade was the superior choice. There was no decision or discussion finding that the number of alternatives was adequate. There is no reason for ARB to limit its analysis to only

<sup>41</sup> *Id.* at 90.

<sup>42</sup> *Id.* at 91.

<sup>43</sup> *Id.*

<sup>44</sup> *See Toyota of Visalia, Inc. v. New Motor Vehicle Bd.* (1987) 188 Cal.App.3d 872, 855.

<sup>45</sup> Order p. 2:28, 3:-2. (Exh. 1)

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five alternatives (three true alternatives). ARB certainly could have discussed a few of the many possible variations in this alternative as individual alternatives themselves, particularly those suggested by stakeholders.<sup>46</sup>

For example, ARB once again fails to include an alternative that would impose mandatory control measures on agriculture. Methane has a global warming potential over 23 times that of carbon dioxide, and methane emissions from livestock waste account for 3% of the total greenhouse gas emissions in California. Instead of exempting an entire industry that contributes a total of 6% of California's greenhouse gas emissions so it can be used as offsets, ARB should analyze an alternative that includes direct regulation. There are currently available technologies and strategies that could reduce greenhouse gas emissions, such as: (1) anaerobic digesters; (2) biogas recovery and barn enclosure; (3) reformulation of ruminant diets to reduce enteric fermentation and some methane emissions; (4) burning animal waste for fuel; (5) organic farming.<sup>47</sup> ARB should have analyzed this alternative.

## CONCLUSION

ARB's Supplement and its actions to continue implementing cap and trade while creating the alternatives analysis makes a mockery of the letter and spirit of CEQA, public participation and informed decision-making. Despite ARB's clear disregard for the health and well-being of California's most vulnerable and overburdened communities, those communities continue to engage ARB and attempt to persuade ARB to use this opportunity to put California at the forefront of *equitable* climate change policy. The undersigned organizations and individuals ask that the Board direct its staff to perform a meaningful and comprehensive alternatives analysis that does not occur simultaneously with the Board's single-minded development and implementation of cap and trade.

Sincerely,

[electronically submitted]

/s/

Sofia L. Parino, Senior Attorney  
Center on Race, Poverty & the Environment

Adrienne Bloch, Senior Staff Attorney  
Communities for a Better Environment

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Maria S. Covarrubias, Secretary  
Comité ROSAS

Vianey Nunez, President  
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Tony Perez, Chair  
Taty Aguilera, Executive Director  
The Chicano Latino Caucus of the California  
Democratic Party

Jesse N. Marquez, Executive Director  
Coalition For A Safe Environment

<sup>46</sup> *Id.* at 104.

<sup>47</sup> Koneswaran, Gowri and Nierenberg, Danielle, *Global Farm Animal Production and Global Warming: Impacting and Mitigating Climate Change*, January 31, 2008.

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Cont'd

Gabrielle Weeks, Executive Director  
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Environment

Caroline Farrell

Drew Wood, Executive Director  
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Ricardo Pulido, Executive Director  
Community Dreams

Salvador Partida, President  
Committee for a Better Arvin (CBA) (Arvin,  
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Domitila Lemus, President  
Comité Unido de Plainview (Plainview, Tulare  
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Ruth Martinez, President  
Comité Si Se Puede (Ducor, Tulare County)

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Comité Luchando por Frutas y Aire Limpio  
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Gary Lasky  
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Martha Dina Arguello

Shabaka Heru  
Society for Positive Action

Tom Frantz, President  
Association of Irrigated Residents (AIR)

Dr. Henry Clark  
West County Toxics Coalition

Angela Johnson Meszaros

California Communities Against Toxics

## **L89 Response**

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- 89-1            This is an introduction and summary of the comments on the Supplement which are detailed in the body of the letter. Please see responses to the detailed comments below in the order in which they are presented in the letter.
- 89-2            The commenter asserts the Supplement cannot present a good faith effort to meaningfully analyze alternatives because ARB has continued with its ongoing rulemaking process for the proposed Cap-and-Trade Regulation. As explained in the introduction to the Supplement, staff proceeded with creating an expanded analysis of the alternatives to the Proposed Scoping Plan. Staff created the Supplement to bring an expanded environmental analysis of alternatives to the Board for reconsideration of the Proposed Scoping Plan. The Board has full discretion to objectively evaluate the alternatives presented in the Supplement and either approve the Proposed Scoping Plan as proposed or instead choose one of the action alternatives. Accordingly, the Board has the discretion to choose whether or not cap-and-trade is included in the Scoping Plan.

ARB staff's continued work on aspects of the proposed Cap-and-Trade Regulation has no bearing on the Board's discretion to independently evaluate the alternatives presented in the Supplement. First, the proposed Cap-and-Trade Regulation is a separate rulemaking from the development of the Scoping Plan pursuant to separate authority under AB 32. The proposed Cap-and-Trade Regulation is not final and would not be final when the Board meets to consider the alternatives presented in the Supplement. Further, as noted by commenter, the First Appellate District Court of Appeal's granted ARB's Petition of the Writ of Supersedeas (First Appellate District, Case No. A132165) staying enforcement of the superior court's order, and thereby permitting ARB to continue activity associated with the separate proposed Cap-and-Trade rulemaking. ARB has proceeded with the separate rulemaking activity to preserve the option to finalize the rulemaking in a timely manner, if the Board chooses to approve the Proposed Scoping Plan after consideration of the expanded alternatives analysis. Under requirements of the Administrative Procedure Act, to become final the proposed Cap-and-Trade Regulation must be filed with the California Office of Administrative Law (OAL) by October 28, 2011. Although ARB recently announced a proposal to initiate the beginning of the compliance obligations on January 1, 2013, that does not change the OAL deadline or the AB 32 deadline of January 1, 2010 to complete the rulemaking. If ARB staff had halted all work on this rulemaking after the Superior Court ruling, ARB would not lost the ability to complete all the required work to finalize the rulemaking with these

timeframes. Moreover, some of the ongoing work on the proposed Cap-and-Trade Regulation could be used for alternatives to the proposed Cap-and-Trade Regulation, if the Board chooses to pursue an alternative to cap-and-trade. ARB disagrees that this parallel work by staff impedes the ability of the Board, as the decision-makers, to objectively consider the Proposed Scoping Plan. It merely does, however, preserve ARB's ability to implement this program beginning in 2012, if the Board chooses this option.

89-3 The commenter asserts that ARB's decision to continue to "implement" the proposed Cap-and-Trade Regulation is questionable in consideration of information in an LAO analysis about the amount of reductions required from a cap-and-trade program. First, as explained above, ARB is not "implementing" the proposed Cap-and-Trade Regulation; staff is continuing the required work to leave open the option to finalize the rule by October 2011 for consideration for final adoption and submission to OAL. Please refer to response 89-2.

Second, the commenter has not demonstrated how the LAO analysis has any bearing on the consideration of the updated alternative analysis. The commenter cites the LAO analysis in support of their belief that activity associated with the proposed Cap-and-Trade Regulation should be halted while performing the alternatives analysis. The LAO analysis correctly explains that fewer GHG reductions are necessary to achieve the target of 427 MMTCO<sub>2</sub>E by 2020. As indicated in the 2008 Scoping Plan, successful implementation of all measures, excluding cap-and-trade, would have created an estimated shortfall of 34.4 MMTCO<sub>2</sub>E to meet the 2020 target. ARB's revised estimate reflecting current projections indicates that successful implementation of all measures, excluding cap-and-trade, would create a shortfall of 18-22 MMTCO<sub>2</sub>E. The proposed Cap-and-Trade program, as recommended in the 2008 Scoping Plan, and proposed as a regulation in October 2010, could provide the necessary amount of additional emission reductions to meet the 2020 target. However, it is important to clarify that a cap-and-trade program is designed to establish a declining limit on total allowable GHG emissions and is not merely to achieve reductions sufficient to close the shortfall. The declining cap guarantees that future GHG emissions are reduced to target levels regardless of the effectiveness of other measures and/or changes in economic growth. Therefore, relying on a simple arithmetic approach to calculate the amount of emission reductions that a cap-and-trade regulation would provide understates the value of the program to the achievement of the AB 32 target.

89-4 The commenter asserts that the analysis of the five alternatives in the Supplement is insufficient. ARB disagrees. In accordance with the

substantive requirements of CEQA, the alternatives analyzed represent a “reasonable range” of alternatives that could potentially attain most of the basic project objectives while having the potential to reducing or eliminating significant environmental effects. A range of alternatives analyzed in an environmental document is governed by the “rule of reason,” requiring evaluation of those alternatives “necessary to permit a reasoned choice.” (CEQA Guidelines, CCR section 15126[f]). The initial screening of potential alternatives had to at least potentially meet the objectives, and alternatives were included only after consideration of their potential feasibility based on technical, legal and regulatory grounds. ARB staff determined that the five alternatives evaluated covered a range of policy level alternatives sufficient to permit a reasoned choice. The commenter critiques this range but does not suggest any additional potential alternatives that ARB should have considered.

In addition, the commenter noted the LAO recommendation to the Legislature on the FY 2011-12 budget to reduce funding and direct ARB to cease all work on the proposed Cap-and-Trade program. ARB staff notes that the Legislature did not act on this recommendation.

The commenter critiques the description of Alternative 2 for not considering the additional information and studies recommended by commenter. Alternative 2 provides a thorough description of this alternative, including a summary of several conceptual studies and existing emission trading programs. Because the Scoping Plan is a broad planning document that recommends measures, and each measure would undergo its own separate review, including consideration of alternatives, the level of detail in the Supplement’s discussion of alternatives is sufficient for the decision-maker’s consideration of these policy-level alternatives at this stage. ARB is not required to perform all research or studies requested by commenters (see CCR section 15204). Further, the CEQA Guidelines (CCR section 15126.6[d]) provide that “an EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.” Additionally, this section states, “If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.” The Supplement contains a thorough evaluation of each alternative and includes the level of detail necessary for informed decision making.

The commenter suggests that several advantages of Alternative 3 were not discussed in the Supplement. Contrary to commenter’s assertion, the Supplement does discuss several of these attributes of Alternative 3 including ARB’s existing expertise in developing regulations.

The commenter's critique of the carbon fee alternative is incorrect. The Supplement provides a thorough description of the carbon fee or tax alternative and an analysis of the alternative's ability to meet the objectives as well as the potential adverse impacts associated with that alternative. Section 2.8 of the Supplement provides a comparison of the relative ability of each alternative to meet the objectives and their comparative environmental impacts. The Supplement does not state that either the proposed project (i.e., the Proposed Scoping Plan) or Alternative 2 would be environmentally superior to Alternative 4. The Supplement does however state that those two alternatives have a higher potential to meet the project objectives.

- 89-5 Please refer to response 89-4 regarding the range of alternatives. With regard to commenter's suggestion that ARB consider an alternative that would impose control measures on agriculture, please refer to the Supplement at pages 71-72 for a description of agricultural sources as a focus of a direct source regulation under Alternative 3.



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

**L90**

*Office of the General Manager*

July 28, 2011

Clerk of the Board  
Mr. James Goldstene, Executive Officer  
Ms. Mary Nichols, Chair  
California Air Resources Board  
1001 I Street  
Sacramento, California 95814

Dear Mr. Goldstene and Ms. Nichols:

**Comments Regarding ARB's Supplement to the AB 32 Scoping Plan Functional Equivalent Document Dated June 13, 2011**

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the Air Resources Board's (ARB) Supplement to the AB 32 Scoping Plan Functional Equivalent Document dated June 13, 2011 (FED Supplement), and is providing the following comments on this document. Metropolitan has closely followed and participated in the AB 32 rulemaking process, including the submittal of detailed written comments on the Cap and Trade Proposed Draft Regulation on January 11, 2010, and on the Proposed Regulation to Implement the California Cap and Trade Program on December 14, 2010. Additionally, Metropolitan provided comments on the AB 32 Scoping Plan in 2008. Metropolitan has provided testimony at ARB workshops and public hearings, and has had several meetings with ARB staff to discuss the Cap and Trade Program, and its impacts on Metropolitan and the Southern California water sector. Metropolitan will be providing comments next month on the 15-Day Modified Text for the Proposed California Cap on Greenhouse Gas Emissions and Market Based Compliance Regulation that the ARB released on Monday, July 25, 2011.

**Background**

As the nation's largest provider of drinking water, Metropolitan distributes water from the Colorado River and Northern California to 26 member agencies (cities and water districts), and supplies more than one-half of the water used by nearly 19 million people in the 5200 square-mile coastal plain of Southern California. Metropolitan's regional water supply and distribution system includes five of the largest pumping plants and water treatment facilities in the United States. Metropolitan's mission is to provide its member agencies with adequate and reliable supplies of high quality water to meet present and future needs in an environmentally and economically responsible way. Recognizing the existence of a nexus between water and energy

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Mr. James Goldstene, Executive Officer

Ms. Mary Nichols, Chair

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supplies, Metropolitan's Board of Directors adopted Energy Management Policies which serve as a blueprint to help ensure energy reliability and efficiency, and protection of the environment. In order to bring Colorado River water to Southern California, Metropolitan will often directly import wholesale energy into California to serve exclusively the electrical pumping requirements of the Colorado River Aqueduct (CRA). This wholesale energy is not marketed or resold to other entities; it is used only by Metropolitan to bring water into Southern California, and does not serve any type of retail load. Metropolitan is a public water supply agency and not an electric utility. It does not provide electrical service to any load other than its CRA pumping plants. Metropolitan is unique in all of these aspects, and not comparable to utilities in the electric sector. As such, we do not believe Metropolitan should be included in a Cap and Trade program structured for the electric and industrial sectors.

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#### Comments on ARB's FED Supplement

Metropolitan has carefully reviewed the five alternatives and environmental analyses that ARB has prepared, as a supplement to the Functional Equivalent Document prepared by the ARB in 2008. Metropolitan has concerns about and therefore opposes ARB's environmental analysis contained in the FED Supplement based upon the identified deficiencies in this letter. Metropolitan's specific comments on ARB's failure to comply with and satisfy the requirements of ARB's certified regulatory program, 17 California Code of Regulations (CCR) Sections 60000 et seq., the California Environmental Quality Act (CEQA), Public Resource Code (PRC) Sections 21000 et seq. and the Guidelines for Implementation of the California Environmental Quality Act at 14 CCR Sections 15000 et seq. are contained in the attached table.

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Metropolitan has also reviewed the descriptions and discussions of the alternatives, and the assumptions used under the various options, with focus on the discussions that relate to water supply. Metropolitan favors the hybrid alternative, Alternative 5, "Adopt a Variation of the Combined Strategies and Measures," which includes a combination of command and control regulations and a Cap and Trade Program. However, Metropolitan does not support the inclusion of the public water sector in a Cap and Trade Program that is designed and tailored for the electric and industrial sectors. In its December 2008 Scoping Plan, ARB discussed several specific water sector measures which include the following:

- (W-1) Water Use Efficiency
- (W-2) Water Recycling
- (W-3) Water System Energy Efficiency
- (W-4) Reuse Urban Runoff
- (W-5) Increase Renewable Energy Production

According to the FED Supplement, implementation of the above measures would result in an estimated reduction of 4.8 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e) by 2020 (page 10 Table 1.2-1 of FED Supplement). Metropolitan and its member agencies are



Mr. James Goldstene, Executive Officer  
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implementing water supply projects that provide for water supply reliability with co-benefits of also reducing greenhouse gas (GHG) emissions. Metropolitan and other public water agencies prepare long-range integrated water resource plans that include projects supporting several of the above-listed water sector measures. We believe it is more appropriate to capture water sector emissions in specific requirements or regulations directly applicable to the water industry's unique interests and operations, rather than include the water sector as part of the Cap and Trade Program while denying the water sector free allowances.

The FED Supplement needs to include an assessment under Alternative 5 of the implementation of water-sector specific measures, which will likely result in improved environmental and economic benefits. Section 6 of Appendix C of the December 2008 Scoping Plan includes a plan for implementation of the water-sector measures, with recommended actions and estimated projections of the associated potential GHG emission reductions in 2020. However, the current status of these water measures and the implementation plan is not clear in the FED Supplement. In lieu of capturing the water sector in the proposed Cap and Trade Program, Metropolitan requests that ARB, the State Water Resources Control Board and the Department of Water Resources partner to develop a separate program that is appropriate for the water sector.

90-2  
Cont'd

### **Recommendations and Requests**

Because of the deficiencies identified in this comment letter and the attached list, the FED Supplement undermines the purposes of CEQA by omitting material necessary for informed decision-making and informed public participation (PRC Section 21005). Metropolitan requests the provision of the additional information identified throughout our comments, in order to understand the changes to ARB's 2008 Scoping Plan and to complete a review of the alternatives presented in the FED Supplement.

90-3

As provided in ARB's certified regulatory program, 17 CCR Section 60005, where "... the action contemplated may have a significant effect on the environment, a staff report, together with the proposed ... plan shall be prepared and published by the staff of the state board." Metropolitan requests a copy of ARB's final staff report for the AB 32 Scoping Plan, which we assume will incorporate the additional information analyzed in the FED Supplement, responses to comments, and any additional CEQA analysis that results.

Mr. James Goldstene, Executive Officer  
Ms. Mary Nichols, Chair  
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If you have any questions on our comments, please contact Carissa Dunn in our Legal Department at (213) 217-5652 or via e-mail at [cdunn@mw20.com](mailto:cdunn@mw20.com), or Janet Bell in our Environmental, Health & Safety Section at (213) 217-5516 or via e-mail at [jbelle@mw20.com](mailto:jbelle@mw20.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Kightlinger". The signature is stylized with a large initial "J" and a cursive "Kightlinger".

Jeffrey Kightlinger  
General Manager

Attachment

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

## 2.0 Responses to Comments

### Specific Comments on the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED Supplement) By The Metropolitan Water District of Southern California (7/28/2011)

Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
California Air Resources Board (ARB) certified regulatory program	1	1	1	<p><b>Sentence:</b> "...prepared in accordance...and the...ARB... certified regulatory program (title 17, California Code of Regulations (CCR) Sections 60006-60008)."</p> <p><b>Comment:</b> Incomplete reference to ARBs certified regulatory program. Section 60005 is cited and included in related program documents. (See page 25 of ARB's October 28, 2010 Functional Equivalent Document (FED) for the California Cap on Greenhouse Gas (GHG) Emissions and Market-Based Compliance Mechanisms).</p>	<ul style="list-style-type: none"> <li>Assurance that with the inclusion of missing CCR sections, ARB is fully complying with all aspects of its certified regulatory program under the California Environmental Quality Act (CEQA).</li> </ul>	17 CCR Sections 60005-60008
GHG reduction measures	1	1	5 <sup>th</sup> (last)	<p><b>Sentence:</b> "It is not required that a particular [GHG reduction] measure be encompassed in a scoping plan in order for ARB to pursue such a measure as a proposed regulation."</p> <p><b>Question:</b> Will ARB be presenting such measures, as currently known, in the Proposed Scoping Plan or in Alternatives 3 and/or 5? Or will such measures be analyzed in separate CEQA documents by ARB?</p> <p><b>Comment:</b> ARB should acknowledge that measures known at the time the FED Supplement was developed were evaluated and that future measures will undergo project level review.</p>	<ul style="list-style-type: none"> <li>Lack of certainty whether public will have the opportunity to comment on other GHG measures, either at this time or through future CEQA analyses.</li> <li>Potential piecemealing of the analyses.</li> <li>Uncertainty on level of significance from cumulative impacts.</li> </ul>	PRC Section 21003.1

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Proposed Scoping Plan	2	3	5,6	<b>Sentences:</b> "First, this Supplement relies on emissions projections updated in light of current economic forecasts (i.e., accounting for the economic downturn since 2008). In addition, the Proposed Scoping Plan excludes one measure identified in the 2008 Scoping Plan that has been adopted as of publication of this Supplement, and one measure no longer under consideration by ARB."	<ul style="list-style-type: none"> <li>Lack of a clear and finite project description for the Proposed Scoping Plan upon which to build CEQA alternatives.</li> </ul>	PRC Sections 21001.1 and 21002
	6	1 (under Proposed Scoping Plan Description)	1	<b>Sentence:</b> "The Proposed Scoping Plan referenced in this Supplement is substantially the same Scoping Plan considered by the Board in 2008, and therefore, contains the same objectives and framework of measures for GHG reduction described in the 2008 Scoping Plan (ARB 2009)."	<ul style="list-style-type: none"> <li>No specific details on how forecasting was done for the revised 2020 baseline. (business as usual) or reductions from other measures.</li> </ul>	14 CCR Section 15126.2
	11	2	All sentences	<b>Sentence:</b> "While ARB has compiled..., many of these strategies have either been implemented and are ongoing or have authority under other statutes and will proceed regardless of the outcome of the reconsideration of the Proposed Scoping Plan...One measure...Refrigerant Management Program...[is already in effect]...and therefore this measure will proceed because it is already codified." A fee was proposed, "...[but due to several factors] will no longer be pursued as part of the Proposed Scoping Plan."	<ul style="list-style-type: none"> <li>Ambiguity on what the ARB decision making body will act on with regards to AB 32 planning efforts.</li> </ul>	
	12	2	1	<b>Sentence:</b> "The shortfall of the AB 32 target is the allocation of GHG reduction that has been estimated to be gained from a Cap-and-Trade Program (18 MMTCO <sub>2</sub> E) and an advanced clean car program (4 MMTCO <sub>2</sub> E) that are included as measures to be pursued as part of the Proposed Scoping Plan."	<ul style="list-style-type: none"> <li>Lack of fairness, equity, transparency, and consistency in not following an established ARB protocol for public discussion on the revisions to the 2008 plan prior to the release of the FED Supplement.</li> </ul>	
	12	3	3,4	<b>Sentences:</b> "ARB recognizes that due to several factors...actual reductions from individual measures aimed at achieving the 2020 target may be higher or lower than current estimates. The inclusion of many of these emissions within the Cap-and-Trade Program, along with a margin of safety in the uncapped sectors, would help ensure that the 2020 target is met."	<ul style="list-style-type: none"> <li>No effort to examine specific impacts (direct and indirect, short-term and long-term) on the revisions to the original 2008 scoping plan.</li> </ul>	
	15	2	All	<b>Sentences:</b> "At a public meeting, the Board will make a new decision whether to adopt the Proposed Scoping Plan or an alternative, based on the information contained in the FED, the Supplement, public comments, and responses to comments."		

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Proposed Scoping Plan (continued)				<p><b>Comment:</b> The description of the Proposed Scoping Plan appears to be scattered amongst several documents, conflicting at times, i.e., ARB states that this reconsidered plan is essentially the same as the 2008, yet there are substantial differences, such as updated emission projections and exclusion of previously analyzed emission reduction measures, some of which have already been adopted.</p> <p><b>Question:</b> Where is the information on how the revised 2020 baseline was developed? What is planned for those industries/agencies in the uncapped sectors within the context of this plan?</p>		
Board action by ARB	1	4	1	<p><b>Sentence:</b> "...to facilitate the Board's reconsideration of its previous decision, based on an expanded environmental analysis of the project alternatives."</p> <p><b>Question:</b> What about the revisions to the 2008 plan, now referred to as the Proposed Scoping Plan? Doesn't the FED Supplement contain an environmental analysis on the revisions to the plan as well?</p>	Without addressing the amendments or revisions to the 2008 plan, the FED Supplement will not fully support the decision-making action by ARB, along with a lack of full disclosure to the public.	PRC Sections 21001.1 and 21002
Bias	2  14	2  5	1-4  All	<p><b>Overall Comment:</b> The text in the paragraphs appears to bias the analysis in the FED Supplement, i.e., the court is wrong about ARB's original analysis but ARB will go along with this in the interest in public participation and informed decision-making.</p>	The spirit and intent of CEQA are compromised by ARB's statement. It is the responsibility of the lead agency to carry out an independent, objective, and factual analysis. Anything less, renders the documentation useless for both the public and the decision makers.	PRC Section 21002.1(e)

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Developing feasible alternatives	2	4	2	<p><b>Sentence:</b> "Each of the action alternatives is a feasible alternative to the proposed project that could potentially attain most of the project's basic objectives..."</p> <p><b>Comment:</b> In addition to attaining most of the project's objectives, CEQA requires that feasible alternatives avoid or substantially reduce any significant impacts identified with the plan's implementation. Did the development of these alternatives occur with the intent to reduce one or more of the significant impacts associated with the Proposed Scoping Plan? It appears that the alternatives were not based upon mitigating the proposed projects impacts but rather upon attaining project objectives, in violation of State CEQA Guidelines Section 15126.6(b), 17 CCR Section 60005(b), 14 CCR Section 15252(a)(2)(A) and 14 CCR Section 15126.6(a) and (b).</p>	The CEQA certified regulatory program for the ARB clearly states: "The analysis shall address feasible mitigation measures and feasible alternatives to the proposed action which would substantially reduce any significant adverse impact identified."	17 CCR Section 60005(b), 14 CCR Section 15252(a)(2)(A) 14 CCR Section 15126.6(a) and (b)
Programmatic approach	2	4	3-5	<p><b>Comment:</b> The ARB refers to Section 15168(b)(4) in the 14 CCR (State CEQA Guidelines) stating that the FED Supplement's primary goal is to take a programmatic approach to consider broad policies related to AB 32. However, ARB appears to be very selective in applying this particular State CEQA Guidelines section in the context of its evaluation, by not conducting an exhaustive analysis of the alternatives pursuant to part (b)(1) of the same section.</p>	The FED Supplement does not comply with Section 15168(b)(1) in the State CEQA Guidelines: "Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action."	14 CCR Section 15168(b)(1)
Developing Proposed Scoping Plan	3	3	3rd bullet, paragraph starting with "Develop a "Scoping Plan..."	<p><b>Question:</b> It is acknowledged that a plan by its very nature is to be a "living document" that will change over time. But this particular text in the FED Supplement is confusing: "Adoption of a Scoping Plan does not, however, mean that ARB is giving final approval to every strategy contained in the Plan. A substantial number of the strategies contained in an approved Scoping Plan will require their own regulatory processes, at the end of which ARB may choose a course that is different from that set in a Scoping Plan. Furthermore, adoption of a Scoping Plan is not a condition precedent for the adoption of greenhouse gas reduction measures ARB may pursue under other provisions of AB 32." Please clarify the components of the Proposed Scoping Plan that are part of the plan to be acted upon by the decision-making body in the near future.</p>	<ul style="list-style-type: none"> <li>• Lack of clarity on plan description.</li> <li>• Confusion in text as to what focus the public and decision makers should take in understanding the plan.</li> <li>• Potential piecemealing.</li> </ul>	PRC Section 21002.1(e)

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Comparison between the Proposed Scoping Plan and alternatives	7	1	1	<p><b>Sentence:</b> "Because discussions of the alternatives sometimes use the Proposed Scoping Plan as a point of comparison, it is helpful to summarize the key strategies in the Proposed Scoping Plan as a foundation of the alternatives analysis."</p> <p><b>Question:</b> Is the ARB not following its own certified regulatory program requirement? The proposed scoping plan should be the point of comparison with all of the alternatives with regards to the plan's significant adverse impacts and those of the alternatives' effects that might be less adverse.</p>	The CEQA certified regulatory program for the ARB clearly states: "The analysis shall address feasible mitigation measures and feasible alternatives to the proposed action which would substantially reduce any significant adverse impact identified."	17 CCR Section 60005(b), 14 CCR Section 15252(a)(2)(A)
Updated BAU emissions projections	10	Below Table 1.2-1	All	<p><b>Question:</b> Is the ARB going to release the technical analysis that was conducted to develop these projections, including the assumptions? What specific growth factors were used?</p>	Lack of full public disclosure; inability to verify the validity of these calculations and assumptions.	PRC Section 21003.1(b)
Data gathering in the development of the alternatives	16	1	All	<p><b>Paragraph:</b> This paragraph details how ARB met with a variety of governmental entities in the development of components on emissions trading programs.</p> <p><b>Questions:</b> Who were the other representatives contacted and were other programs examined on other methods to reduce GHG emissions? Was an emphasis made in judging the alternatives primarily with emissions trading programs? While the following paragraph in the FED Supplement indicates that sources/methods other than trading emissions were examined, the specifics aren't there and Section 3 (References Cited) is heavily weighed on emissions trading.</p>	<ul style="list-style-type: none"> <li>Developing alternatives around particular methods rather than developing alternatives to reduce one or more of the Plan's significant impacts.</li> <li>Not consistent with alternative methodology approach discussed on page 14, notwithstanding with ARB's CEQA certified regulatory program.</li> </ul>	14 CCR 15126.6

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Incorporation by reference	16	2	2	<b>Sentence:</b> "Documents incorporated by reference are listed in Section 3.0." <b>Question:</b> Are the references cited in Section 3 truly for incorporation by reference as defined in 14 CCR Section 15150? Or are they just references cited?	If the FED Supplement is incorporating by reference all the documents in Section 3, then CEQA requires that such documentation be made available to the public. There is no mention of the incorporated by referenced documentation in the Notice of Availability for the FED Supplement or on ARB's website.	14 CCR Section 15150 PRC Section 21003
Analysis of alternatives	17	4	All	<b>Question:</b> This paragraph is very confusing. The first part of the paragraph indicates that the analysis will examine a range of alternatives to evaluate "whether reasonable alternatives to the Proposed Scoping Plan" will reduce or eliminate the project's significant effects while meeting most of the project objectives. Since the Proposed Scoping Plan is not yet available (See ARB's definition on page 1 of the FED Supplement indicating that the Proposed Scoping Plan will be brought back to the Board at some future date) it is difficult to understand alternatives to that yet disclosed Proposed Scoping Plan that would reduce or eliminate the plan's significant effects. Also, ARB's analysis description suggests that a study is first being conducted to determine if a range of feasible alternatives exists rather than just proceeding with the actual analysis. It does not pertain explicitly to the five alternatives. The next part of the paragraph indicates that the second part of the FED Supplement's analysis of each of the five alternative's feasibility and their ability to reduce impacts shall be conducted as identified in the FED's analysis of the Proposed Scoping Plan. Again, it is confusing as to which Plan is being referred to, as the Proposed Scoping Plan is "the plan being brought back to the Board for reconsideration along with this Supplement," and therefore a document that has yet to be developed, based upon ARB's response to comments as part of the required review of the Supplement to the AB 32 FED. The FED's analysis is solely on the existing 2008 Plan. Also, CEQA or the ARB's CEQA certified regulatory program does not call for a comparative analysis of the feasibility of the alternatives	<ul style="list-style-type: none"> <li>Lack of clarity in setting up the analysis, by placing undue emphasis on feasibility.</li> <li>Not following typical CEQA alternative analysis methodology.</li> </ul>	17 CCR Sections 60005(b) and 60006 PRC Section 15126.6



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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Analysis of alternatives (continued)				themselves ...only that they are feasible. The analysis should compare the alternatives to the Proposed Scoping Plan to determine if one or more of the alternatives reduces the significant impacts of the Proposed Scoping Plan, while meeting most of the plan's objectives.		
Assumptions for Alternative 1: No-Project Alternative	17-18	Bottom of page 17/top of page 18	All	<b>Comment:</b> The FED Supplement indicates that, contrary to the current litigation, the ARB believes that the proposed cap-and-trade regulation and other emission reduction measures are independently authorized by the HSC Section 38562. If that is truly the case, why wasn't a second No-Project Alternative developed that included these measures? While such analysis is unusual, it is not prohibited by CEQA nor the ARB's CEQA certified regulatory program and would provide additional relevant information to the public and decision makers.	The lead agency is not fully disclosing potential impacts of a version of the No-Project alternative that includes GHG reduction measures the agency believes would be implemented even if the Proposed Scoping Plan was not adopted.	4 CCR Section 15126.6(e)(3)
Alternative 5: Adopt a variation of the proposed strategies or measures	19	Top bullet item	1	<b>Comment:</b> This characterization of the alternative is too vague..either a subset or a different combination of measures from Alternatives 2, 3, and 4. Is this alternative being developed to spread the regulatory requirements and lessen the economic impacts to the various sectors affected or has it been developed as a fifth alternative that reduces one or more of the Proposed Scoping Plan's significant impacts?	Is this a valid CEQA alternative for analysis?	14 CCR Sections 21001(f) & 21001(g)
Attributes of Alternative 1: Baseline condition	20	4 (last paragraph)	3	<b>Sentence:</b> "ARB staff derived the updated emissions estimates by projecting emissions from a past baseline estimate using three-year average emissions, by sector, for 2002 to 2004 and considering the influence of the recent recession and measures that are already in place." <b>Question:</b> Given the baseline was an average for the No-Project alternative, will a different baseline be used for the Proposed Scoping Plan? According to page 10 in the FED Supplement, the baseline for the Proposed Scoping Plan will be updated using a past baseline average by sector for 2006-2008. How can a straight forward comparison regarding impacts between the Proposed Scoping Plan and the No-Project alternative be made?	<ul style="list-style-type: none"> <li>Relying on different baselines between Alternative 1 and the Proposed Scoping Plan is not a proper comparison; it does not provide an accurate presentation of the severity of the impacts between the plan and the no-project scenario.</li> <li>The standard CEQA use of baseline conditions should be employed (i.e., existing conditions when CEQA document is published or when analysis is commenced).</li> </ul>	14 CCR Section 15125

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Attributes of Alternative 1: BAU Conditions	23-31			<p><b>Comments:</b> The discussion of existing conditions/future foreseeable outcomes are either incomplete or reflect a skewed perspective. For example, while ARB cites issues of water/energy challenges facing the state and indicates that the measures in DWR's California Water Plan Update must be implemented to avoid additional water shortages, the FED Supplement does not cite or consider other applicable statewide and regional water resource plans that would also characterize the environmental setting. Additionally, other assumptions seem to lack balance. The Supplement forecasts the trend for larger houses and more electronics; however, historic housing trends may not be relevant here given California's continuing high unemployment, housing foreclosures, and difficulties in securing bank loans. For Port-related matters, in Southern California, both the Port of Los Angeles and the Port of Long Beach are committed to reducing air impacts. According to a recent News release by the Port of Los Angeles (May 5, 2011): "Latest air monitoring data shows concentrations of diesel particulate matter (DPM) down by 50 percent in Wilmington and 40 percent in San Pedro compared to 2006." The Port of Los Angeles has an adopted Clean Air Action Plan that includes a wide variety of measures and incentives to aid in achieving clean air goals at the port.</p>	Conditions described for Alternative 1 are not balanced in terms of achievements attained by local government entities as well as the unique circumstances in California in 2011, including an over abundance of water supplies, high unemployment, etc. This lack of an objective presentation tends to overstate adverse conditions under the No Project alternative.	14 CCR Section 15126.6

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Alternative 1: Impact Discussion	32-37			<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>This section would do well to have a matrix comparing the Proposed Scoping Plan with Alternative 1.</li> <li>There is no reason why impacts from the "Scoping Plan" (again, we're not sure whether the reference to "Scoping Plan" in this section is the 2008 Scoping Plan or the Proposed Scoping Plan) that are less than significant be compared with the No-Project alternative. The analysis needs to focus on significant impacts.</li> <li>It appears that the No-Project alternative reduces the Plan's significant impacts in eight out of nine environmental categories: agriculture, air quality, biological resources, cultural resources, geology, hydrology/water, land use, noise, and traffic. As certain early action GHG reduction measures are expected to continue with the No-Project alternative, why are all of the objectives for the No-Project alternative listed as no or low likelihood to achieve one or more of the 20 objectives in Table 2.8-1? Even though ARB cannot adopt the No-Project alternative due to AB 32 requirements, it appears that the analysis is too simplistic and limited.</li> <li>Forestry Resources impacts are included in each of the Environmental Impacts sections for each of the analyzed alternatives in the FED Supplement. As such, the CEQA environmental checklist in the final FED and/or FED Supplement should be appropriately updated by adding Forestry Resources and including items II(c),(d) and (e) from the 2011 CEQA environmental checklist.</li> </ul>	<ul style="list-style-type: none"> <li>Confusing analysis that does not support a balanced and objective comparison between the Proposed Scoping Plan and Alternative 1.</li> <li>The analysis does not consider achievements by local government agencies throughout the state to improve local air quality issues, plan for water reliability and source protection, and implement renewal energy strategies.</li> </ul>	14 CCR Section 15126.6

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Alternative 2: Impact Discussion	51-60			<p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>What is the baseline condition for Alternative 2? Is it based on criteria established for the baseline of the 2008 Scoping Plan, Proposed Scoping Plan or for the No-Project alternative?</li> <li>Why so much emphasis on the background information on cap-and-trade to the detriment of the overall analysis? This emphasis suggests that the FED Supplement is skewed in favor of a cap-and-trade approach, rather than examining all alternatives objectively.</li> <li>The analysis is strictly on impacts generated by Alternative 2. Where is the comparative impact analysis between Alternative 2 and the Proposed Scoping Plan?</li> </ul>	<ul style="list-style-type: none"> <li>Not a valid alternatives' analysis because the analysis does not indicate if this Alternative reduces the significant impacts of the project (Proposed Scoping Plan).</li> <li>Unclear as to what the baseline is for Alternative 2.</li> </ul>	<p>14 CCR Section 15126.6, 14 CCR Section 15125, and 17 CCR Section 60005(b)</p>
Alternative 3: Impact Discussion	72-83			<p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>What is the baseline condition for Alternative 3? Is it based on criteria established for the baseline of the 2008 Scoping Plan, Proposed Scoping Plan or for the No-Project alternative?</li> <li>The analysis is strictly on impacts generated by Alternative 3. Where is the comparative impact analysis between Alternative 3 and the Proposed Scoping Plan?</li> </ul>	<ul style="list-style-type: none"> <li>Not a valid alternatives' analysis because the analysis does not indicate if this Alternative reduces the significant impacts of the project (Proposed Scoping Plan).</li> <li>Unclear as to what the baseline is for Alternative 3.</li> </ul>	<p>14 CCR Section 15126.6, 14 CCR Section 15125, and 17 CCR Section 60005(b)</p>
Alternative 4: Impact Discussion	94-102			<p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>What is the baseline condition for Alternative 4? Is it based on criteria established for the baseline of the 2008 Scoping Plan, Proposed Scoping Plan or for the No-Project alternative?</li> <li>The analysis is strictly on impacts generated by Alternative 4. Where is the comparative impact analysis between Alternative 4 and the Proposed Scoping Plan?</li> </ul>	<ul style="list-style-type: none"> <li>Not a valid alternatives' analysis because the analysis does not indicate if this Alternative reduces the significant impacts of the project (Proposed Scoping Plan).</li> <li>Unclear as to what the baseline is for Alternative 4.</li> </ul>	<p>14 CCR Section 15126.6, 14 CCR Section 15125, and 17 CCR Section 60005(b)</p>

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Issue	Page Number	Paragraph Number	Sentence Number in Paragraph	Comments/Questions	CEQA Ramifications	Notes
Alternative 5: Impact Discussion	106-109			<p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>What is the baseline condition for Alternative 5? Is it based on criteria established for the baseline of the 2008 Scoping Plan, Proposed Scoping Plan or for the No-Project alternative?</li> <li>The analysis is strictly on impacts generated by Alternative 5. Where is the comparative impact analysis between Alternative 5 and the Proposed Scoping Plan?</li> </ul>	<ul style="list-style-type: none"> <li>Not a valid alternatives' analysis because the analysis does not indicate if this Alternative reduces the significant impacts of the project (Proposed Scoping Plan).</li> <li>Unclear as to what the baseline is for Alternative 5.</li> </ul>	<p>14 CCR Section 15126.6, 14 CCR Section 15125, and 17 CCR Section 60005(b)</p>
Comparison of Alternatives	109	3	1	<p><b>Sentence:</b> "With the exception of Alternative 1, No-Project, all of the project alternatives are designed to cover...[the plan's overall target reduction for AB 32-GHG emissions]."</p> <p><b>Comment:</b> Should provide a second No-Project alternative that includes GHG measures that will be adopted regardless of the AB 32 Scoping Plan.</p>	Lead agency is not providing an analysis, despite litigation, that it feels is warranted under separate requirements of the Health and Safety Code.	<p>14 CCR Section 15126.6, 17 CCR Section 60005(b)</p>
Comparison of Alternatives	110	1	3	<p><b>Sentence:</b> "Therefore, Alternative 1 would incur the majority of the environmental impacts of the Proposed Scoping Plan, but would not achieve the GHG reduction benefit needed to comply with AB 32."</p> <p><b>Comment:</b> This conclusion conflicts with the previous analysis in pages 32-37 that indicated that the No-Project alternative would avoid at least eight of the nine significant environmental impacts due to the Proposed Scoping Plan.</p>	Confused and contradictory conclusion that is not supported in the FED Supplement.	<p>14 CCR Section 15126.6, 17 CCR Section 60005(b)</p>
Comparison of Alternatives	110-111			<p><b>Comment:</b> The remaining discussion on the various alternatives to the Proposed Scoping Plan are vague and do not clearly delineate those significant impacts related to the Plan where one or more of the alternatives could further reduce to less than significant.</p>	Comparison is focused more on objectives and less on reducing environmentally significant impacts by the Proposed Scoping Plan.	<p>14 CCR Section 15126.6, 17 CCR Section 60005(b)</p>

## **L90 Response**

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90-1        The commenter provides background information about the Metropolitan Water District (Metropolitan) and concludes by expressing the opinion that Metropolitan should not be included as a covered entity in the proposed Cap-and-Trade Regulation. Comment is noted; however, it does not raise significant environmental issues associated with the proposed action or apply to the adequacy of the alternatives analysis in the Supplement and, therefore, requires no additional response.

90-2        The commenter expresses general opposition to the environmental analysis in the Supplement and refers the reader to a following table (which is contained in comment 90-4) for specific points. Because the specific concerns are raised below, no additional response is provided here.

The commenter also notes that Metropolitan and other water districts have implemented and/or are planning to implement several specific water sector measures noted in the 2008 Scoping Plan that result in GHG emission reductions. Therefore, the commenter feels that Metropolitan should be included in a water sector subject to direct regulation, rather than in the proposed Cap-and-Trade Regulation. Comment is noted; however, it does not raise significant environmental issues associated with the proposed action or apply to the adequacy of the alternatives analysis in the Supplement and, therefore, requires no additional response.

Finally, the commenter requests the addition of an assessment of a modified set of water sector-specific regulations as part of Alternative 5, expressing the belief that there would be economic and environmental benefits. Metropolitan requests that ARB, State Water Resources Control Board, and Department of Water Resources partner to develop a separate program of direct regulations for the water sector. The Supplement includes alternatives that emphasize a cap-and-trade component (Alternative 2), a source-specific, direct-regulation approach (Alternative 3), and a variation including a combination of those and other approaches (Alternative 5); therefore, the range of reasonable alternatives already presented in the Supplement covers the strategy requested by the commenter. Table 2.8-1 in the Supplement acknowledges that environmental benefits could occur with Alternative 3, direct regulation approach, as well as Alternative 2 with its cap-and-trade focus (to somewhat varying degrees in some cases). Recognizing that the strategy suggested by the commenter is captured in the range of alternatives in the Supplement, evaluation of a variation of Alternative 5 is not necessary.

90-3 This commenter requests specific additional information to be included in the Staff Report in response to points raised in the remainder of the letter. Please see Response 90-4 for more specific responses to the requested information. The Supplement is the Staff Report prepared for this action. The draft of the Supplement was made publicly available on June 13, 2011. The Staff Report is being modified with written response to comments received during the public review period of the Supplement. The responses to comments provide additional information for ARB to use in its decision-making.

The prior documents prepared for the 2008 Scoping Plan are available on ARB's website: <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Under CEQA-equivalent programs certified in accordance with PRC section 21080.5, the written documentation containing environmental information prepared in accordance with the agency's regulations is accepted as a substitute for formal EIRs or negative declarations required by CEQA. ARB's regulations that specify the requirements of the environmental analysis refer to the "staff report" that shall be prepared with certain required information (CCR section 60005). For regulatory actions the "staff report" is the Initial Statement of Reasons (ISOR) prepared in accordance with the Administrative Procedure Act. The required environmental analysis is included in the ISOR either as a chapter or a separate appendix (sometimes called a Functional Equivalent Document, or FED). For the 2008 Scoping Plan, the environmental analysis was included as the appendices to the Scoping Plan (Volume III) and called the FED. Together those documents comprised the written documentation referred to as the "staff report." The Supplement distributed for review on June 13, 2011 provides a revision to a portion of that 2008 FED, i.e., a revised and expanded environmental analysis of the alternatives. The responses to comments contained herein provide additional information as part of the Supplement. In essence the Supplement, including these responses to comments, is a revised portion of the 2008 "staff report" called the 2008 FED. No additional report is required.

90-4 The commenter provides a table of specific issues and comments as part of its letter. Responses to specific comments are provided below in the order they appear in the cells of the table. The subtitle phrase provided below after the response number will aid the reader in relating the specific responses to cells in the commenter's table.

1. ARB certified regulatory program – The commenter requests correction of the reference to regulations to include CCR section

60005. This correction is acknowledged. The Supplement was prepared in compliance with all the applicable regulations for ARB's certified regulatory program. The correct citation is presented elsewhere in the Supplement (see page 13). The sentence should refer to CCR sections 60005 – 60008. This correction will be included in the final document.

2. GHG reduction measures - The commenter requests clarification of how GHG reduction measures not included in the Proposed Scoping Plan would be subject to environmental review. The Proposed Scoping Plan recommends that ARB pursue various emission reduction measures. Measures anticipated in the 2008 Scoping Plan are listed in the Supplement at Table 1.2-1. Measures that have been approved, are ongoing, or have authority outside AB 32 are listed in the Supplement in Table 2.3-1. Each recommended regulatory measure can be adopted only through a separate, independent rulemaking that includes a more detailed environmental analysis and opportunity for public comment. Therefore, CEQA compliance is accomplished for all regulatory actions, as required by ARB's certified regulatory program.
3. Proposed Scoping Plan – The commenter questions the development of the baseline emission projections in the Supplement. The Proposed Scoping Plan is explained in the Supplement on pages 6 – 12. The development of the baseline for the 2008 Scoping Plan is included in Appendix I in the 2008 Scoping Plan document. The updated information was explained in the Supplement, as the commenter notes, to reflect updated conditions, recognizing the economic downturn. Further, ARB released the Status of Scoping Plan Recommended Measures on Scoping Plan website <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Please refer to responses to comment letter submitted by Edward Casey, Alston and Bird, LLP for more information about the baseline. The commenter is referred to comment response 90-4 #8 as well.
4. Board action by ARB – The commenter inquires about environmental analysis of revisions to the 2008 Scoping Plan. There have been no revisions to the Proposed Scoping Plan that require changes to the environmental analysis provided in the 2008 FED. The Proposed Scoping Plan consists of the same framework and range of GHG reduction measures to meet the same objectives. The court did not find the environmental impact analysis of the 2008 Scoping Plan to be inadequate *in Association of Irrigated Residents, et al. v. California Air Resources Board, et al.*



See the Supplement at pages 6-12 for further description of the project.

5. Bias – The commenter expresses an opinion about ARB’s response to the court decision. The commenter’s opinion is noted.
6. Developing feasible alternatives – The commenter inquires about whether the alternatives were developed to reduce environmental impacts. The Supplement provides an expanded description and analysis of the five alternatives originally presented in the 2008 FED when the 2008 Scoping Plan was first proposed. In accordance with the substantive requirements of CEQA, these alternatives represent a “reasonable range” of alternatives that could potentially attain most of the basic project objectives while having the potential to reduce or eliminate significant environmental effects. A range of alternatives analyzed in an environmental document is governed by the “rule of reason,” requiring evaluation of those alternatives “necessary to permit a reasoned choice.” (CEQA Guidelines, CCR section 15126[f]). The initial screening of potential alternatives had to at least potentially meet most the basic objectives and alternatives were included only after consideration of their potential feasibility based on technical, legal and regulatory grounds. The analysis of the alternatives in the Supplement was developed with the intent to test whether the alternatives would reduce environmental impacts. The analysis shows that some alternatives do have the potential to reduce or eliminate some environmental impacts associated with the Proposed Scoping Plan. Please see the comparison of the environmental tradeoff for each alternative in Section 2.8 of the Supplement.
7. Programmatic approach – The commenter expresses the opinion that the FED and supplement do not provide a sufficiently exhaustive analysis to comply with CEQA requirements for a program EIR. The commenter references the State CEQA Guidelines Section 15168(b)(1), which states that an advantage of a program document is to “provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual document.” ARB disagrees with the commenter. The Supplement provides over 112 pages of analysis and discussion of five alternatives, which is a very extensive analysis.
8. Developing Proposed Scoping Plan – The commenter questions what is being acted upon by the Board at this time and how does that relate to the adoption of specific proposed strategies. As noted

in Section 1.1 and based on the expanded analysis of project alternatives in Section 2 of this Supplement, the Board will reconsider its approval of the Proposed Scoping Plan. As stated in the Supplement, the Proposed Scoping Plan recommends a policy direction and measures, but ARB is not necessarily bound by those recommendations. As each measure is developed by ARB in its own regulatory process, more detailed information is gathered including the ability of that measure to be feasibly implemented. For updated information on the status of measures recommended in the 2008 Scoping Plan, please see the Status of Scoping Plan Recommended Measures on Scoping Plan website <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>.

9. Comparison between the Proposed Scoping Plan and alternatives – The commenter asks if the point of comparison for the analysis of alternatives is the Proposed Scoping Plan. In comparisons of GHG reduction effectiveness and advantages or disadvantages of each alternative in the achievement of objectives, the Proposed Scoping Plan is most often used as the point of comparison. In addition, comparisons between alternatives are also discussed, such as in Section 2.8, which is the reason the word “sometimes” was included in the referenced sentence. Also, please note that the determination of significance of environmental impacts use existing conditions as the point of comparison, in compliance with the State CEQA Guidelines.
10. Updated BAU emission projections – The commenter requests information about the updated emission projections. For updated information on the status of measures recommended in the 2008 Scoping Plan and emission projections please see the Status of Scoping Plan Recommended Measures on Scoping Plan website <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Please refer to responses to comments 2 and 75 (submitted by Edward Casey, Alston and Bird, LLP).
11. Data gathering in the development of the alternatives - The commenter seeks clarification about information used to develop alternatives with emission trading components. The paragraph noted by the commenter makes a general reference to ARB’s process for developing alternatives during the preparation of the 2008 Scoping Plan. The alternatives discussed in the Supplement are the same as those presented in the 2008 Scoping Plan with updated information where relevant. The consultation process was extensive and involved investigations of both emission trading programs and other approaches. The subsections in the

Supplement discussing “Precedents or Examples of the Approach” for each of the action alternatives provide information about the representative existing or past examples of the focus of each alternative. Please see pages 38 – 45 (Alternative 2), 61 – 62 (Alternative 3), 84 – 86 (Alternative 4), and 102 – 104 (Alternative 5) of the Supplement.

12. Incorporation by reference - The commenter asks if the documents cited in Section 3 are incorporated by reference according to State CEQA Guidelines, CCR section 15150. The documents listed in section 3.0 either are included as a reference cited for information that directly supports the analysis or serve as general background information. All of the cited references are available from ARB in electronic file format upon request. In some cases, specific pages are cited, where needed. “Incorporated by reference” on page 16 of the Supplement is intended to reflect the term’s plain meaning, rather than the formal regulatory definition and treatment of State CEQA Guidelines, CCR section 15150.
13. Analysis of alternatives – The commenter requests clarification about the Supplement’s approach to alternatives analysis and assessment of the feasibility of the alternatives. An evaluation of alternatives in a CEQA document necessarily contains an assessment of whether the considered alternatives would be feasible. The paragraph cited in the comment seeks to explain the importance of considering alternative feasibility and assessing a reasonable range of alternatives. Both the State CEQA Guidelines (CCR section 15126.6) and ARB’s certified regulatory program (CCR sections 60005[b] and 60006) require consideration of whether feasible alternatives are available to reduce significant impacts. In ARB’s regulations “feasible” has the definition: “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors, and consistent with the state board’s legislatively mandated responsibilities and duties” (CCR section 60006).
14. Assumption for Alternative 1: No Project Alternative – The commenter suggests analysis of a second No-Project Alternative with measures authorized by HSC section 38562. The No-Project Alternative in the Supplement includes only those GHG reduction strategies that are already underway and reducing emissions at this time, or would be reasonably expected to continue because they are approved as part of AB 32 implementation or authorized by other statutes, as explained on page 20 of the Supplement. The

No-Project Alternative components authorized under other statutes are not subject to additional future rulemaking to be implemented. By contrast, the proposed Cap-and-Trade Regulation and other ARB reduction measures have not gone through final rulemaking action to be adopted. Even though authorized separately under HSC 38562, they were not considered in the No-Project Alternative because, until final action on those measures, they could not be reasonably expected to be implemented. Without a reasonable expectation of implementation, there would be no useful purpose to make that assumption under a second No-Project Alternative.

15. Alternative 5: Adopt a variation of the proposed strategies or measures – The commenter criticizes the description of Alternative 5. The comment references a one-sentence summary description of the alternative from a bullet list introducing the alternatives. A more detailed description of Alternative 5, including its goal, role in the range of alternatives, examples of similar approaches and description of attributes is presented pages 102 – 107 of the Supplement.
16. Attributes of Alternative 1: baseline condition – The commenter asks if ARB will update the environmental analysis of the project with the information used to develop the No-Project Alternative relative to the “baseline.” The Supplement provides an expanded analysis of the alternatives presented in the 2008 FED. There have been no revisions the Scoping Plan that require any revisions to the analysis conducted in the 2008 FED. ARB disagrees that it must reevaluate the 2008 FED analysis with the information used to develop the No-Project Alternative (updated information from the recent recession) to provide a comparative analysis of the No-Project to the project because analysis in the FED is necessarily qualitative and would not change. The term “baseline” in the cited text is not a “baseline” in CEQA terms (i.e., CCR section 15125, where the baseline is used to determine the significance of a proposed project’s environmental impacts). Rather, it is a reference to ARB’s quantitative methodologies used to project emissions based on available data.
17. Attributes of Alternative 1: BAU conditions – The commenter offers additional information regarding the Supplement’s characterization of No-Project Alternative conditions that lay the groundwork for BAU emission projections. On pages 23 – 31 of the Supplement, the narrative is intended to provide the context for existing programs to address GHG reduction, assuming there is no implementation of proposed or yet-to-be-authorized reduction

measures as part of the approval of a Scoping Plan (i.e., No-Project Alternative). This characterization addresses the conditions that lead to ARB's emission projects without the Scoping Plan. The commenter's suggestion that additional information exists about the discussed sectors is acknowledged. Economic activity, population and housing trends, water planning, and other factors affecting GHG emissions are dynamic with new information arising on a regular basis. Notwithstanding that other information exists, the summary of No-Project Alternative conditions provides substantial evidence and an adequate basis to support the emission projections.

18. Alternative 1: impact discussion – The commenter raises several points about the impact analysis of Alternative 1. The suggestion of a matrix comparison of impacts between the Proposed Scoping Plan and Alternative 1 is noted. A narrative discussion comparing the alternatives is used instead. Please refer to Section 2.8 of the Supplement, pages 109 – 112.

The comment includes an inquiry about why the No-Project Alternative is rated “L” (No or Low Likelihood of Achieving Objectives) for many of the objectives in Table 2.8-1. As explained on pages 21, 32, and 34, and Table 2.3-1 in the Supplement, the No-Project Alternative would fall approximately 22 MMTCO<sub>2</sub>E short of the AB 32 GHG reduction goal. This is the substantial evidence basis underlying the “L” ratings in related objectives in Table 2.8-1.

The comment includes a request to change the environmental checklist in the Scoping Plan FED to include the forestry resources topic in the current CEQA guidelines (Appendix G). The forestry resources topic was added with the Appendix G environmental checklist entry, agricultural resources, in March 2010 with the adoption of CEQA guidelines amendments pursuant to SB 97. Changes to the environmental checklist in the FED are not necessary, because there have been no revisions to the 2008 Scoping Plan that require changes to the environmental analysis provided in the 2008 FED and specific regulatory actions implementing the Proposed Scoping Plan must undergo their own CEQA review, where the current checklist will be used. Also, the Proposed Scoping Plan consists of the same framework and range of GHG reduction measures to meet the same objectives and the court did not find the environmental impact analysis of the 2008 Scoping Plan to be inadequate in *Association of Irrigated Residents, et al. v. California Air Resources Board, et al.* The Supplement does include discussion of forest resources impacts for each of the

alternatives. Therefore, amending the environmental checklist for the 2008 Scoping Plan FED retroactively would not be necessary for the current action.

About presentation of significant impacts, the program-level analysis contained in the 2008 FED indicates that there is the potential for adverse environmental impacts associated with the implementation of various GHG emission reduction measures recommended in the Plan in all the resource areas. It acknowledges that additional analysis concerning the potential impacts of these measures must wait for project-level review. The FED concludes that the potential impacts are speculative and it is not feasible to quantify or describe with further specificity the potential impacts of particular measures. The details of the measures are developed during the rulemaking process for each measure, a more detailed environmental analysis of each measure, including feasible mitigation and alternatives is performed in accordance with the requirements of CEQA and ARB's certified regulatory program. The Supplement provides as much detail as is reasonably feasible at for the stage of the development and approval of the Plan that does not adopt or implement any of the measures recommended in it.

19. Alternative 2: impact discussion – The commenter asks about the baseline definition for the alternatives analysis. The expanded alternatives analysis in the Supplement uses existing conditions as the baseline for determining significance of environmental impacts. This is consistent with the CEQA Guidelines in CCR section 15125. When analyzing environmental impacts of regulatory actions, the existing conditions most appropriately consist of the existing framework of regulatory programs in effect at the start of environmental review and the existing compliance actions covered entities perform in response to those regulatory programs. In the case of the Supplement, existing regulatory conditions have been updated to include GHG reduction measures that are underway. Projections of future emissions under the existing regulatory framework have also been updated, as described in pages 20 – 31 and in Table 2.3-1. These are used for the No-Project Alternative, and also serve to describe the outcome of expected GHG reductions from the existing regulatory framework.

The comment also includes an inquiry about the degree of emphasis on cap-and-trade in the impact analysis for Alternative 2 with an expressed concern that the Supplement is skewed toward a cap-and-trade program. ARB disagrees that the Supplement is

skewed toward any individual alternative. The pages referenced in the comment are from the impact analysis of Alternative 2, which by definition has a focus on a cap-and-trade program. Therefore, it is expected that a read of these pages, alone, would reflect an emphasis on cap-and-trade. Alternatives 3, 4, and 5 each have a different focus and are discussed in comparable detail. The balanced character of the alternatives analysis can be recognized when reading all of the alternative impact analysis sections, rather than a single one.

The comment includes a question about the location of a comparative analysis between this alternative and the Proposed Scoping Plan. A narrative discussion comparing the alternatives is presented in Section 2.8 of the Supplement, pages 109 – 112.

20. Alternative 3: impact discussion – For Alternative 3, the commenter asks the same questions about definition of baseline and location of a comparative analysis as is asked for Alternative 2. Please see the response to point number 19 in this response.
21. Alternative 4: impact discussion – For Alternative 4, the commenter asks the same questions about definition of baseline and location of a comparative analysis as is asked for Alternative 2. Please see the response to point number 19 in this response.
22. Alternative 5: impact discussion – For Alternative 5, the commenter asks the same questions about definition of baseline and location of a comparative analysis as is asked for Alternative 2. Please see the response to point number 19 in this response.
23. Comparison of alternatives – In the last three cells of the table of issues in comment 90-4, the commenter expresses several points about comparing the impacts of the alternatives. The comparative impact analysis of the alternatives is provided in Section 2.8 of the Supplement, pages 109 – 112. In addition, a summary comparison of the alternatives to the Proposed Scoping Plan is presented in an introductory paragraph to the environmental impact analysis of the alternatives beginning on pages 32, 51, 75, 95, and 107.

The comment includes a recommendation to add a second No-Project Alternative with other measures that would resolve the shortfall of GHG reduction (22 MMTCO<sub>2</sub>E). An alternative that closed the gap of this shortfall would require additional discretionary actions by ARB (i.e., a CEQA project of some type), so it would not constitute an appropriate no-project condition. Therefore, adding a second No-Project Alternative in the suggested

manner would not provide meaningful information or be required for CEQA compliance.

The comment includes a disagreement with a conclusion statement on page 110 of the Supplement that the No-Project Alternative would incur the majority of the environmental impacts of the Proposed Scoping Plan without achieving the AB 32 GHG reduction goal, and references pages 32 – 37. The basis for the comment's disagreement is not evident in the referenced pages. Consistent with the Supplement's conclusion statement, the narrative for each impact issue acknowledges that the "effects of other ongoing, implemented, or otherwise authorized measures would continue to occur" for aesthetics, agricultural and forest resources, air quality, biology, cultural resources, geology/soils, GHG, hazards, hydrology/water quality, land use/planning, noise, public services, recreation, transportation/traffic, and utilities/service systems. These are the effects referenced in the conclusion that the "majority of environmental impacts of the Proposed Scoping Plan" would occur for the No-Project Alternative.

The comment includes the expressed concern that the significant impacts of the alternatives are not delineated in the Supplement, making it difficult to understand which alternatives could reduce impacts of the Proposed Scoping Plan. The impact analyses for Alternatives 1 – 4 include specific discussions of each of the 17 environmental topic areas represented in Appendix G of the CEQA Guidelines (Environmental Checklist). In the narrative discussion, the significance conclusions related to each environmental topic area are delineated for each alternative. Therefore, the environmental impact significance conclusions are explicitly stated and able to be compared by reading the full narratives. Because Alternative 5 represents a combination of actions from Alternatives 2, 3, and 4, the discussion of its impacts also relies on summarizing and cross referencing to the environmental analysis narratives supporting the other alternatives. Therefore, the narrative is adequate for presenting the environmental impacts of the alternatives and their significance conclusions, including which result in reduced, i.e., less-than-significant, impacts.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

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**L91**

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**COMMENT 91 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Joyce  
Last Name: Dillard  
Email Address: [dillardjoyce@yahoo.com](mailto:dillardjoyce@yahoo.com)  
Affiliation:

Subject: Comments to AB 32 Scoping Plan FED due 7.28.2011

Comment:  
Since the US Supreme Court has ruled on American Electric Power v. Connecticut, that ruling (attached) should be considered in this document.

The State has no jurisdiction in interstate commerce issues and would not be able to execute the Western States Climate Initiative. The EPA is tasked with regulating Greenhouse Gas Emissions, not the State of California.

◆Caps◆ would not be in the State◆s jurisdiction for any category they do not regulate and/or permit.

Alternatives would need to be revised according to the new US Supreme Court decision and incorporated into this document.

Climate Change effects sea-level rise and forests, both under the jurisdiction of Federal agencies. Plans are being implemented to address federal Climate Change issues which effects water as well as air.

California can only address those issues under the jurisdiction of California regulations and not impose California standards for interstate and out-of-state projects.

Cap and Trade is not feasible without complete control of the emission and regulatory process and within the allowable jurisdiction.

Joyce Dillard  
P.O. Box 31377  
Los Angeles, CA 90031

Attachment: [www.arb.ca.gov/lists/ceqa-sp11/123-10-174.pdf](http://www.arb.ca.gov/lists/ceqa-sp11/123-10-174.pdf)

Original File Name: 10-174.pdf

Date and Time Comment Was Submitted: 2011-07-28 16:07:28

91-1

If you have any questions or comments please contact [Clerk of the Board](#) at (916) 322-5594.

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## **L91 Response**

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- 91-1      The commenter indicates that U. S. Supreme Court's decision on *American Electric Power v. Connecticut* should be included in the Supplement. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. In accordance with the requirements of CEQA, ARB need not respond to all non-project-specific secondary materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484). Please also refer to response 1-1.



**L92**

July 28, 2011

***Via Electronic Mail and ARB Online Comments Website***

Mary D. Nichols  
Chairman  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95812  
([mnichols@arb.ca.gov](mailto:mnichols@arb.ca.gov))

**IETA Response to the Supplement FED Analysis**

On behalf of the International Emissions Trading Association (IETA), I write in support of the Air Resources Board (ARB) "Supplement to the AB 32 Scoping Plan Functional Equivalent Document" (SFED). IETA believes the SFED provides a lengthy, considerate and detailed analysis of available alternatives, appropriate to the circumstances under which it was required to complete the SFED.

IETA has been the leading voice of the worldwide business community on the subject of emissions trading since 1999. Our 160 member companies include some of California's, America's and the world's largest industrial and financial corporations—including global leaders in oil, electricity, cement, aluminum, chemical, paper, and banking; as well as leading firms in the data verification and certification, brokering and trading, offset project development, legal, and consulting industries.

IETA extends its appreciation to ARB for its leadership in working to develop a comprehensive cap-and-trade program for the State of California, and for focusing on how this program will link to regional emissions trading programs like the Western Climate Initiative. While IETA favors a national cap and trade program, the absence of US Federal action at this time provides an opportunity for California regulators to demonstrate leadership in advancing the most cost-effective means to control emissions—namely a well-designed cap-and-trade approach with a robust and efficient offsets program.

**ARB's Supplemental Functional Equivalent Document (SFED)**

In response to the lawsuit *Association of Irrigated Residents, et al. v. California Air Resources Board* (CPF-09-509562) and the related May 20, 2011 San Francisco Superior Court Ruling, ARB has submitted the SFED for consideration (under "CEQA review") beyond its original Functional Equivalent Document ("FED"). The SFED has provided a materially expanded and revised analysis of the five GHG abatement alternatives – which included cap-and-trade as one of the alternatives – that were discussed in the FED.

92-1



## International Emissions Trading Association

July 28, 2011

### IETA's Assessment of the SFED

IETA believes a well-designed cap-and-trade program will provide the most cost-effective means, of meeting GHG reduction targets. Cap-and-trade has been the environmental solution of choice for reducing acid rain pollution, phasing lead out of gasoline, and eliminating ozone-depleting gases. In each case cap-and-trade accomplished its environmental objectives ahead of schedule and below projected costs.

That being said, IETA recognizes that the importance of demonstrating that in the case of California, an emissions market is the most favorable option versus the alternatives. Out of the five alternatives evaluated in the SFED, ARB has demonstrated that only cap-and-trade focuses solely on the environmental result, both by result and by design. Direct regulation and taxation programs may favor specific outcomes in specific sectors but they do not approach GHG reductions in the aggregate. ARB's analysis of the five alternatives (No Project, Cap-and-Trade, Direct Regulation of Sectors, Carbon Fee/Tax, and Hybrid) evaluated each alternative's policy effectiveness across no fewer than 20 objectives, and only Cap-and-Trade had a high likelihood of meeting at least 19 out of 20 of those objectives.

The most differentiated alternatives to Cap-and-Trade – Carbon Fee/Tax and Direct Regulation – were found to have the lowest likelihood of meeting two critical policy objectives: 1) minimizing leakage and 2) creating linkages with other States'/Regions' abatement programs. Both of these objectives are high on the priority list of any well-designed cap-and-trade program.

Beyond these 20 Objectives, ARB's SFED cited numerous precedents of the five alternatives in its 120+ page analysis. For example, ARB analyzed a long list of policy fee/tax precedents which had been independently compiled by the Nicholas Institute at Duke University.

Regarding a carbon fee/tax as an alternative, IETA notes that ARB made a number of observations and evaluative statements that are broadly consistent with IETA's own analyses over time:

- When initially implemented a fee/tax provides a "point in time" signal of the price an entity will face for their emissions – but, that fee/tax would need to be dynamic over time, something that would be very difficult to implement in practice
- Fees/taxes do not guarantee a specific emission outcome because there is neither a regulated cap nor any prescribed performance standards over the regulated entities – just a one-size-fits-all that disregards one entity's ability to mitigate its emissions versus another's
- The criteria for reviewing carbon fees/taxes in different systems– such as a "pain threshold," "Social Cost," "Technology Goal," or "Comparable/Environmental" prices – were found to be variable, arbitrary, divergent, or subject to manipulation
- At best, carbon fees/taxes have found their way into larger comprehensive systems as in British Columbia and in various European countries – but there is no economic "gold standard" for evaluating whether these taxes can be viewed as effective, in isolation of their larger context

As a final observation: in the face of political reality in California, which requires a two-thirds supermajority to pass any new fees or taxes, it seems especially difficult to coalesce behind a policy of fees/taxes to incentivize emissions mitigation, especially since it would involve layers of approvals over



## International Emissions Trading Association

July 28, 2011

time, as new fees/taxes would need to be continually introduced to keep up with the requirements of AB-32 emissions reduction timeline.

Regarding direct regulation, various initiatives can aim for and achieve specific factory-by-factory standards. However, such specific government controls come at a very high cost: economists argue that direct regulation costs five to ten times higher than cap-and-trade. Neither California businesses nor California consumers can afford such costs in these difficult economic times.

Please do not hesitate to contact me, or Ethan Ravage in IETA's San Francisco CA office, for further information or with questions. Thank for you for the opportunity to provide comments.

92-1  
Cont'd

Sincerely,

A handwritten signature in black ink, which appears to read "Henry Derwent", with a long, sweeping horizontal stroke extending to the right.

Henry Derwent  
President and CEO

## **L92 Response**

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- 92-1        The commenter provides his insight regarding a cap-and-trade program and a carbon tax or fee program, concluding that a well-designed cap-and-trade program will provide the most cost-effective means of meeting GHG reduction targets. ARB has reviewed this comment. ARB has determined that it does not state a specific concern or question regarding the adequacy of the environmental analysis of the alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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## 2.0 Responses to Comments

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**COMMENT 93 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Kay  
Last Name: Cuajunco  
Email Address: [kay@baylocalize.org](mailto:kay@baylocalize.org)  
Affiliation: Bay Localize

Subject: Consider alternatives to cap-and-trade!

Comment:

We must consider alternatives to cap-and-trade to seriously reduce emissions! A carbon tax and regulating specific pollution resources would be great contributions to a strong climate action plan. Clean air is a human right, and we must acknowledge the frontline communities most impacted by these false solutions to environmental crises. The health of our communities depends on much stronger regulations that put people and planet first.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 16:15:43

93-1

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### **L93 Response**

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93-1        The commenter suggests considering a carbon tax, and directly regulating specific pollution sources, as alternatives to cap-and-trade. The commenter indicates that California's carbon trading program approved by ARB replicates many of the problems seen in the European model. ARB's proposed Cap-and-Trade Regulation is still in the rulemaking process, and has not been formally approved.

The commenter also indicates that the LAO found that the complexities of ARB's proposed Cap-and-Trade system open it up to gaming and California lacks the authority to effectively regulate a market arising from a cap-and-trade system.

The commenter expresses alarm at plans to include REDD as part of the proposed Cap-and-Trade Regulation.

Please refer to responses 15-1, 42-4, 67, 89-3 and 89-4.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L94**



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BELOW IS THE COMMENT YOU SELECTED TO DISPLAY.

**COMMENT 94 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Dave  
Last Name: Massen  
Email Address: [massen@pacbell.net](mailto:massen@pacbell.net)  
Affiliation: Citizens Climate Lobby

Subject: COMMENT TO CEQA-SP11

Comment:

Thank you for the opportunity to comment. California is a leader in fighting global warming and in making the transition to a green economy, to its benefit and to the world's, and I greatly appreciate the historic role the Air Resources Board has played in this process.

I urge you to keep California at the forefront by replacing the cap and trade approach embodied in AB32 with a carbon fee (tax) and rebate program. Citizens Climate Lobby and affiliated groups can assist CARB in this process, if you will contact me.

### 1. Issues with cap and trade

Inventors of the cap and trade approach are skeptical of its effectiveness to regulate carbon. Writing in the San Francisco Chronicle last January, David R. Baker pointed out well-known issues with cap and trade, especially when the scheme includes offsets (paraphrased and augmented):

◆ It's complicated, and experts are likely to game the system and stay ahead of safeguards;

◆ Legitimate trading strategies can exacerbate energy price spikes;

◆ Allowing businesses to meet emission reduction quotas by purchasing offsets from projects that aim to reduce CO2 elsewhere is deeply controversial ◆ it is difficult or impossible to verify that offsets represent the additional emissions reductions they claim;

◆ Secondary trading markets based on emissions allowances pose derivatives risk. The term ◆subprime carbon◆ has been used in describing new vehicles that could develop.

At the very least, California will spend time and resources designing and maintaining multiple safeguards, and trading services will be among the system's costs. The European Union's experience with cap-and-trade includes harmful price volatility, few greenhouse gas reductions, higher energy prices and billions in windfall profits for utilities.

### 2. Simple carbon fee and rebate will drive clean energy transition, make consumers whole

The principal reason for continued widespread use of fossil fuels and their CO2 emissions is that they remain relatively cheap compared to clean, renewable energy sources. Applying a steadily rising fee on the carbon content of fossil fuels at the source ◆ the well, mine or point of entry ◆ is the simplest, most effective market-based approach for leveling the playing field and driving clean energy investment by providing businesses with a predictable carbon price. As a complementary policy, fossil fuel subsidies should be phased out.

Fee revenue should be rebated to Californians to make fossil energy prices affordable during the energy transition. Rebate options include monthly dividend checks, lower income tax rates, and reductions in payroll taxes. The last option is regarded as one of the best ways to stimulate employment; if it is used people who are not working must be addressed. The program can be administered by existing State agencies such as the Franchise Tax Board.

Switching from cap and trade to carbon fee and rebate need not delay California's anti-pollution efforts. British Columbia's carbon tax was implemented in 2008 within months of adoption.

### 3. California's national, international influence

California's adoption of carbon fee and rebate would

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94-2

94-3

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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increase its acceptance by the US Congress, where cap and trade has not passed; in recent visits to Capitol Hill Citizens Climate Lobby found interest in a carbon fee and dividend program. The world is waiting for US leadership; thus, California could catalyze an international carbon reduction and clean energy revolution. A carbon fee approach is preferable for international harmonization - not every country has the capability to administer a cap and trade program, but every country has a tax system.

For illustrative purposes I have attached Citizens Climate Lobby's proposed federal legislation. Please contact me if you have any questions. Thank you.

Attachment: [www.arb.ca.gov/lists/ceqa-sp11/126-feeanddividendlegproposal-2011.pdf](http://www.arb.ca.gov/lists/ceqa-sp11/126-feeanddividendlegproposal-2011.pdf)

Original File Name: FeeAndDividendLegProposal-2011.pdf

Date and Time Comment Was Submitted: 2011-07-28 16:16:54

94-3  
Cont'd

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**The Carbon Fee and Dividend Proposal of 2011  
Proposed Findings:**

- 1. Causation:** Whereas the weight of scientific evidence indicates that greenhouse gas emissions from burning fossil fuels and other sources are causing rising global temperatures,
- 2. Mitigation (Return to 350 ppm or Below):** Whereas the weight of scientific evidence also indicates that a return from the current concentration of more than 392 parts per million (“ppm”) of carbon dioxide (“CO<sub>2</sub>”) in the atmosphere to 350 ppm CO<sub>2</sub> or less is necessary to slow or stop the rise in global temperatures,
- 3. Endangerment:** Whereas further increases in global temperatures pose imminent and substantial dangers to human health, the natural environment, the economy and national security and an unacceptable risk of catastrophic impacts to human civilization,
- 4. Co-Benefits:** Whereas the measures proposed in this legislation will benefit the economy, human health, the environment and national security, even without consideration of global temperatures, as a result of advances in clean-energy technology, reductions in non-greenhouse-gas pollutants, reducing the outflow of dollars to oil-producing countries and improvements in the energy security of the United States,
- 5. Benefits of Carbon Fees:** Whereas phased-in carbon fees on fossil fuels (1) are the most efficient, transparent and enforceable mechanism to drive an effective and fair transition to a clean-energy economy; (2) will stimulate investment in clean-energy technologies by insuring that fossil fuels lose their competitive price advantage over clean energy within a 10 year time frame; (3) give all businesses powerful incentives to increase their energy-efficiency and reduce their carbon footprint in order to remain competitive; (4) provide households an incentive to reduce carbon use.
- 6. Equal Monthly Per-Person Dividends:** Whereas equal monthly dividends (or “rebates”) from carbon fees paid to each American household can help insure that families and individuals can afford the energy they need during the transition to a clean energy economy and the dividends will stimulate the economy,

94-4

Therefore the following legislation is hereby enacted:

- 1. Collection of Carbon Fees/Carbon Fee Trust Fund:** Beginning on January 1, 2012, impose a carbon fee on all fossil fuels at the point where they first enter the economy or are spilled into the environment. The fee shall be collected by the Internal Revenue Service. The fee on that date shall be \$15 per ton of CO<sub>2</sub> equivalent emissions and result in equal charges for each ton of CO<sub>2</sub> equivalent emissions potential in each type of fuel. The Department of Energy shall propose and promulgate regulations setting forth CO<sub>2</sub> equivalent fees for other greenhouse gases including methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons (HFCs) emitted as a byproduct, perfluorocarbons, and nitrogen trifluoride. The Internal Revenue Service shall also collect the fees imposed upon the other greenhouse gasses. All fees are to be placed in the Carbon Fees Trust Fund and be rebated 100% to American households as outlined below.

**2. Ensuring that Clean Energy Become Competitive Within a Ten year Time Frame:** The yearly increase in carbon fees including other greenhouse gasses, shall be at least \$10 per ton of CO2 equivalent each year to ensure that fossil fuel energy loses its competitive price advantage with respect to the clean energy technologies we have today, including, at a minimum, wind, geothermal and industrial solar energy, within 10 years of the date of enactment. Annually the Department of Energy shall determine whether an increase larger than \$10 per ton per year is needed to achieve program goals. Yearly price increases of at least \$10 per year shall continue until total U.S. CO2-equivalent emissions have been reduced to 10% of U.S. CO2-equivalent emissions in 1990.

**3. Equal Per-Person Monthly Dividends Payments:** Equal monthly per-person dividend payments shall be made to all American Households (1/2 per child under 18 years old, with a limit of 2 children per family) each month beginning on February 28, 2012. The total value of all monthly dividend payments shall represent 100% of the total Carbon Fees collected per month.

**4. Border Adjustments:** In order to ensure that U.S.-made goods can remain competitive at home and abroad and to provide an additional incentive for international adoptions of carbon fees, Carbon-Fee-Equivalent Tariffs shall be charged for goods entering the U.S. from countries without comparable Carbon Fees/Carbon Pricing. Carbon-Fee-Equivalent Rebates shall be used to reduce the price of exports to such countries and to ensure that U.S. goods can remain competitive in those countries. The Department of Commerce will determine rebate amounts and exemptions if any.

94-4  
Cont'd

**5. Phase Out of Fossil Fuel Subsidies :** All existing subsidies of fossil fuels including tax credits, shall be phased out over the 5 years following enactment.

**6. Moratorium on New or Expanded Coal-Fired Power Plants:** Beginning on the date of enactment, there shall be no new coal-fired power plants permitted, constructed, or operated. There shall also be no expansions in capacity of any existing coal power plants permitted, constructed, or operated. And any previously permitted coal-fired power plants that have not yet been constructed or put into operation prior to the date of enactment shall not be put into operation and shall not be further constructed.

**7. Seeking Treaties:** The President in consultation with the United States Department of State shall seek treaties with other countries that encourage adoption of programs similar to the ones provided for in this Act to reduce CO2 and other greenhouse gas emissions in other countries.

In the 111<sup>th</sup> Congress legislation proposed by Rep. John Larson (D-CT) H.R. 1337 America's Energy Security Trust Fund Act, and by Rep. Bob Inglis (R-SC) H.R. 2380 Raise Wages Cut Carbon Act, reflected an approach similar to this.

## **L94 Response**

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- 94-1            The commenter suggests a carbon fee (tax). Please refer to response 15-1.
- 94-2            The commenter suggests that a simple carbon fee and rebate will drive clean energy investment. Please refer to response 15-1.
- 94-3            The commenter states that adoption of a carbon fee would increase California's acceptance by the U.S. Congress. Please refer to response 15-1.
- 94-4            ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. In accordance with the requirements of CEQA, ARB need not respond to all non-project-specific secondary materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484).

Also, please refer to responses 1-1 and 15-1.

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**COMMENT 95 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Colin  
Last Name: Miller  
Email Address: colin.brazil@gmail.com  
Affiliation: Concerned Citizen

Subject: unities!Cap and Trade Privatizes Air, Rewards Polluters, and Pollutes EJ Communities

Comment:

To whom it may concern at the California Air Resources Board:

California has the unique opportunity to provide leadership on the climate crisis for the nation and the world. It depends on the courage and the integrity of our elected officials, upon whom we the people are depending to make the right decision. The stakes could not be higher: California's choice in how AB 32 is implemented sets the course for the preservation or the destruction of life as we know it on our planet.

I write to urge the Air Resources Board to use your power for good, and implement AB 32 with alternatives to Cap and Trade. Cap and trade as implemented in Europe, not only produced windfall profits to carbon traders and carbon-based polluters, it also increased overall greenhouse gas emissions. Hardly the success story that Californians can be proud of!

Greenhouse gas emissions from industrial sources should be capped locally, period. Environmental justice communities located near to polluting facilities already experience significantly higher levels of asthma, respiratory illnesses, cancer, shorter life spans, and greater infant mortality due to the disproportionate location of such facilities in low-income communities of color. Cap and trade could permit such polluting facilities to purchase carbon credits elsewhere, thus giving the local community no relief from the toxic assault. Human health harming co-pollutants aside, carbon dioxide on its own has been shown to significantly impact human health and cause greater mortality, known as the Jacobson Effect (Mark Z Jacobson is a Stanford University engineering professor who has testified on the subject before U.S. Congress).

Polluters should not be allowed to trade credits or buy credits from supposed greenhouse gas mitigation projects in other parts of the state, country, or world. Such projects are easily falsifiable, and could lead to unprecedented greenwashing and even overall INCREASES in carbon emissions.

I urge the California Air Resources Board to stand by your conscience and heed the recommendations made by Communities for a Better Environment and the coalition of Environmental Justice Organizations advocating for alternatives to cap and trade.

You will be remembered by future generations for your role in either assuring certain catastrophe, or setting the world on a sane course for sustainability, equity, and justice. It's up to you to decide.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 16:00:16

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### **L95 Response**

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- 95-1      The commenter requests that ARB not pursue a cap-and-trade program, and advocates a regulation only approach. ARB has reviewed this comment, and determined that it does not state a specific concern or question regarding an inadequacy of the environmental analysis of the alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record.

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Amazon Watch • Center for Biological Diversity • Friends of the Earth US • Global  
Ecology Project • Global Witness • Greenpeace • International Forum on Global  
International Indian Treaty Council • Justice in Nigeria Now • Rainforest Foundation US

**L96**

July 28, 2011

Governor Jerry Brown  
State Capitol, Suite 1173  
Sacramento, California 95814  
Via fax: (916) 558-3160

Mary Nichols, Chair  
California Air Resources Board  
1001 "I" Street  
Sacramento, California 95812  
Via fax: (916) 327-5748

Submitted to ARB Rulemaking Docket at <http://www.arb.ca.gov/lispub/comm/bclist.php>

**Re: Carbon Offsets—Particularly REDD Credits—Undermine the Environmental Integrity and Public Benefits of AB 32**

Dear Governor Brown and Chair Nichols:

We strongly urge your administration to prioritize policy options that uphold AB 32's requirements to avoid disproportionate impacts to low-income communities; and to maximize environmental, economic and public health co-benefits for California.

We are concerned that the carbon trading system approved by the Air Resources Board (ARB) in December 2010 will not deliver on those requirements. Studies show that cap-and-trade programs can create pollution "hot spots" in low-income communities of color, exacerbating the toxic burden borne by these communities.<sup>[1]</sup> In Europe, carbon trading systems have also been plagued by numerous trading scandals.

The carbon trading program approved by ARB replicates many of the problems seen in the European model. One serious flaw is that the ARB's rules allow some of California's biggest polluters to meet the vast majority of cumulative reductions from business-as-usual pollution reductions through 2020 through the purchase of carbon offset credits, which can come from outside California and eventually from outside the United States. A University of California study looked at six types of air pollutants and found that under this scenario (which allows 50% of offsets to be sourced out of state), California's air pollution would actually increase in five out of six pollution categories.<sup>[2]</sup> Such offset loopholes deprive California of the environmental, economic and public health co-benefits that a carbon cap purportedly provides. The Legislative Analyst's Office also found that the complexity of ARB's cap and trade system opens it up to

96-1

<sup>[1]</sup>Minding the Climate Gap, What's at Stake if California's Climate Law isn't Done Right and Right Away, Manuel Pastor, Ph.D., Rachel Morello-Frosch, Ph.D., MPH, James Sadd, Ph.D., Justin Scoggins, M.S., April 16, 2010.

<sup>[2]</sup> Roland-Holst, David, "Carbon Emission Offsets and Criteria Pollutants: A California Assessment," Center for Energy, Resources and Economic Sustainability, University of California, March 2009 at [http://www.ucsusa.org/assets/documents/global\\_warming/Offsets-and-Criteria-Pollutants.pdf](http://www.ucsusa.org/assets/documents/global_warming/Offsets-and-Criteria-Pollutants.pdf).

gaming and that the State of California lacks authority to effectively regulate markets arising from a cap and trade system.<sup>[3]</sup>

We are particularly alarmed at plans to allow international forest carbon offsets, known as REDD (Reduced Emissions from Deforestation and Degradation) credits, to enter California's carbon trading system. No other carbon trading system in the world has allowed such credits to enter their program because of serious, and perhaps intractable, problems with environmental integrity. However, under the Governor's Climate and Forests Task Force and the REDD Offsets Working Group, California is working with the heads of several provinces and states to provide recommendations to policymakers and to secure REDD offsets.

California's tight timetable to create REDD carbon credits is undercutting the years of study, effort, and deliberation conducted by policy-makers engaged in other REDD processes (such as the United Nations Framework Convention on Climate Change, UNFCCC) aimed at ensuring the effectiveness of REDD programs. Successful REDD efforts will require meaningful governance reform, respecting the rights of indigenous peoples and local communities, as well as addressing the underlying drivers of deforestation. These measures take both time and political will and cannot be solved with injections of private capital alone. We therefore urge you to suspend further work on REDD until and unless a decision is taken at the UNFCCC that ensures social and environmental integrity as well as financial market stability.

We also urge you to direct the Air Resources Board to take alternative measures to implement California's most important global warming law, AB 32, that prioritize emissions reductions in communities impacted by toxic air contaminants and preserves social and environmental integrity.

Sincerely,

Amazon Watch  
Center for Biological Diversity  
Friends of the Earth US  
Global Justice Ecology Project  
Global Witness  
Greenpeace  
International Forum on Globalization  
International Indian Treaty Council  
Justice in Nigeria Now  
Rainforest Foundation US

96-1  
Cont'd

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<sup>[3]</sup> California Legislative Analyst's Office, "Cap-and-Trade Market Issues" June 29, 2011, accessed July 28, 2011, at [http://www.lao.ca.gov/handouts/resources/2011/Cap\\_And\\_Trade\\_Market\\_Issues\\_062911.Pdf](http://www.lao.ca.gov/handouts/resources/2011/Cap_And_Trade_Market_Issues_062911.Pdf).

## **L96 Response**

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- 96-1      The commenter indicates that California's carbon trading program approved by ARB replicates many of the problems seen in the European model.
- The commenter also indicates that the LAO found that the complexity of ARB's proposed Cap-and-Trade system opens it up to gaming and California lacks the authority to effectively regulate a market arising from a system.
- The commenter expresses alarm at plans to include REDD as part of the proposed Cap-and-Trade Regulation.
- ARB's proposed Cap-and-Trade Regulation is still in the rulemaking process, and has not been formally approved. Also, please refer to responses 42-4, 67, 89-3 and 89-4.
- .

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**COMMENT 97 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Katie  
Last Name: DeCarlo  
Email Address: [katie@ellabakercenter.org](mailto:katie@ellabakercenter.org)  
Affiliation: Ella Baker Center for Human Rights

Subject: Equitable AB 32 Implementation

Comment:

The entire world is watching how CARB implements this landmark legislation. We have to be absolutely sure that the communities that suffered most under the carbon intensive model benefit from the new energy economy.

We must ensure that we don't continue to devastate communities that are most impacted by pollution and climate change. If we do this in a way that leaves behind low-income communities of color, it will only strengthen the hand of people who want to see meaningful climate action fail.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 16:40:28

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97-1

### **L97 Response**

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- 97-1      The commenter indicates that communities that suffered most from a carbon-intensive model benefit from a new energy economy. ARB reviewed this comment, and determined that it does not state a specific concern or question regarding the adequacy of the environmental analysis of the alternatives in the Supplement. No revision or further written response is required because no significant environmental issues have been raised. This comment is noted and included in the public record.



# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 98 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Harvey  
Last Name: Eder  
Email Address: harveyederpspc@yahoo.com  
Affiliation: Public Solar Power Coalition & self

Subject: Comments Supp. to Scoping Plan FED CARB Part 3 HE PSPC Prt1 Comt. 68, & Prt 2 Comt. 7 3

Comment:

This is part 3 of Comments due to lack of time (60 min. limit) Part 1 Comment 68 for ceqa-sp11 (NonReg) and Part 2 Comment 73 for ceqa-sp11 (Non-Reg) were send yesterday July 27,2011. A confirming email was send only for Part 2 Comment 73 and not for Part 1 Comment 68. Another email was send by me/us to you regarding the need for sending a confirmation email for Part 1 Comment 68 as well as for this Comments Part 3 to be sent today July 28, 2011, herein.

In regards to the fee cited in Part 1 Comments 68 this fee should be used for a rebate fund and solar equity conversion fund. One third of it 1/3 would be paid each year to low income people/citizens of California with incomes up to 150% of state/federal poverty level, one third of it 1/3 would be paid to low income people/citizens of California with incomes from over 150% to 200% of state/federal poverty income level, and the remaining one third for the first 5 years 1/3 would be spent on a solar conversion equity dividend to finance local state solar conversion entities. This would be called Solar Cal and would facilitate California conversion to solar renewables as soon as possible. A (as cited in part 1 comments herein ) 2020 or 10 year solar conversion plan would be implemented with a back up 15 yr. and 20 year plan as well as a 30 and 40 for total solar conversion to as direct solar as possible as soon as possible. The 100% of the Dividend /Solar Conversion Equity Fund would also be used for buying up high GWP Global warming Potential emission units like CFC, PFC etc for from \$1-\$5 per ton equivalent and held for higher fee amounts for the distribution in increased value to low income consumers and Solar Cal. This will enable the states low income consumers to benefit as well as the state from any higher value fees in the future. More work needs to be done on the details of this proposal.

Dr. Jane S. Long 2 weeks ago July 15,2011 gave an ARB Chairs lecture with a panel in Sacramento on Californias Energy Future: through to 2050 which is the 80% ghg reduction date referred to in comments 68 part 1 of off 1990 levels by 2050 and the Governors Executive Order S-3-05. She is the Associate Director at Large and Fellow Center For Global Security Lawrence Livermore Laboratory. Her conclusion was that existing solar technology will get to 60% off 1990 reductions of ghg by 2050 and that a "solar silver bullet" can take us the rest of the way... As Marks Jacobson and Delucci of Stanford University and UC Davis have detailed as cited in Comments 68 Part1 the solar renewable technology is cost effective now to bring us to solar conversion by 2030 (see incorporated into this record Nov. 2009 Cover Article Scientific American and December 30&31 2010 articles in Energy Policy. CARB has an opportunity to lead this why along with the other state energy related agencies towards immediate total solar conversion through Solar Cal as an example for the nation and the world.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 15:53:22

98-1

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## **L98 Response**

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- 98-1      The commenter notes this comment submission is a continuation of a comment submitted earlier (Comment 49 and 54). ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers.

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July 28, 2011

*Via electronic submittal*

Chairman Mary Nichols  
California Air Resources Board  
1001 I Street, Sacramento, CA 95812

**Re: Comments regarding the Supplement to the AB 32 Scoping Plan Functional Equivalent Document**

Dear Chairman Nichols and Members of the California Air Resources Board:

On behalf of the Center for Biological Diversity, I am submitting these comments regarding the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (“Supplement”). The Center for Biological Diversity is a non-profit environmental organization with more than 300,000 members and activists.

The Center for Biological Diversity strongly supports AB 32, the California Global Warming Solutions Act; the substantial progress made by the California Air Resources Board (“ARB”) in implementing AB 32; and the tremendous amount of work ARB staff have put into developing the AB 32 reduction measures. We strongly support the vast majority of reduction measures identified in the Proposed Scoping Plan, and ARB’s plans to move forward with these measures.

We understand that the revised FED for the Scoping Plan is not intended to serve as the analysis for cap-and-trade, that this is a program-level FED and that each of the measures included in the Scoping Plan the Board ultimately adopts is required to undergo its own, more detailed environmental analysis. However, as the Supplement focuses primarily on the decision to adopt a cap-and trade program as part of the AB 32, these comments to the Supplement will largely address that issue.

Unfortunately, the Supplement represents a missed opportunity for ARB to address the concerns raised by public interest organizations in their challenge to the 2008 Scoping Plan and FED. Presumably, ARB believes that this document is sufficiently different from the 2008 FED to be satisfy the Superior court finding “that the analysis of the alternatives identified in the FED was not sufficient for informed decision-making and public review under CEQA (*Association of Irrigated Residents, et al. v. California Air Resources Board, et al.*, San Francisco Superior Court, Case Number CPF-09-509562, May 20, 2011).” Supplement at 2. Whether or not the trial court ruling was stayed, the ruling provided ARB with a needed opportunity to fully consider options for increasing air quality co-benefits for low-income communities at risk of exposure to high levels of air pollution and providing greater certainty that real and permanent emissions reductions would be achieved.

If that is what ARB intended in the Supplement, it is not the impression that the reader gets from that document. Reading the Supplement, it is easy to sympathize with those organizations that feel the decision to include a cap-and-trade program was a predetermined conclusion and that the analysis was largely fixed around that conclusion.

The Supplement contains substantial portions of text developed specifically for the FED for the cap-and-trade program, which the Supplement analyzes only as a complete package with all of its attendant provisions for cost-containment, leakage reduction, and offset program. Compare this to the analysis of Alternative 3 (Direct Regulation), which states... “The analysis below shows that direct regulation of these sectors may be technologically feasible, but substantial additional analysis would need to be done to ensure that the APA and AB 32 requirements could be met.” Supplement at 64. This seems to say that although Alternative 3 (Direct Regulation) may be able to achieve reductions similar to those achieved by Alternative 2 (Cap-and-Trade), ARB is further along in developing the cap-and-trade rule, and therefore Alternative 2 is more robust.

At the same time, there is no analysis of the benefits and drawbacks associated with the individual design elements that have been developed as part of the cap-and-trade rule since the 2008 Scoping Plans and FED. Cap-and-trade design elements are described in Supplement at 46 to 51. As a result, neither Alternative 2 (Cap-and-Trade) nor Alternative 5 (Combined Strategies) considers, for example, a cap-and-trade program without offsets mechanisms, or a cap-and-trade program coupled with direct regulation of oil refineries. In general, ARB considers a highly developed cap-and-trade program—with a hard emissions cap and provisions to reduce leakage and compliance costs—and compares that with other alternatives in which such provisions are conspicuously absent. This downplays the fact that similar measures could be included in other alternatives. Specifically, Alternative 5 (Combined Strategies) could include versions of an emissions cap and provisions to reduce leakage and compliance costs. As a result, the decision analyzed in the Supplement is not how best to achieve the reductions identified, but whether or not to include the proposed cap-and-trade program. As such, the range of alternatives analyzed in the Supplement fails to “represent enough of a variation to allow informed decisionmaking,” the document violates CEQA. *Mann v. Cmty. Redev. Agency* (1991) 233 CA3d 1143, 1151.

99-1  
Cont'd

**The Supplement represents a missed opportunity to consider options to minimize criteria pollutants and maximize public health benefits.**

Perhaps most relevant to the public health issues raised in the challenge to the 2008 Scoping Plan and FED, the Supplement fails to include an analysis and explicit comparison of the capacity of the various alternatives to reduce air pollution levels in communities adjacent to and downwind from emitters. Even if ARB expects all alternatives to produce reductions in criteria pollutants in at-risk communities, the alternatives could vary widely in the timing and magnitude of those reductions. However, only two criteria used in the alternatives analysis seem germane to this issue, and neither appears to address the differences in potential reductions. Objective 7 is defined as “Avoid disproportionate impacts – to ensure, to the extent feasible, that activities undertaken to comply with the regulations do not disproportionately impact low-income communities (HSC section 38562, subd. (b)(2)).” Supplement at 5. Objective 18 is defined as “Prevent increases in other pollutant emissions – to design, to the extent feasible, any market-based compliance mechanism to prevent any increase in the emissions of criteria air pollutants or toxic air contaminants (TACs) (HSC section 38570, subd. (b)(2)).” Supplement at 6. The Supplement appears to consider this issue only as a question of whether air pollution would increase. Under CEQA, the Supplement must consider a range of reasonable alternatives that would feasibly attain most of the objectives of the project while avoiding or substantially lessening its significant impacts, and must compare the relative merits of these alternatives. CEQA Guidelines § 15126.6(a).

99-2

In fact, the Supplement finds that air quality impacts may indeed be significant, but then dismisses any further analysis or consideration of policy options by declaring these impacts unavoidable. “Although localized air quality impacts resulting from compliance responses by covered entities and the development of offset credits related to Alternative 2 are highly unlikely, they cannot be entirely ruled out...To address the possibility of unanticipated localized air impacts caused by the cap-and-trade program, ARB would incorporate an adaptive management program into the alternative...Even with these considerations, ARB has taken a conservative approach by concluding that the remote possibility of localized air impacts for Alternative 2 would be considered potentially significant and unavoidable under CEQA.” Supplement at 53.

99-2  
Cont'd

Furthermore, the analysis of co-pollutants appears to be based not on a comparison among alternatives but a comparison of each alternative to the background levels. That is, the Supplement describes the air quality impacts of each alternative only in the context of reduction from the baseline on a statewide basis. “Air quality impacts of Alternative 2 would be mostly less than significant and would also include beneficial reduction of co-pollutant emissions on a statewide basis.” Supplement at 51. In such an analysis, the potentially substantial differences among alternatives is washed out in individual comparison to a baseline level of pollution that may be stable or increasing. “All the action alternatives would create at least some benefits related to reduced GHG emissions, reduced regional criteria co-pollutants and TACs, and energy demand, compared to existing conditions.”

**The comparison of alternatives’ likelihood of achieving project objectives fails to set forth quantitative, comparative criteria.**

In order to reject an alternative as infeasible, the analysis must set forth adequate quantitative, comparative data to enable the public and decision-makers to reach a rational conclusion. *See, e.g., Save Round Valley Alliance*, 157 Cal. App. 4th at 1461-62; *Uphold Our Heritage*, 147 Cal. App. 4th at 600. However, the Supplement provides no criteria for how the alternatives were rated for their likelihood to achieve each project objective. Table 2.8-1, Supplement at 112, assigns ratings of high, medium, and low to each objective, but provides no criteria for those ratings. For example, are these ratings qualitative, quantitative, based on comparison to the highest score achieved by any alternative for each objective? Alternative 5 (Combined Strategies) differs from Alternative 2 (Cap-and-Trade) in its rating for only one objective—“Avoid duplication – to ensure that electricity and natural gas providers are not required to meet duplicative or inconsistent regulatory requirements HSC sections 38501(g) and 38561(a)),” a criterion that is defined in the Supplement but not discussed. Alternative 3 (Direct Regulation) is rated as less likely than Alternative 2 (Cap-and-Trade) to achieve the objective of “Link with partners – to link, where feasible, with other Western Climate Initiative (WCI) partner programs to create a regional market system” a criterion that makes no sense when applied to an alternative that does not rely on a market system.

99-3

Thank you for your consideration of these comments. Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Brian Nowicki". The signature is written in a cursive, flowing style.

Brian Nowicki  
California Climate Policy Director  
Center for Biological Diversity  
(916) 201-6938  
[bnowicki@biologicaldiversity.org](mailto:bnowicki@biologicaldiversity.org)



## **L99 Response**

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99-1           The commenter asserts that the Supplement is inadequate, essentially because more details about particular design features are provided for Alternative 2 than Alternatives 3 and 5. As the commenter acknowledges, each measure recommended in the Proposed Scoping Plan is required to undergo a separate more detailed rulemaking process and the purpose of the 2008 FED was to provide a program-level discussion of potential environmental impacts and alternatives. The purpose of the Supplement is to provide more details about each of the alternatives considered in the 2008 FED and their relative environmental impacts. For purposes of the program-level review, it is not necessary, nor reasonably feasible, to provide more details than were provided in the Supplement for each alternative, particularly about specific design features of Alternative 3 or 5. These details would become more defined if either alternative was selected as the preferred alternative and subsequently developed in accordance with direction from the Board. The Supplement did include more details about Alternative 2 because ARB had more detailed information about what a cap-and-trade program would look like since that regulation was under development in a separate rulemaking process.

CEQA provides that "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible" and that courts reviewing EIRs should look "not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." (CEQA Guidelines, CCR section 15151.) CEQA Guideline section 15204 recommends that reviewers of EIRs "should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible."

99-2           We disagree with the commenter's opinion that the supplement represents a missed opportunity to consider options to minimize criteria air pollution and maximize health benefits. ARB analyzed the impacts of co-pollutant impacts to the best of our ability in the FED and associated documents. As described in the response to comment 106-18, the FED referenced the Emissions Assessment conducted for the proposed Cap-and-Trade Regulation being developed under its own separate rulemaking process. Please refer to response 4-1. The Emissions Assessment analyzed both increases and decreases in co-pollutants due to the proposed Cap-and-Trade Regulation. Moreover, counter to the commenter's claim, the Supplement compares the air quality impact of various alternatives to each other on pg. 110 (as shown below) and again in Table 2.8-1. This table specifically identifies the ability of all the alternatives to meet objective 18, prevent increases in other emissions, and objective 7, avoid disproportionate impacts.

Potential significant environmental impacts are identified for Alternative 2, including the remote potential for localized air quality impacts, construction-related impacts of covered entities' compliance responses, and environmental effects of certain elements of the offset protocols (such as construction impacts related to livestock digesters and possible local land use planning conflicts from avoided forest conversion where local plans call for development). Compared to other action alternatives, the Proposed Scoping Plan and Alternative 2 present environmental trade-offs, because the proposed Cap-and-Trade program compliance responses and offset protocols could result in certain significant environmental impacts that other alternatives would not cause, while the Proposed Scoping Plan's and Alternative 2's effectiveness in reducing GHG and creating attendant air quality co-benefits would be stronger than Alternative 3 (Direct Regulation) or 4 (Carbon Fee or Tax), because of the lesser risk of leakage. Also, the smaller risk of leakage means that Proposed Scoping Plan and Alternative 2 would not have the potential for out-of-state environmental impacts, as either Alternative 3 or 4 would have.

- 99-3 This comment requests clarification of the "criteria" and "ranking" of the alternatives provided in Table 2.8-1, including what quantified criteria were used. One type of evaluation the Supplement seeks to expand is an understanding of how the alternatives relate to the Proposed Scoping Plan's objectives. Consistent with the CEQA Guidelines (CCR section 15126.6[a]), the analysis describes a range of reasonable alternatives that would feasibly attain most of the basic objectives of the project. In CCR section 60006 of ARB's certified regulatory program, "feasible" means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors, and consistent with the state board's legislatively mandated responsibilities and duties." Table 2.8-1 provides a summary of how likely the alternatives may be to achieve certain objectives, which relates to the element of the definition of feasibility regarding consistency with the Board's mandated responsibilities. Because of the programmatic nature of the Scoping Plan, an assessment of likelihood and consistency with legislative mandates is naturally qualitative, so there are not quantified criteria to be applied to the objectives. Rather, the assessment is intended to be a general summary, supported by the discussion in the Supplement, as well as the 2008 Scoping Plan FED, and where relevant, the 2010 Cap-and-Trade Regulation FED, as noted on page 111 of the Supplement.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**L100**

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**COMMENT 100 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Vanessa  
Last Name: Carlson  
Email Address: [vcarlson@ucsd.edu](mailto:vcarlson@ucsd.edu)  
Affiliation: UCSD

Subject: California would benefit most from a carbon fee and dividend

Comment:

California would benefit from a carbon fee and dividend, with 100% of the money going back to the state of CA. Equally returned to Californians, 66% of Californians would end up breaking even or end up ahead, taking pressure off of the California welfare system. (on the nation as a whole) As the state is in debt, this would reduce government expenditures, decreasing the debt. A fee and dividend is straightforward and transparent, contrasting the cap and trade system considerably.

The cap and trade system, which is volatile, is similar to the stock markets with its ups and downs. It is considerably less stable, increasing complication, and leaving room for companies to buy carbon credits, which keep emissions high.

A cap and trade system could take up to 4 years to implement. These are four years that California can use to reduce emissions, and take pressure off of the environment. A carbon fee and dividend can be implemented immediately, by being placed in the tax code.

The province of British Columbia, in Canada, enacted a carbon fee and dividend, and it has been very successful. By initiating a carbon fee and dividend, California would become a leader in reducing emissions very quickly.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 16:44:55

100-1

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### **L100 Response**

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100-1      The commenter suggests a carbon fee and dividend. Please refer to response 6-1, 6-2, and 15-1.

# Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

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**COMMENT 101 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.**

First Name: Dawn  
Last Name: Carlson  
Email Address: dawnncarlson@gmail.com  
Affiliation:

Subject: I support a carbon fee and dividend

Comment:

I support a revenue-neutral carbon fee and dividend because it would increase the state revenue, and would benefit the environment because a carbon fee and dividend is more stable than a cap and trade system. Everyone is taxed equally, and there is no potential for carbon credits, which ultimately jeopardizes our efforts to decrease the amount of carbon being expelled into the atmosphere.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 16:44:55

101-1

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### **L101 Response**

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101-1      The commenter suggests a carbon fee and dividend. Please refer to response 6-1, 6-2, and 15-1.

July 26<sup>th</sup>, 2010

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To: California Air Resources Board (CARB)

Re: Comments for the Supplement to the AB 32 Scoping Plan Functional Equivalent Document  
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Dear CARB,

Thank you kindly for the opportunity to present comments during this review period.

California is the largest polluting state in the largest polluting country. This fact alone should be the premise to why we should not *trade* pollution permits. As you've noted in the Scoping Plan, California's population is growing at a rate of 1.2% each year and we need to anticipate the pressure the population will have on resources and the rise of GHG emissions. There is no confidence that this will be addressed through a carbon trade market, as has been seen through the failures of carbon trade programs worldwide. This is bad for the environment, for the economy, and most importantly, for the residents of this state and the international communities that could be involved in international offsets.

Verification and monitoring requirements are a cause for concern, as CARB has not presented a full and cohesive analysis that determines that loopholes and leakages will be avoided at all costs. As was evident in the stakeholder meeting on the 15<sup>th</sup> on July, there is a lack of confidence that is necessary to ensure that offset credits are real at the domestic level. For example, there is no confidence that forest biomass combustion is carbon neutral. A much more rigorous verification system would ensure that greenhouse gas reductions are real and enforceable, and a risk assessment strategy prior to the implementation of these programs could deduce possible obstacles, such as complications with buyer and seller liability.

A successful carbon trade program is not as cheap as CARB makes it sound. In fact, the costs are *overwhelmingly* higher than direct regulation would be. These range in costs to the investor (liability), costs to the state of California (verification/monitoring), costs to low income communities in CA (no GHG reductions at home), costs for the green energy sector in CA (lack of green job growth at home), and costs for forest communities internationally (social, environmental, and political costs).

My work with the International Forum on Globalization has me particularly concerned with international forest offsets. REDD programs come with a variety of concerns. California has signed a Memorandum of Understanding with the states of Chiapas and Acre, both volatile regions that have been recently plagued with violence. Chiapas is a region where land access and tenure is still a question, and the president of Mexico recently had to cancel a visit to the region due to Zapatista threat<sup>1</sup>. In the Brazilian Amazon, over 1,150 rural activists have been killed over land and logging conflicts in the past two decades.<sup>2</sup> These are regions lacking proper forest management and good governance. How would an offset program with these regions be a solution to these problems? REDD projects promise to alleviate some of these concerns, and sometimes far more. During project review periods, we need the right regulatory tools to ensure that real GHG reductions will be real and that participating parties will co-benefit from this agreement.

This is why I urge you to recognize the United Nations Declaration on the Rights of Indigenous Peoples<sup>3</sup>. When working with international forests, you are also becoming involved with forest peoples, and these peoples have a right to free prior and informed consent. This presents an overwhelming amount of costs with the need to assess that all entities are *well* informed prior to the development of the project, to ensure that you have their consent, in addition to the costs that will arise to ensure that there are real GHG emissions.

<sup>1</sup> La Jornada. 2011. "Por letreros zapatistas se canceló la gira del presidente por Toniná"  
<http://www.jornada.unam.mx/2011/07/12/politica/020n1pol>

<sup>2</sup> The Guardian. 2011. "Peasant activist shot dead in Brazil's Amazon region"  
<http://www.guardian.co.uk/world/2011/jun/15/peasant-activist-killed-brazil>

<sup>3</sup> United Nations Declaration on the Rights of Indigenous Peoples. <http://www.un.org/esa/socdev/unpfii/en/drip.html>

**CARB does not have the capacity to ensure that projects adhere to the UNFCCC decisions made at the UN Climate Change Conference in 2010, specifically Paragraph 69 and 70, which state that efforts to Reduce Emissions from Deforestation and Degradation should comply to safeguards listed in Appendix 1.<sup>4</sup> And failure to have this capacity once programs are put into place would come with far greater costs: no reductions to deforestation, projects that are not carbon neutral, forced displacement of forest communities, and further conflict in regions that are already plagued with violence.** Forests communities around the world are already complaining that these failures are happening. Central Kalimantan is the pilot province under the Indonesia-Norway US\$1 billion REDD deal and indigenous organizations have demanded an “immediate moratorium of all REDD+ processes and investments in Central Kalimantan” because deforestation has not been reduced and the rights of indigenous peoples are not being addressed.<sup>5</sup> In the Lampung province in Indonesia, farmers claim they are becoming “nothing more than spectators in the program,” and “those who benefit are middlemen and large-scale financiers.”<sup>6</sup> These are just some of the programs in place. Forests peoples around the world are urging their governments to reconsider offset mechanisms to finance REDD. In the state of Chiapas, there are complaints that the rural poor are being forced off their lands to make way for REDD projects.<sup>7</sup> CARB, how will you address these problems and make sure that your Cap and Trade program does not fail like the others?

Direct regulations within the state of California do promise one thing: simplicity. You’ve addressed your concerns with leakage and costs. These will be concerns with ANY proposal. A carbon trade market exacerbates these concerns, and in the end, no one is satisfied, there is no clarity on successes if any, and there is no guarantee that your initial problem was addressed.

Let’s fix the problem in ways that are within our reach.

Lilly Alvarez  
International Forum on Globalization

102-1  
Cont'd

<sup>4</sup> UNFCCC. 2011. “Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010” <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=2>

<sup>5</sup> Indigenous Peoples Alliance of the Archipelago. 2011. “Statement Of Concern On Redd+ In Central Kalimantan, Indonesia” <http://www.redd-monitor.org/wordpress/wp-content/uploads/2011/06/AMAN-Kalteng-17-Juni-2011-on-REDD+-EN.pdf>

<sup>6</sup> The Jakarta Post. 2011. “Community-based program ‘needs to be re-evaluated’” <http://www.thejakartapost.com/news/2011/07/22/community-based-program-%E2%80%98needs-be-re-evaluated%E2%80%99.html>

<sup>7</sup> Global Justice Ecology Project. 2011. “Action Alert and Video: Amador Hernandez, Chiapas – Starved of Medical Services for REDD +” <http://climate-connections.org/2011/07/26/action-alert-and-video-amador-hernandez-chiapas-%E2%80%93starved-of-medical-services-for-redd/>



### **L102 Response**

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102-1      The commenter expresses no confidence that GHG and pollution would be reduced through a trading system, and indicates that offsets may not produce credits that are real. The commenter states that there is no confidence that forest biomass is carbon neutral. Further, the commenter indicates that REDD needs to have the right regulatory tools to ensure real GHG reductions and that participating parties would co-benefit from the Memorandum of Understanding signed with the states of Chiapas and Acre.

Please refer to Response to Comments 19-1, 55 and 106.

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COMMENT 103 FOR SUPPLEMENT TO FED -AB-32 SCOPING WITH CEQA (CEQA-SP11) - NON-REG.

First Name: Aaron  
Last Name: Reaven  
Email Address: [aaronreaven@hotmail.com](mailto:aaronreaven@hotmail.com)  
Affiliation:

Subject: Implementing AB32

Comment:

If global warming and the climate disruption caused by it are not to cause the extinction of numerous species ♦ quite possibly our own included ♦ then we all have a profound responsibility to effectuate drastic, immediate, actual and absolute reductions in greenhouse emissions. No system ♦ such as cap and trade ♦ that can be manipulated, gamed and/or unfairly imposed on more powerless communities, is defensible or acceptable.

I strongly support stronger and fairer measures, such as

1)A straightforward and completely transparent tax on carbon, the proceeds from which can be used to alleviate the high utility bills of low-income ratepayers and support the adoption of energy efficiency measures and renewable energy generation.

2) Strict enforcement of air pollution and air quality laws and regulations, especially with regard to high-polluting sites and industries.

Although greenhouse gas emissions are shared globally in the atmosphere within months, the locations which emit the most greenhouse gases also simultaneously emit related pollutants which have a pernicious effect on the health of nearby communities.

So for the sake of health justice, polluter responsibility for decreasing their own pollution, and reducing greenhouse gas emissions, please implement stronger and fairer measures than cap and trade.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2011-07-28 16:44:04

103-1

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### **L103 Response**

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- 103-1      The commenter expresses support for a carbon tax. The commenter also supports stricter enforcement of air pollution laws. ARB supports stricter enforcement; however the air districts have enforcement authority and are responsible for ensuring compliance with their respective rules and permitting framework. Also, please refer to response 15-1.

David Silverstein  
[dnsilver@ucsd.edu](mailto:dnsilver@ucsd.edu)

My honest assessment of the “Supplement to the AB 32 Scoping Plan Functional Equivalent Document” is that it was not truly objective and was biased to support the existing plan of a cap-and-trade system. Even the choice of objectives and the rating of them appears to be biased. In addition, it is also incomplete, and some of the analysis appears to be at very least, highly misleading. My strong belief is that alternative #4 (carbon fee/tax) is the superior choice.

The supplement states that “Setting the cost of carbon emissions on covered entities through a fee or tax does not guarantee a specific emission outcome because there is neither a regulated cap (as in cap-and-trade) nor a defined performance standard”. But neither does cap-and-trade, if it includes offsets. And the required cap needed to limit specific temperature increases would be highly uncertain itself. It is better to price carbon based on environmental risk, not market demand. Since in any case carbon emissions need to be measured, a carbon fee or tax can be easily raised when environmental risk increases. The supplement also states that “Because many countries have recently implemented a tax and the tax is often mixed with other strategies, it is not yet feasible to assess the programs success.” However, carbon taxes have been in place in some countries since 1990, and have demonstrated success, while the EU ETS has yet to demonstrate any substantial success. See Sumner et al. 2011 for a more complete analysis of carbon taxes across the world since 1990.

On some of the objective ratings, cap-and-trade was rated “H” and carbon fee/tax was rated “L” with no explanation. Regarding “Link with partners”, if this refers to the EU ETS, this is not better than a harmonized carbon tax, expect perhaps for carbon traders. If it refers to offsets, the substantial downsides of this will be explained in later paragraphs. Regarding “Technologically feasible, cost effectiveness”, it is hard to see why cap-and-trade is assigned an “H” and carbon fee/tax is assigned an “L”. By any reasonable assessment, the opposite should be true. Carbon fees/taxes are much easier to implement. Measurement of emissions needs to take place in either case, for compliance, unless assessed based on carbon content in fuels. Otherwise, how is it known that an emitting company bought the required emissions permits? “Credit early action” is also unexplained, with an assignment of “H” for cap-and-trade and “L” for carbon fee/taxes. Carbon fees/taxes could be deployed earlier because they are much easier to implement and have less administrative overhead. Regarding “Minimize leakage”, a cap-and-trade program is said to address leakage by use of a free allocation of allowances to trade-exposed industries. For a carbon fee or tax, it is said that additional administrative mechanisms may be necessary. However, management of free allocation of allowances is already an additional administrative mechanism. Further, tax breaks could be employed for some industries, in a more transparent way and with less potential for corruption when issuing free allowances. The objective “avoid disproportionate impacts” is also unexplained. There really are no advantages to cap-and-trade over carbon fees,

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unless you are a carbon trader or corporation looking for fee handouts. Other objectives which should have been listed include: losses of revenues to carbon trading; likelihood of market manipulation and fraud; likelihood of political corruption; market volatility; stable price signals for investment; government administrative overhead

The Kyoto mechanisms, including cap-and-trade and CDM, have largely failed to limit global emissions growth. Kyoto also has not been effective in reducing carbon emissions within the developed and industrialized countries that have ratified it. Recent drops in emissions from some countries during the global recession are only temporary (Friedlingstein 2010). Estimates are that the European Union (EU) Emissions Trading Scheme (ETS) phase II (2008–12) caps will only constrain emissions on covered emitters by a mere 0.3%, with this difference and additional emissions growth allowable by purchasing cheap carbon offset credits from within the EU or elsewhere (Morris & Worthington 2010). Only a couple of countries such as Sweden have been truly successful reducing emissions under Kyoto and have done so largely because of a carbon tax, without the need of ETS. For example, Sweden adopted a carbon tax in 1991 and reduced emissions 9% between 1990 and 2006. The current Swedish carbon tax rate in industry is approximately \$75 per metric ton of CO<sub>2</sub> (MtCO<sub>2</sub>), although electricity producers are exempt. The general carbon tax rate outside of industry is \$150 MtCO<sub>2</sub> and applies to fossil fuels such as petrol. Indications are that emissions would have been 20% higher without this (Global Utmaning 2009). Carbon taxes are often criticized with the claim that they will hurt economic recovery and growth. So, it is worth mentioning that the comparatively high carbon taxes in Sweden do not appear to be negatively affecting economic growth and competitiveness, considering that the Swedish GDP growth rate is estimated to be 4.3% for 2010 (NIER 2010) and Sweden is ranked 2<sup>nd</sup> globally by The World Economic Forum global competitive index for 2010.

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Cap-and-trade was first used in the US to reduce sulfur dioxide released into the atmosphere in order to combat acid rain. For this, cap-and-trade has been somewhat successful, but since sulfur emissions are much smaller than greenhouse gas emissions, confined to coal-related industries and not required for energy production when burning coal, it has been much easier to achieve a level of equilibrium in the atmosphere. Much was achieved by adding scrubbers to coal-fired plants and switching to coal with lower sulfur content. Greenhouse gas emissions are a very different problem because energy production is a product of burning fossil fuels, not from impurities in the fuels.

The risks of using cap-and-trade for CO<sub>2</sub> equivalent emissions are substantial and the failure of this approach is not likely to provide time for a second chance. In theory, capping emissions and trading the rights to pollute within the cap seems like a plausible approach. With auctions of emissions permits and a secondary market, working capital can be utilized to fund the most efficient ways to reduce carbon emissions in exchange for carbon credits, which can then be sold to industrial polluters where emissions reductions are more expensive. In practice, cap-and-trade becomes very complex as key assumptions are tested and real risks come to light. Cap-and-trade for CO<sub>2</sub> emissions has yet to be validated as effective within the ETS and cannot be truly validated until after caps are planned to shrink starting in 2013.

While defining a cap can be an important tool, it is almost meaningless without verification, integrity and enforcement. The weakest link in a cap-and-trade system with offsets is carbon offset integrity

both inside and outside the Clean Development Mechanism (CDM). The basic assumption is that participants in offset exchanges will act with self interest, but follow rules which will indirectly aid the global interest. However, human behavior does not typically follow this assumption. While the rule of law affects behavior, law in this domain is currently primitive. Even with laws in place, they must be enforced, but still will not prevent pathways around those laws which are not in the global interest. Offset projects in developing countries may be difficult to verify, because they may not be easily accessible. Carbon offsets are supposed to be eligible for credits if a project would not have been done anyway. However, this is difficult to validate. Suppose a company may or may not cut down their forest for timber. If the company is paid not to cut down a forest, the demand can just shift elsewhere. Money would be paid for offsets, even though there were no real offsets. There is also a significant measurement risk. Gold can be easily weighed, so it makes an excellent commodity. Measuring the amount of carbon sequestered from a forest, landfill or farm is quite a different matter. Planting and counting trees is not enough, because trees can die and rot from disease or forest fires can occur. In the case of the Noel Kempff forest preservation project for creating carbon offsets, estimated CO<sub>2</sub> emissions reductions dropped 90% from original estimates (Densham et al. 2009). Although forest preservation is critical, funding does not have to be based on a carbon market. The CDM has already resulted in multi-billion euro offset frauds, including the case of deliberate overproduction of refrigerant in China, in order to sell destruction of the HFC-23 byproduct for carbon credits (Wara 2007), which for a time was almost 30% of the entire market. Carbon credit carousel fraud in the EU ETS resulted in losses of about 5 billion euros in 2008-2009 and is estimated to account for 90% of the carbon trading volume in some countries (Europol 2009). In auction markets for carbon allowances, blocks of allowances are auctioned for future emissions, so a secondary market is usually necessary for trading excess supply and demand. Auction allowances can be awarded over long fixed time periods, adding additional legal, business and environmental constraints that can take years to unwind. These allowances can lock in business decisions on deploying low-carbon infrastructure and are not adaptable to changing environmental conditions. There is also the possibility that global financial firms could buy emitters to access the auction market, buy up auction rights by outbidding other emitters and then sell emissions securities back to them at a higher cost. In addition, a corruption risk exists when permits and allowances are allocated by politicians to special interests, particularly in their jurisdictions.

Financial corporations and traders act with self interest, sometimes regardless of the consequences. Ceding control of carbon emissions to very large financial firms with an appetite for risk and profits would have substantial risks. Some of these firms have manipulated the energy, oil, mortgage and currency markets in the past, at the expense of the common good. Not long ago Enron was heavily manipulating the electricity and energy market to cause price spikes and the world is still reeling from the mortgage crisis. Although these markets are different in some respects to carbon market, manipulation was driven by the same common human behavior which would be active in carbon markets. Similar foreseeable and unforeseeable things can happen with derivatives on offsets, allowances and permits. Some of what is likely to happen is predictable, because it has happened before. Carbon allowances and offsets can be pooled and securitized. This gives financial firms the power to buy the offsets and offset projects they like and directly control the offset market, forcing most companies to buy emissions securities from them. Financial firms would charge transaction and management fees on the pools, buy the cheapest carbon allowances and offsets, and may hide the source, effectiveness and compliance or use a rating firm they hire to assert the carbon

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instruments are effective. This is similar to what happened in the mortgage market and caused the current global financial crisis. Even in the mature mortgage industry, many home owners cannot find out who owns their mortgage or what mortgage-backed securities pool their mortgage went into. And the financial firms paid ratings agencies to provide high ratings on their sub-prime and other mortgage pools, which ultimately failed. In a new carbon market, this kind of behavior is very likely to occur with carbon instruments. Consider carbon offset origination companies that go into the business of creating domestic and international offsets. Companies selling offsets at a profit would be encouraged to exaggerate their offsets and cut corners to increase profits, forcing other companies to either do the same or go out of business. Offset originators could also create and flip an offset project without considerations of the affected communities, which may lead to inefficient community offset strategies. The risk is huge transfers of capital to financial firms and ineffective carbon reductions. Carbon traders can make profits with arbitrage and momentum trades, which they would be able to execute before the intended users of a carbon market could, such as the energy intensive businesses and governments. Linking cap-and-trade markets around the world would enable global high-speed arbitrage trades which carbon trading firms would have privileged access to. Global carbon trading firms would effectively have their own rents on carbon, draining resources which could have been used more directly to reduce carbon emissions. Secondary carbon markets also have price volatility, adding risk to companies who might need to buy emissions credits. Indeed, companies are exposed to considerably higher market risks, because the volatility of oil and carbon prices are likely to be highly correlated and will sum together. Even if they are uncorrelated, combined volatility increases to the square root of the sum of the individual volatilities squared. Speculation in carbon instruments do not increase capital for carbon investments, they just increase price volatility, and this volatility can also provide poor price signals for investments in carbon emissions reduction, discouraging investment.

The global financial system is highly complex, having evolved over much of the 20<sup>th</sup> century, often during economic crises. Yet, it still needs a lot of work. Cap-and-trade with offsets essentially establishes a whole new monetary system of huge complexity in a short period of time. ETS thus far is still experimental with questionable results. The real risk is that even with a huge effort it still may not work due to complexity, and irreplaceable time will have been lost. Some have argued that the complexity of the climate problem requires a market based approach, therefore carbon trading is necessary. However, there are several markets involved, including for renewable energy, low-emissions products, technologies and services for carbon sequestration. Climate financing can be based on lending, rather than carbon markets and trading. There is nothing inherently inefficient about a tax based on a stable carbon price of a global commodity common in the atmosphere, particularly with increasing climate change costs for the foreseeable future. In addition, due to high complexity, carbon trading adds substantial regulatory risks and high overhead.

Many of the risks of cap-and-trade are substantially reduced or eliminated if a carbon fee or tax is used instead and harmonized across the world. This has been suggested previously in a Swiss proposal during the COP13 Bali Climate Conference (UVEK 2008), (Nordhaus 2009) and by others. Another approach is to price for carbon emissions per metric ton of CO<sub>2</sub> equivalent (MtCO<sub>2</sub>e) be based on a percentage of the actual cost to remove carbon from the atmosphere. Over time, the harmonized carbon tax can incrementally increase over 40 years until 2050 to reach the true cost of removing the carbon from the atmosphere, adjusting down as the cost of removal drops. By some

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estimates, the current cost of CO<sub>2</sub> removal by air capture is estimated to be near \$360 per metric ton in 2007 dollars, but may not drop below \$100 before 2050 (Pielke 2009). If the cost of CO<sub>2</sub> removal is initially estimated to be \$200 in 2050, then a harmonized carbon tax can set at \$20 starting in 2013 and incrementally increase by \$5 each year. This tax would start low, but provide predictability and incentives for industries and other emitters to become more carbon efficient.

The tax would be assessed on whatever party emits the CO<sub>2</sub>. For example, when coal is burned for electricity, the utilities would pay the tax on carbon emissions. For oil products, emissions taxes from extraction and refinement would be paid by the producers, but the taxes on CO<sub>2</sub> released from burning the fuel would be paid by consumers, such as an added fuel tax. Methane emissions in non-farm sectors could also be taxed at higher levels than CO<sub>2</sub>, since it causes 21 times more heat retention. This would encourage collecting and burning Methane to produce energy whenever possible, even though a byproduct is CO<sub>2</sub>. Globally, countries would collect carbon taxes internally and invest those funds internally strictly in climate change adaptation, low-carbon infrastructure, protecting natural carbon absorbers, climate research and monitoring. In California, a carbon fee appears to fulfill this requirement. This would create economic growth and fuel the right kind of carbon market, one for creating and implementing solutions. Companies might also deduct investments in carbon emissions reduction from the carbon fee/tax. On a global level, a harmonized carbon tax would be much easier to implement and adds badly needed elements of certainty and predictability. It is also more adaptable to changing environmental conditions, unlike cap-and-trade plans with fixed targets. Further, Carbon fees/taxes do not require a secondary market since taxes can be paid based on actual emissions.

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## **L104 Response**

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- 104-1      The commenter states an opinion that the Supplement is inadequate and prefers the carbon tax alternative contained in Alternative 4. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. In accordance with the requirements of CEQA, ARB need not respond to all non-project-specific secondary materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484). Also, please refer to response 1-1 and 15-1.

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**Comment to Request 11: R**  
**Proper Accounting of Biogenic CO<sub>2</sub> Emissions**

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**ABOUT GAIA R**

The Global Alliance for Incinerator Alternatives (GAIA) is an alliance of more than 660 community groups and non-governmental organizations in 90 countries whose ultimate vision is a just, toxic-free world without incineration. We actively oppose incinerators, landfills, and other end-of-pipe interventions, in favor of clean production and the creation of energy and materials-efficient economies where all products are reused, remanufactured, repaired or recycled. As such, GAIA supports a sustainable amount of human helping local, state and federal governments and agencies, and other stakeholders understand the dynamics between waste, climate emissions and strategies that serve to reduce both. P

**RECOMMENDATION R**

ARB must ensure that all emissions from combustion, including biogenic CO<sub>2</sub>, are measured and counted towards emissions limits. Imposing costs on emissions of fossil CO<sub>2</sub> emissions without imposing similar costs on biogenic CO<sub>2</sub> emissions would result in a number of extremely serious distortions, including increased deforestation, conversion of food crops to fuel crops, and increased overall CO<sub>2</sub> emissions. P Industry's arguments to omit the counting of biogenic CO<sub>2</sub> are without scientific merit and should be rejected. P

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**BACKGROUND R**

Carbon dioxide (CO<sub>2</sub>) is often divided into two types: "biogenic" and "fossil". Biogenic refers to CO<sub>2</sub> which results from the combustion of biomass, including trees, plants, peat, wood, paper, food waste and other materials which were recently alive. Fossil CO<sub>2</sub> derives from the combustion of fossil fuels such as oil, coal and natural gas as well as plastic (which is made primarily from oil or natural gas). The distinction between biogenic and fossil CO<sub>2</sub> rests solely on their origin – all CO<sub>2</sub> in the atmosphere behaves identically; in particular, the radiative forcing due to CO<sub>2</sub> does not depend on whether it is of fossil or biogenic origin. P

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Industry has argued that biogenic CO<sub>2</sub> emissions do not add to overall atmospheric concentrations of CO<sub>2</sub> and therefore should not be controlled in the same way as fossil CO<sub>2</sub> emissions. The arguments are various, but all are fallacious. P

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Argument #1: Biogenic CO<sub>2</sub> is part of the natural carbon cycle. P

Reality: Human activity, including deforestation, burning biomass, and farming, has resulted in a significant release of biogenic CO<sub>2</sub> into the atmosphere. Tackling climate change requires reducing these emissions as much as emissions of fossil CO<sub>2</sub>. P

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Argument #2: Biogenic CO<sub>2</sub> will be released into the atmosphere anyway as organic material decomposes, so burning the organic material does not result in a net increase in atmospheric CO<sub>2</sub>. P

Reality: The rate of biogenic carbon in organic material varies greatly depending on the type of material and how it is handled. Some materials will decompose rapidly and release CO<sub>2</sub> to the atmosphere; others decompose slowly; and wood can store carbon indefinitely. Composting can actually lock some P

105-1

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carbon into soil, building up the organic content of soil. Only combustion releases virtually all carbon from organic matter instantaneously, how?   
P

Argument #3: Biogenic  $CO_2$  will be absorbed by growing plant matter, so releasing it into the atmosphere will not result in additional atmospheric  $CO_2$ .   
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Reality: This argument assumes that in passing  $CO_2$  emissions (for example, by burning biomass) will automatically result in an increase in  $CO_2$  uptake; however, no such correlation exists. Indeed, there is some evidence that activities which increase biogenic  $CO_2$  emissions (such as harvesting wood for energy or failing to return organic matter to soil) also reduce the land's natural ability to remove  $CO_2$  from the atmosphere.   
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Argument #4: The Intergovernmental Panel on Climate Change (IPCC) has stated that biogenic  $CO_2$  emissions need not be counted.   
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Reality: The full quote is: "The  $CO_2$  emissions from combustion of biomass materials (e.g., paper, food, and wood waste) contained in the waste are biogenic emissions and should not be included in national total emissions estimates. However, if in practice of waste is used for energy purposes, both fossil and biogenic  $CO_2$  emissions should be estimated. Only fossil  $CO_2$  should be included in national emissions under Energy Sector while biogenic  $CO_2$  should be reported as an information item also in the Energy Sector. Moreover, combustion, or any other factor, is causing long term decline in the total carbon embodied in living biomass (e.g., forests), this net release should be reflected in the calculation of  $CO_2$  emissions described in the Agriculture, Forestry and Land Use (AFOLU) Volume of the 2006 IPCC Guidelines." As the last sentence makes clear, excluding biogenic  $CO_2$  emissions only makes sense if the  $CO_2$  emissions are accounted for elsewhere. This is to prevent double counting in national total emissions estimates. On a project-by-project basis, however, there is no reason not to count biogenic emissions.   
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#### CONSEQUENCES

The consequences of putting an emissions control regime for fossil  $CO_2$  without controlling biogenic  $CO_2$  emissions would be negative and potentially severe. A carbon price that excludes biogenic emissions would create a financial incentive for firms to switch from fossil fuels to burning biomass. If carried out on a large scale this would further aggravate current levels of deforestation. It would also increase the burning of dirty biomass, such as treated lumber, which is a significant source of various toxic pollutants including heavy metals, persistent organic pollutants, and particulates. Analyses of such partial emissions regimes indicate that they could lead to complete deforestation with a few decades.   
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Similarly, liquid biofuels would replace fossil fuels, placing greater pressure on existing farmland to produce both food and fuel. This would lead to price increases for food, greater demand for synthetic fertilizer (which is a significant source of greenhouse gas emissions) and the further depletion of soil carbon.   
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Such a rule would also have implications for waste management. Approximately 30-50% of the carbon in municipal waste is biogenic in origin; if these emissions are not tallied against emissions limits, it will create an undue incentive to incinerate waste, which will undercut the state of California's established goals of reducing waste disposal by 50%.   
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The exemption of biogenic  $CO_2$  would also undermine the primary goal of a carbon price which is to drive investment towards truly clean technologies. Biomass combustion is a well-established, relatively cheap technology, compared with newer forms of energy such as solar, wind, and tidal. This would be particularly starved of investment if firms believed they could meet regulatory goals by burning biomass.   
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## Responses to Comments on the Supplement to the AB 32 Scoping Plan FED

## 2.0 Responses to Comments

Finally, since biomass is a relatively inefficient fuel – it produces more CO<sub>2</sub> per kilowatt-hour than coal – increased burning of biomass would also lead to an overall increase in atmospheric CO<sub>2</sub>, thus completely undermining the goal of any climate policy. P

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### CONCLUSION R

A scientifically rigorous emissions control mechanism will require that all CO<sub>2</sub> from combustion, whether biological or fossil in origin, point towards emissions limits. There is no scientific basis for exempting biological CO<sub>2</sub> from the emissions control regime. Moreover, such a loophole would be large enough to completely defeat the purpose of climate legislation, as well as point the other way towards policies. P

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## **L105 Response**

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- 105-1      The commenter advocates not exempting biogenic carbon from the proposed Cap-and-Trade Regulation. Please refer to response 4-1. ARB has reviewed this comment and determined that it does not directly relate to the adequacy of the environmental analysis prepared for the alternatives to the Proposed Scoping Plan. Per the CEQA Guidelines (CCR section 15204), reviewers should focus on the sufficiency of the document identifying and analyzing the possible impacts on the environment and ways in which the significant effects might be avoided or mitigated. ARB has reviewed this comment, and determined that it neither applies nor raises any substantial issues regarding the adequacy of the environmental analysis of the alternatives in the Supplement. In accordance with ARB's certified regulatory program (CCR section 60007[a]) and CEQA Guidelines (CCR section 15088), no revision or further written response is required in response to this comment because no significant environmental issues were raised related to the proposed action; however, this comment is included in the public record for review by other interested parties and decision-makers. In accordance with the requirements of CEQA, ARB need not respond to all non-project-specific secondary materials submitted (*Environmental Protection Information Center v. California Dept. of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 484).



July 28, 2011

ELECTRONIC SERVICE

**California Air Resources Board**

Members of the Board of Directors

Mary Nichols, Chair

1001 I Street

Sacramento, California, 95814

<http://www.arb.ca.gov/lispub/comm/bclist.php>

**Re: Communities for a Better Environment's Comments on ARB's Supplement to the  
AB 32 Scoping Plan FED**

Dear Chair Nichols and Members of the Board of Directors,

CBE urges ARB to adopt an alternative to cap and trade and reject the Supplement to the Scoping Plan FED as proposed. The Scoping Plan itself is the blueprint that maps California's path to stop or significantly slow disastrous climate change. Since ARB certified the FED in 2009, new information has become available that should be considered in evaluating alternatives to Cap and Trade in the Scoping Plan. We have also reintroduced other significant information that CARB appears not have evaluated previously. This information demonstrates that Cap and Trade fails to meet pollution reductions and can cause significant environmental harm to communities (inside and outside California). Accordingly, if CARB is honest in its declaration to consider alternatives to cap and trade, it must take a serious look at alternatives, including direct regulations that can achieve big greenhouse gas and co-pollutant reductions and avoid significant negative impacts of Cap and Trade. We incorporate the comments submitted by Center on Race, Poverty & the Environment, to which CBE has signed-on.

106-1

**SUMMARY:**

- I. The cap and trade program does not meet the project objectives**
- II. The latest evidence overwhelmingly demonstrates that all carbon trading programs have major flaws, resulting in unreliable predictability, and failure to meet reduction goals**
  - A. European carbon trading is in its second phase and still not meeting reductions despite years of attempts, due to overallocation, banking, too many offsets, free allocations, fraud, failure to account for imports, etc., which are program designs present in California's Cap and Trade.

- B. Columbia University found that all carbon trading programs evaluated in the U.S. and Europe suffered from overallocation either during earlier years, or in every year of the program.
- C. The International Energy Agency found that unambitious goals, free allocations, overallocation, banking and other flaws caused trading programs to fail to achieve the needed reductions.
- D. Forestry trades and other offsets have been notorious for false carbon reductions.

**III. Cap and Trade health and environmental impacts can cause inequities that CARB and CDHS did not evaluate, and other severe environmental harms**

- A. Minding the Climate Gap (Pastor et. al.<sup>1</sup>) found that Cap and Trade could make air pollution hotspots worse, and cause existing inequities for people of color to worsen, and that cap and trade loses the opportunity to greatly reduce local pollution.
- B. The Department of Health assessment of Cap and Trade health impacts only evaluated offsets occurring in California, but offsets are allowed outside California. Health impacts from increased toxic hotspots were outside the scope of the evaluation.
- C. CARB cannot abandon AB 32's health protection requirements by relying only on other environmental laws.
- D. Health impacts due to "co-pollutants" are already unacceptably high.
- E. CARB needs to adequately screen for communities impacted by air pollution in order to assess impacts of various alternatives.
- F. New evidence shows that carbon trading is causing harm to indigenous people through the offsets program/REDD program, and is not effective in achieving real greenhouse gas reductions

**IV. Other alternatives are reliable & avoid Cap & Trade's significant impacts**

CARB could entirely avoid the significant negative impacts from Cap and Trade through an alternative set of direct pollution controls, which achieve more than the 17 million tonnes<sup>2</sup> of the CO2 equivalent current cap and trade target, and achieve major co-pollutant reductions.

<sup>1</sup> April 16, 2010, *Minding the Climate Gap, What's at Stake if California's Climate Law isn't Done Right and Right Away*, <http://dornsife.usc.edu/pere/documents/mindingthegap.pdf>, Attached as CBE Exhibit A Minding the Gap

<sup>2</sup> Note that metric tonnes (1000 kilograms or 2200 lbs) and U.S. tons (2000 lbs) are similar, but are different units of measurement and frequently spelled differently to differentiate them

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<b>Direct control alternatives is locally enforceable &amp; gains local reductions of health hazards</b>	
<b>Industrial</b>	<b>GHG Reductions (metric tonnes CO<sub>2</sub>e) + copollutant reductions</b>
1. Industrial Energy Efficiency Improvements	~ 3 million or more - Including Boiler and Heater upgrades and others. Thorough audits need to be implemented and calculations made public to more specifically assess other reductions.
2. Industrial methane exemption removal & other methane reductions	3 million or more + (including over a hundred thousand tons/yr smog precursor reduction benefit, likely also H <sub>2</sub> S reduction)
3. Clean Electricity for Refineries	1.2 million + SO <sub>x</sub> , NO <sub>x</sub> , and other copollutant reductions
4. Clean Electricity for Cement sector	1 million + SO <sub>x</sub> , NO <sub>x</sub> , and other copollutant reductions
5. Other Cement sector controls	1.3 million + hazardous mercury reductions
6. Refinery Crude Quality Requirements (power plants have been required to phase in lower carbon feedstock for many years)	8 million compared to current baseline, and also avoids 20 million new tonnes that would occur by 2020 without stopping the higher carbon crude oil switch that is well documented to occur at CA refineries
7. 33% Refinery Renewable Portfolio Standard (RPS) (already required for power plants)	12 million (from replacing 33% of refinery production with renewable transportation) – Plus upwards of 40 million additional reductions from lower vehicle emissions + many thousands of tons per year of criteria pollutant reductions and toxic reductions
<b>Expanded clean transportation goals (paired with 33% refinery RPS for reducing oil refinery production)</b>	
1. Expanded pure ZEV, CAFÉ standards, plug in hybrids in conjunction with 33% RPS for oil refineries	
2. Public Transit funding through oil drilling tax (CA is only state not taxing drilling), carbon tax	
<b>Additional large sources can bring GHG reductions and co-pollutant benefits:</b>	
3. Other major sources can meet expanded reduction requirements including:	
<ul style="list-style-type: none"> <li>• Power Plants    • Large agricultural sources    • Port, Rails, Trucks    • LCFS improvements</li> </ul>	
<b>GRAND TOTAL</b>	Much greater than 17 MMTCO <sub>2</sub> e cap and trade target

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**V. The alternatives analysis must consider new emissions information that demonstrates the need for bigger reductions and shows that cap and trade in the oil refinery sector will further significantly increase GHG emissions in California:**

- A. GHG emissions reductions needed are much higher than previously assessed because emissions transfers through imports are greatly increasing GHG emissions.
- B. Peer reviewed GHG emissions evaluation shows refining lower quality crude greatly increases GHG emissions not assessed by CARB's proposed benchmarks.

## I. Cap and Trade Does Not Meet the Project Objectives

As an initial matter, the purpose of an EIR or FED is to examine alternatives to the proposed project and describe ways to avoid or reduce the proposed Project's significant environmental effects. *See Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 565. The alternatives and mitigation sections are "the core" of an EIR. *Id.* at 564. Agencies may not approve projects as proposed if there are feasible alternatives that would substantially lessen the significant environmental effects of such projects. *See* Pub Res. Code §§ 21002, 21081(a), CCR §60006; *see also County of San Diego v. Grossmont-Cuyamaca Community College Dist.* (2006) 141 Cal.App.4th 86, 98 (requirement of Section 21081 is a "substantive mandate" for public agencies). Moreover, agencies should adopt a superior alternative even if impedes to some degree the project objectives. Guidelines § 15126.6(b). Ironically, CARB's favored approach, cap and trade, would both impede the project objectives and cause significant impacts.

The Scoping Plan Supplement lists 20 project objectives. (Scoping Plan Supp. p. 4.) These objectives were not listed in the original Scoping plan. (*See* Scoping Plan J-74 (providing that the alternatives are required to feasibly obtain the objectives of the proposed project and noting that AB 32 requires CARB to prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective greenhouse gas emission reductions.)) The objectives listed in the Supplement primarily mirror Health and Safety Code section 38562 – which describes the qualities that the regulations should possess. Cap and trade undermines many of these objectives. Among other things, an interstate or regional cap and trade program is not enforceable or capable of being monitored or verified; cap and trade does not ensure emissions reductions are real, permanent, quantifiable, verifiable and enforceable; does not achieve real reductions; and does not minimize the administrative burden of implementing and complying with the regulation. In brief:

1. **Cap and trade *fails* to achieve the maximum technologically feasible and cost-effective reductions in GHG emissions.** As CBE's comments will demonstrate, cap-and-trade programs consistently fail to meet reduction goals, in part because of overallocation, which delays or prevents emission reductions, while the alternatives CBE describes are proven much more reliable and cost-effective at achieving maximum reductions in emissions, and with greater economic benefits. Additionally, as to cost-effectiveness, the program is so complex that it is expected to cost \$9 million dollars this budget year alone for staff and contract costs.<sup>3</sup>
2. **Cap and trade *fails* to ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.** As CBE's comments will

<sup>3</sup> Legislative Analyst's Office, [Recommendations from our review of AB 32 zero-based budget submitted by Administration on May 4](http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department_Number=-1&KeyCol=429&Yr=2011), May 20, 2011, available at: [http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department\\_Number=-1&KeyCol=429&Yr=2011](http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department_Number=-1&KeyCol=429&Yr=2011)

demonstrate, cap-and-trade could worsen air pollution / toxic hotspots and exacerbate existing inequities for communities of color and low-income communities, where pollution sources are disproportionately located.

3. **Cap and trade does *not* complement existing air standards and does not ensure a lack of interference with efforts to achieve and maintain national and California Air Quality Attainment Standards. The program also fails to reduce toxic air contaminant (TAC) emissions.** Cap and trade is susceptible to a large number of fraudulent transactions which—if similar programs provide any predictions—are likely to lead to a program that significantly fails to meet emission reduction goals. Further, CBE’s comments also illustrate that a huge resource drain would result from the implementation of the cap-and-trade program. This resource drain, at ARB and other implementing agencies, is likely to greatly undermine other efforts to meet state and national requirements. Trading will also incentivize major polluters to increase GHGs and its co-pollutants, as discussed in the final section below. Rather than complement, cap and trade could result in an increase in criteria pollutants and toxics in California’s low-income communities of color.
4. **Cap and trade does *not* contribute to reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.** As noted above, cap and trade could worsen pollution hot spots and exacerbate social, economic, and environmental inequalities. Furthermore, as described below, the California Department of Health Services’ (CDHS) Health Impact Assessment of the cap-and-trade program emphasized that major parts of the program, and their associated environmental, health, and economic impacts were unassessed because there was either too little data, too little time, or else these assessments were outside the HIA scope. CDHS did not evaluate health impacts from increased toxic hot spots. At the same time, ARB acknowledges cap and trade’s potential for increasing co-pollutants, worsening pollution and toxic hot spots, but does not make a significance finding—it simply does not quantify the extent of the effect. As discussed in the final section, cap and trade increases air pollutants and diminishes diversification of energy sources because it is through cap and trade that oil refineries, one of the state’s major emitters of GHGs, can switch its operations to process heavier more contaminated oil. Further, aside from public health risks and increases in other air pollutants, ARB fails to take into account evidence that increases in co-pollutants and toxic emissions in urban areas shifts the economic burden to other areas of the economy, such as the health care sector, and also fails to consider evidence that cap and trade stifles innovation in emissions reduction technology and new energy sources, which also harms the economy.
5. **Cap and trade causes leakage.** While not leakage in the traditional sense, a trading scheme that is linked to other systems, such as the WCI, could result in “leakage” of California’s jobs, capital, and air quality benefits to other jurisdictions as California’s businesses choose to engage in reduction projects outside of California.

CBE described at length many of these concerns in its earlier comments on the Scoping Plan and on the proposed Cap and Trade regulation. However, the Legislative Analyst’s Office (LAO) also recently identified many flaws in the cap-and-trade program that expose the program to potential gaming and fail to ensure adequate oversight or enforcement. Specifically, the LAO asserts that because ARB’s program is extremely complex, and

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includes policy objectives unrelated to reducing GHGs, like reducing the potential for economic activity to leave the state as a result of the program, it is susceptible to manipulation and fraudulent activity. Moreover, there is no current governmental authority established to routinely monitor and regulate carbon trading, so ARB intends to step in as the regulating authority. ARB, however, has no experience regulating such markets, and this inexperience increases the chances market manipulation could go undetected. Moreover, even if manipulation is found and violators of market rules can be banned from participating in the market, “any disciplinary action would take place after the fact, and ARB may not be able to invalidate transactions once completed.”<sup>4</sup> Evidence and examples described in CBE’s comments below confirm that the LAO’s concerns regularly occur in other carbon trading programs.

CARB cites statutory authority to support most of its objectives. However, a few of the objectives either are not cited or are worded in a misleading way. Specifically, Objective 3 is to “to link, where feasible, with other Western Climate Initiative (WCI) partner programs to create a regional market system.” This does not appear in the statute and could only be fulfilled by a market trading system. Objective 15 to “[a]chieve reductions over existing regulation using market-based strategies” gives the misimpression that Health & Safety Code § 38562 (d)(2) requires a market-based strategy but this is not the case. Instead, that section provides that if CARB adopts a market-based system pursuant to a different section, that market system’s “reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.” Similarly, while Objective 16 to “complement direct measures” suggests that AB 32’s objective necessarily is to complement direct measures, this quality or requirement is not found in the section of AB 32 that CARB cites. Project objectives may not be written so narrowly that only the proposed project can meet those objectives. *See e.g., City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438. Therefore, insofar as CARB has changed the plain language of the statute to create overly narrow objectives, or has added objectives that can only be met by the proposed project, those objectives are not valid.

There is substantial evidence that a cap and trade program would cause significant environmental impacts and that alternatives to cap and trade meet the objectives of the project, as laid out in AB 32. Moreover, cap and trade does not fulfill most of the project objectives. Despite this, CARB has proposed not to adopt any alternatives, in violation of CEQA.

## **II. The Latest Evidence Overwhelmingly Demonstrates That All Carbon Trading Programs Have Major Flaws, Resulting in Unreliable Predictability, and Failure to Meet Reduction Goals**

The carbon trading program in Europe is in its second phase now and still is not working despite years of attempts. Very large numbers of fraudulent transactions are continuing up to the present, and overallocation continued in Phase II (2008-2012). Additionally, every version of studied pollution trading suffered from overallocation and other severe flaws, resulting either in failure to achieve emissions reductions goals during earlier years, or in absolute failures to

<sup>4</sup> Legislative Analyst’s Office, *Cap-and-Trade Market Issues*, Presented to: Senate Select Committee on the Environment, Economy, and Climate Change, Hon. Fran Pavley, Chair (June 29, 2011).

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achieve reduction goals. Studies found that fraud, overallocation, free allocation, banking, unambitious emissions reduction targets, and other design flaws resulted in failure to meet necessary reductions in carbon trading programs. Overallocation during early years combined with being allowed to bank those extra credits results in no need for reduction in later years. Offsets makes this problem worse. California, despite generalized statements about this, has not learned from the earlier and ongoing failures of pollution trading.

Columbia University study showed every pollution trading program suffered overallocation:

In a study by Columbia University, every pollution trading program either had years of delays in achieving reductions during the early years, or were fatally flawed so that reductions were never achieved.<sup>5</sup> These programs had the same characteristics (free allocations of pollution credits, offsets, banking, vulnerability to fraud, etc.) that were identified as causing the long delays that CARB's proposed Cap and Trade program has.

This Columbia study evaluated several U.S. trading programs (EPA's Acid Rain trading, Los Angeles's RECLAIM, the Chicago ERMs) as well as European carbon trading. Every program suffered from overallocation either in the early years or in all years, resulting in the failure to meet reduction goals for years because too many credits were available, so prices were too cheap to push investment in low carbon technologies. The European program, although in its second phase (each phase is multi-year), is still delayed in meeting its goals. It found:

- ERMS and Phase 1 EU trading had "absolute overallocation" -- allocations were greater than emissions such that the price of allowances collapsed. This allowance surplus is predicted to continue in Phase 2 2008-2012. Falling prices, such as those from 30 EU in July 2008 to below 15 EU in December, are also predicted by some analysts to continue. p. 443.
- RECLAIM and ARP had "early overallocation," with allowance allocations greater than emissions in early years. Overallocation and its accompanying effects compromised the environmental effectiveness of these cap-and trade programs.
- The recently developed Regional Greenhouse Gas Initiative (RGGI) has also been estimated to be overallocated by 17% in its first year of operation
- Common effects of early and absolute overallocation include low allowance prices, delayed emissions reductions, and development of a large allowance bank that allows for greater future emissions.
- Cap-and-trade systems have not generated high enough credit prices to economically trigger significant emissions reductions. p. 419.
- **"While requiring less of regulated sources is more politically appealing, it may well not be sufficiently protective of the environment. A cap-and-trade program with high caps may make it look like something is being done when very little actual improvement can be attributed to the program. In other words, part of the story of**

<sup>5</sup> 34 Colum. J. Envtl. L. 395 (July 17, 2009), Overallocation Problem in Cap-and-Trade: Moving toward Stringency, The; McAllister, Lesley K., [http://www.columbiaenvironmentallaw.org/assets/pdfs/34.2/7. McAllister\\_34.2.pdf](http://www.columbiaenvironmentallaw.org/assets/pdfs/34.2/7. McAllister_34.2.pdf). (Attached as CBE Exhibit B Columbia University)

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**why cap-and-trade programs may appear to be so cost effective may simply be that to do less costs less.** In the case of RECLAIM, a Los Angeles Times article may have hit the mark when it stated that “Companies saved an estimated 41% on compliance costs under RECLAIM compared to conventional regulation, although most of the savings occurred because pollution controls were delayed for too long.” p. 444.

- The SCAQMD projected that allocations would be in excess of actual emissions for “the first few years.”<sup>36</sup> Allocations in fact remained significantly in excess of emissions for five years. . . . **In the face of this significant noncompliance, SCAQMD partially dismantled RECLAIM in 2001 and began using conventional technology-based regulation to regulate large emitters.** p. 404-405.

The Columbia University study also found that cap and trade fails to promote innovation, which is crucial to the program:

It found:

- Commentators often posit that cap-and-trade regulation provides greater incentives for innovation in emissions reductions technology than conventional regulation because firms have more flexibility in making compliance decisions.
- In fact, a detailed study of the history of innovation in SO<sub>2</sub> control technology found much more significant innovation under the conventional environmental regulations of the 1970s than under the ARP.
- It found that overallocation and volatility of prices may be the cause of undermining new emissions reductions technology. p. 423.

International Energy Agency Study found major flaws

At the end of 2010 the International Energy Agency also evaluated trading programs, and found that standard features such as free allocations (a major feature of California’s Cap and Trade program) caused delays in achieving reductions.<sup>6</sup> The investigation found that free allocation slows the pace to low-carbon technologies, and that overallocation and banking caused delays (both allowed in California’s Cap and Trade). It found that extensive offsets (generously allowed in California’s Cap and trade at 8%) could result in locking in a high carbon infrastructure in the short term so that no progress would be made in the long term. In addition to the delays in achieving environmental improvements, this study also found that the standard approaches of cap and trade providing free allocation were not shown to be in the public’s economic interest. It found these lead to windfall profits, do not prevent price increases to consumers, and that there are alternatives for offsetting consumer prices. It found that offsets and banking could reduce emissions reductions:

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<sup>6</sup> *Reviewing Existing and Proposed Emissions Trading Systems*, Nov. 2010, International Energy Agency, [http://www.iea.org/papers/2010/ets\\_paper2010.pdf](http://www.iea.org/papers/2010/ets_paper2010.pdf). (Ellerman, 2010; European Commission, 2010c) (Attached as CBE Exhibit C Int Energy Agency CO<sub>2</sub> trading.)

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*European Union Emissions Trading System (EU ETS):*

**Generous free allocation of allowances to emissions-intensive industries is standard**, but economic analyses do not generally reveal why this should be in the wider economic interest. These companies face competition from rivals that do not face emissions pricing, but they also face competition from companies producing lower-emissions alternative products. Overly generous support to maintain current production patterns **slows the pace of transition to sustainable low-carbon technologies.** p.7.

In competitive markets, free allocation leads to windfall gains for electricity generators and does not prevent electricity price rises for end users. In regulated systems, **although free allocation could prevent price rises it can also remove the incentive to move to low-carbon generation.** In both cases, if the desire is to offset price rises for end consumers, it is better to compensate consumers directly (or via electricity distribution companies), rather than providing free allocation to generators. p.8.

There is a significant risk of insufficient targets and oversupply of allowances in the early stages of a trading scheme. **If over-allocated allowances can be banked for future use, they can make it more difficult to reach long-term emissions reduction targets.** p.8.

However as noted in Section 6.2, **extensive use of offsets in the short term could lock in investment in high-emissions infrastructure domestically, making the eventual transition to a low-carbon economy more difficult.**

Reports show pollution credits prices have fallen, undermining the market

A recent article (June 1, 2011), E&E Publishing Services reported that the value of carbon pollution credits had fallen, that the market was not sufficiently robust, and that the global carbon market had shrunk. It also reported that there had been a collapse in talks on worldwide emissions trading, and that there was global concern about the economic impacts related to trading of 2010 being the warmest year on record.<sup>7</sup>

Widespread fraud in pollution trading up to the present is another source of regulatory uncertainty

The largest and most developed cap and trade program – the European carbon trading program – is highly vulnerable to fraud. There is no reason to believe that a California cap and trade program would not be vulnerable to the same fraud. Fraudulent credits not only cause delays, they can close markets entirely<sup>8</sup>:

<sup>7</sup> Greenwire, E&E Publishing, LLC, Wash., D.C. 20001, [www.eenews.net](http://www.eenews.net). (Attached as CBE Exhibit D Greenwire carbon markets shrink)

<sup>8</sup> This finding undermines CARB's statement that the need for regulatory certainty by regulated entities is a reason to complete its cap and trade regulation before Board consideration is carried out: "This type of delay would result in a lack of regulatory certainty for regulated entities and would have several potentially irreversible and harmful consequences to the environment." (Number 12, Edith Chang declaration)

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- **February 2011 -- European Union faces legal action over fraudulent carbon emissions trading:**<sup>9</sup> A Court case in Belgium was brought to recover 267,991 stolen carbon credits, closing carbon markets. A complete list of stolen serial numbers was not completed.
- **March 2010 - The Times, (London) March 18, 2010 article: Chaos on carbon market over 'recycled' permits:**<sup>10</sup> Two carbon exchanges were forced to suspend trading as panic hit investors fearful they had bought invalid permits. Concern that used and worthless permits were circulating caused the price to collapse to less than €1.
- **February 2010 - Phishing attack nets 3 million euros of carbon permits (BBC):**<sup>11</sup> The international carbon market was hit by a phishing attack which saw an estimated 250,000 permits worth over 3 million euros stolen. The scam involves six German companies and meant emissions trading registries in a number of EU countries shut down temporarily on 2 February. The criminals are believed to have created fake emissions registries. Registries in nine countries, were temporarily suspended. . . . **Phishing scams, which redirect people to a fake website via an e-mail, are common in the banking industry."**

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Especially in California, where ARB envisions a regional program, and where ARB is the only regulator, there is little way to closely monitor and police the trading system, and little way for ARB to enforce rules violated out of state.

Economists now question the whole concept of pollution trading

The following very recent article by economist Hazel Henderson<sup>12</sup> (previous advisor to the U.S. Office of Technology Assessment and the National Science Foundation), co-developed with the Calvert Group (investors), found:

- **Emissions trading shown ineffective, economists' focus on carbon and its financial trading now seems a strategic mistake.**
- Widespread fraud in trading CO2 'offsets' led the UN police agency Interpol to warn that the next white collar global crime wave would likely be in trading these carbon derivatives.
- . . . large polluting industries in Europe's Emissions Trading Scheme (ETS) quickly gamed the Kyoto Protocol. They lobbied EU governments for so many free CO2 emission permits that they crashed the ETS markets for CO2.

<sup>9</sup> Terry Macalister, guardian.co.uk, 20 February 2011, <http://www.guardian.co.uk/business/2011/feb/20/carbon-emissions-trading-market-eu> . (Attached as CBE Exhibit E Guardian carbon trading fraud)

<sup>10</sup> Carl Mortished: World Business Editor, The Times, (Attached as CBE Exhibit F Times carbon trading fraud) [http://business.timesonline.co.uk/tol/business/industry\\_sectors/natural\\_resources/article7066315.ece](http://business.timesonline.co.uk/tol/business/industry_sectors/natural_resources/article7066315.ece)

<sup>11</sup> BBC News, published 2010/02/03, <http://news.bbc.co.uk/go/pr/fr/-/2/hi/technology/8497129.stm> (Attached as CBE Exhibit G BBC carbon trading fraud)

<sup>12</sup> *As Kyoto Expiration Nears, Emissions Trading Shown Ineffective*, by Hazel Henderson, Monday, May 23, 2011, Inter Press Service, Hazel Henderson, author, president of Ethical Markets Media (USA and Brazil), co-developed with the Calvert Group the Calvert-Henderson Quality of Life Indicators and co-authored "Qualitative Growth" (2009), Institute for Chartered Accountants of England and Wales, <http://www.globalissues.org/news/2011/05/23/9757>. (Attached as CBE Exhibit H Hazel Henderson carbon trading)

- Then, instead of shifting from fossil fuels to wind, solar, geothermal and energy efficiency, polluting industries purchased ‘offsets’ under the CDM to fund projects in developing countries.
- **Verification of these projects proved almost impossible**, since it was found that many of these projects would have happened anyway for sound business practice—e.g. energy efficiency and more productive, cleaner technologies.
- Now China has developed and captured these export markets; it has stopped selling ‘offsets’ to Europe’s polluting industries, which must now “go green” and buy their new equipment from China.
- The CO2 permits were to be auctioned, but this quickly turned into what were essentially massive giveaways to polluters, which then sold them at a profit, as global levels continued to rise.
- **Thus ‘cap and trade’ turned out to be less efficient than direct tax and regulation.**

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The development and implementation of cap and trade requires enormous resources, whereas alternatives would allow money to be used for adaptation instead

Implementing a cap and trade and offset program requires significant amounts of resources to staff and create the bureaucracy to manage its implementation. An analysis should be done of the efficiency and cost-savings of utilizing a cap and control strategy instead.

- From the Summary of LAO Findings and Recommendations on the 2011-12 Budget:<sup>13</sup>  
*ZBB Shows Substantial Expenditures for Cap-and-Trade Development and Implementation in Budget Year.* In the current year, ARB has a total of 32 positions which support the development and implementation of the **cap-and-trade program at a cost close to \$5 million**. The ZBB shows an additional \$4 million in contract costs related to cap-and-trade implementation in 2011-12, bringing the total cost of cap-and-trade development and implementation to about \$9 million in the budget year.  
**LAO Recommendation.** The cap-and-trade program is a significant part of the AB 32 Scoping Plan. There are numerous policy considerations associated with its implementation, and, as such, proceeding with its implementation before completing the analysis discussed above is premature. **Therefore, we recommend that the Legislature direct the ARB to cease all work on the cap-and-trade program until it has completed the required analysis of potential alternatives and presented the results to the Legislature.** This would provide the Legislature with the opportunity to evaluate the analysis and to provide further policy direction to the ARB.
- Shefali Sharma writes:

<sup>13</sup> California Legislative Analyst’s Office.  
[http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department\\_Number=1&KeyCol=429&Yr=2011](http://www.lao.ca.gov/laoapp/budgetlist/PublicSearch.aspx?PolicyAreaNum=22&Department_Number=1&KeyCol=429&Yr=2011) (Attached as CBE Exhibit I LAO on cap and trade)

The FAO estimates that close to 17 billion euros (approximately 24.3 billion USD) could be required in transaction costs alone to set up soil carbon sequestration projects from 2010–2030, diverting scarce resources away from critical adaptation needs. According to the World Bank’s own estimates adaptation costs to developing countries will range between 2.5 and 2.6 billion USD per year from 2010–2050. Experts monitoring Reduced Emissions from Deforestation and Degradation (REDD) schemes also find that important institutional and public resources are being diverted to create the technical capacity and infrastructure required to create offset credits to trade on potential forest carbon markets. Rather than diverting scarce resources, this money could be invested directly into institutions and communities to build resilience against climate change and directly address deforestation.<sup>14</sup>

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### III. Cap and Trade Health and Environmental Impacts Cause Inequities, Which CARB and CDHS Did Not Evaluate

#### A. Minding the Climate Gap<sup>15</sup> found that Cap and Trade could make air pollution hotspots worse, and cause existing inequities for people of color to worsen

This report (“Minding the Gap” Pastor, Morello-Frosch, Sadd, Scoggins, 2010) analyzed industrial facilities included under Cap and Trade (oil refineries, power plants, and cement plants), and confirmed that co-pollutants (such as particulate matter) from these facilities impact people of color more than non-hispanic whites due to the location of these facilities. The report then showed that Cap and Trade has the potential not only to fail to take this unprecedented opportunity to greatly improve existing inequities, **but could actually worsen them.** It also found that the economic benefits from directly reducing emissions at the most polluting facility would be enormous. The analysis found:

- Those who are most likely to suffer negative consequences of carbon trading system are communities of color and the low-income communities already facing the greatest impacts of climate change – widening instead of narrowing the climate gap.
- Economic opportunity that could be realized by reducing air pollution in dense neighborhoods is also enormous.
- **Geographic inequality in greenhouse gas (GHG) reduction is likely under any market-based scheme, and it matters for public health.**
- **The state is plagued by environmental inequity, and if new climate change regulations are not designed to address the growing climate gap, the suffering of those who bear the brunt of this burden may grow.**
- A cap and trade program could shift the economic burden to the healthcare system.

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<sup>14</sup> Shefali Sharma. April 21, 2011. The hype versus the reality of carbon markets and land-based offsets: Lessons for the new Africa carbon exchange. Institute for Agriculture and Trade Policy. (Attached as CBE Exhibit J Shefali Sharma offsets)

<http://www.iatp.org/files/The%20hype%20versus%20the%20reality%20of%20carbon%20markets042011.pdf>

<sup>15</sup> Id, Minding the Climate Gap

- Some dismissed concerns that because of other regulations, cap-and-trade will never produce “hot spots” where co-pollutants actually increase, but this did occur in the Southern California NOx RECLAIM program.
- The potential for such hotspots is by no means an extreme view: the potential for “hot spots” is acknowledged by some who are against imposing any sort of health- or EJ-based constraints on the cap-and-trade system. Schatzki and Stavins (2009), for example, concur that cap-and-trade could lead to an increase in local co-pollutant emissions.

**The report found that refineries made up the greatest part of the emissions burden and risk of increased impacts.** The report ranks the facilities below . **A few facilities accounted for most of the inequity, causing an increased pollution burden in communities of color:** p. 18.

Rank	Facility Name	City	Pollution Disparity Index*
1	BP Carson Refinery	Carson	1.442
2	Tesoro Wilmington Refinery	Wilmington (Los Angeles)	1.013
3	Paramount Refinery	Paramount	0.62
4	ConocoPhillips Wilmington Refinery	Wilmington (Los Angeles)	0.52
5	Exxon Mobil Torrance Refinery	Torrance	0.40
6	Chevron Richmond	Refinery Richmond	0.32
7	Malburg Generating Station (Vernon Power Plant)	Vernon	0.31
8	Conoco Phillips Carson Refinery	Carson	0.29
9	Valero Wilmington Refinery	Wilmington (Los Angeles)	0.24
10	California Portland Cement Company Colton Plant	Colton	0.16

\* *Pollution disparity index* measures the relative co-pollutant burden on communities of color, as compared with non-Hispanic white communities<sup>16</sup>

It found that some trades or allowance allocations could widen the climate gap by deepening disparities in emissions burdens by race/ethnicity. It also found that targeting these facilities for cleanup would benefit everyone. p. 21. The report states: **“The research reviewed here suggests that the concerns of environmental justice advocates about the unequal**

<sup>16</sup> Minding the Gap, p. 27 – Pollution disparity index: “Based on Bailey et al. (2008), we used the NO<sub>x</sub> and PM<sub>10</sub> emissions to calculate a health impacts index for each facility, which represents the relative potential health impact of the facilities included in the analysis (see Bailey et al. 2008 for assumptions and limitations). The only difference is that we used PM<sub>10</sub> rather than total PM because it is considered more closely tied to health endpoints. The NO<sub>x</sub> and PM<sub>10</sub> data come from the 2006 ARB Emissions Inventory for stationary sources and can be accessed at: <http://www.arb.ca.gov/app/emsinv/emssumcat.php>.”

**impacts of cap-and-trade are not misplaced.** The major facilities that will be regulated under any carbon reduction program are more frequently located near people of color and lower-income communities, with a handful of petroleum refineries making a significant contribution to the pattern of inequity. p.25.

Thus the most specific assessment of potential impact of Cap and Trade to communities of color in California has found that cap and trade could indeed not only fail to reduce large existing inequities, but make them worse. It found that cleaning up the facilities directly, particularly oil refineries, would address most of the risk of increase and help most people in California, including by providing great economic benefits.

#### **B. California Health Services assessment scope didn't include many California impacts**

The California Department of Health Services (CDHS) performed a Health Impact Assessment (HIA) for the proposed Cap and Trade program,<sup>17</sup> but this was very limited in scope, as described below. p. 89. Within this limited scope, the California Department of Health Services (CDHS) only evaluated those impacts occurring inside California. (The health department found small positive health effects related mainly to urban forestry projects inside California.) The department did not assess offset projects outside California, even though the Cap and Trade program allows all offsets to be implemented out of state. p. 57. Specifically, CDHS did not evaluate linking a California program to the Western States Climate Initiative (six Western states and four Canadian provinces),<sup>18</sup> in addition to Chiapas and Brazil.<sup>19</sup> However, CDHS did acknowledge that the positive impacts for California would only occur if these projects were inside California. p. 94.

Throughout the Health Department's HIA, the Department emphasized that major parts of the Cap and Trade Project and their associated environmental, health, and economic impacts were unassessed because there was either too little data, too little time, or else these assessments were outside the HIA scope:

**In addition, the potential health impacts of linking broader national and international climate change mitigation efforts are not assessed.** p. 12.

This document only addresses the portion of the HIA led by CDPH. p.19.

**Local economic and health data were deemed too scarce to provide a reliable community-level analysis of these health determinants,** and assessing impacts on socioeconomic health determinants by region, county, or city were thus out of the scope of this assessment.

<sup>17</sup> [http://www.arb.ca.gov/cc/ab32publichealth/cdph\\_final\\_hia.pdf](http://www.arb.ca.gov/cc/ab32publichealth/cdph_final_hia.pdf)

<sup>18</sup> "California is working closely with six other western states and four Canadian provinces through the [Western Climate Initiative](#) (WCI) to design a regional cap-and-trade program that can deliver GHG emission reductions within the region at costs lower than could be realized through a California-only program. To that end, the ARB rule development schedule is being coordinated with the WCI timeline for development of a regional cap-and-trade program." CARB website, <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>

<sup>19</sup> <http://californiareleaf.org/homepage-post/emission-trading-program-cleared> ,

(Attached as CBE Exhibit K California Leaf cap and trade chiappas )

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This assessment is limited in its ability to geographically pinpoint local economic and air quality impacts and subsequent health effects. p. 22.

Theoretically, **there are instances in which pollution could increase in some communities even though it would decrease overall statewide, but the distribution of such instances cannot be predicted with precision.** p. 90.

The Dept. of Health HIA specifically found that there was the potential for impacts in local communities, including increased impacts in communities of color:

The cap is implemented at the State level, but as individual firms comply with the statewide cap in a manner that best fits their needs, **local community impacts will vary.** p. 21.

**Low-income communities and communities of color in California are disproportionately impacted by environmental exposures** and have a greater susceptibility to the negative health impacts of environmental risks because of existing health and socioeconomic vulnerabilities. p. 60.

While the Health Department noted that increased emissions could occur due to Cap and Trade, it did not specifically assess the impacts that could occur from increased emissions in communities of color due to Cap and Trade. It did identify existing economic and health disparities in the Wilmington Harbor San Pedro Area, in Richmond, and in the San Joaquin valley. These communities are more vulnerable to further increases in pollution. Attached because of its length, is our summary from the Health Department's assessment describing the increased location of major air pollution sources, hazardous materials, and increased health impacts including asthma, cancer, lower birth weight, and higher death rates in these areas.<sup>20</sup>

In conclusion, CARB found that there are existing inequities in California in industrial pollution in communities of color that cause major health impacts, and CDHS states that increased impacts could occur due to Cap and Trade, but since CDHS does not determine the significance of these impacts, potentially significant impacts, are left unmitigated.

#### CARB's Cap and Trade regulation does not address these major flaws

In addition to the HIA performed by CDHS discussed above, ARB performed a "Co-Pollutant Emissions Assessment."<sup>21</sup> These two assessments were the sole evaluations performed to evaluate impacts caused by Cap and Trade in communities of color, where a very large percentage of the pollution sources are located—where they can be traded instead of directly controlled. As stated above, CDHS did not evaluate potential increases in toxic hotspots caused by Cap and Trade in communities of color. ARB's own analysis was not complete. Unfortunately, most of ARB's assessment stated conclusions without evidence that staff "believed" it unlikely that Cap and Trade would increase pollution, although it acknowledged that it was possible that emissions increases could occur due to Cap and Trade because of the inherent program flexibility of Cap and Trade. It concluded that since other laws would be in

<sup>20</sup> Attached as CBE Exhibit L Health Dept excerpts burden Wilm Richm San Joaq)

<sup>21</sup> CARB, Appendix P, Co-Pollutant emissions Assessment, 10/2010, <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>

effect (such as the Clean Air Act), and since ARB could do additional monitoring in the future, it need not complete its analysis.

**C. CARB cannot abandon AB32's health protection requirements by relying solely on other environmental laws**

Perfect combustion producing only carbon dioxide and water does not exist in the real world where we must breathe. Other combustion products that emit with CO<sub>2</sub> commonly include methane, nitrous oxide, PM, benzene, metals, and sulfur compounds to name a few. As ARB well knows, these all cause hotspots to form. Hotspots are areas where pollutants concentrate locally rather than dispersing. These areas can cause dire health and other quality of life consequences. Since the carbon cannot be separated from the other pollutants, it is wholly artificial to address the carbon as if it came in its own package.

ARB's position has been that it need not worry about co-pollutants and hotspots because other laws, such as the Clean Air Act, will prevent polluters from increasing air pollution, even as the GHG emissions from a particular facility increase. But it is unreasonable for ARB to rely on such laws. First, AB 32 explicitly provides that ARB, in implementing the statute, must seek to *complement* and not interfere with pollution reduction efforts, ensure that compliance with the regulations does not disproportionately impact low-income communities, *consider* overall societal benefits including *reductions in other air pollutants*, consider direct indirect and cumulative impacts including localized impacts in communities already disproportionately burdened, design any market mechanism to *prevent any increase* in TACS or criteria air pollutants, and ensure that market-based programs maximize co-benefits. (See Health & Safety Code §§ 38562(b)(2),(4),(6); 38570(1),(2),(3).) Cap and trade undermines these objectives because it enables large polluting facilities to inexhaustibly increase GHG emissions and therefore to increase its co-pollutants emissions.

A view that the Clean Air Act prevents increased pollution is not based in reason. First, the air districts focus on regional pollution rather than localized impacts when issuing an air permit. In reality, even regionally, many areas, such as the South Coast Air Quality Management District, remain in non-attainment for many criteria pollutants yet continue to issue new pollution permits to new and existing facilities.

Other factors also must be considered, such as limited resources to enforce violations of state and federal air laws, the fact that many sources and chemicals remain unregulated, and that releases from fugitive and intermittent operations are difficult to monitor. More subtly, polluters seek permits in excess of its estimated emissions to avoid violations. This also gives them ample room to increase pollution to the maximum a permit will allow, which actually increases pollution on the ground. Nothing prevents a polluter from then installing bigger equipment. ARB should not build in a system that encourages increased pollution. Cap and trade allows and encourages facilities to increase emissions, and ARB cannot rely on existing permits to stop them.

The last section of this comment letter provides a glaring example, revealing extreme-high California refinery combustion emissions exceeding any other U.S. region that all these laws had failed to identify up until now. It then explains how cap and trade specifically

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incentivizes increased emissions from the largest oil refining center in the western U.S. The comment documents here and throughout how emissions from refineries and other concentrated emissions increase concentrations of GHGs and co-pollutants in primarily low-income communities. Ultimately, co-pollutants are an issue that ARB must face directly. The Clean Air Act cannot serve as a justification to increase criteria pollutants and TACs and AB 32 does not endorse such an approach.

**D. Health impacts of Co-pollutants are unacceptably high in California**

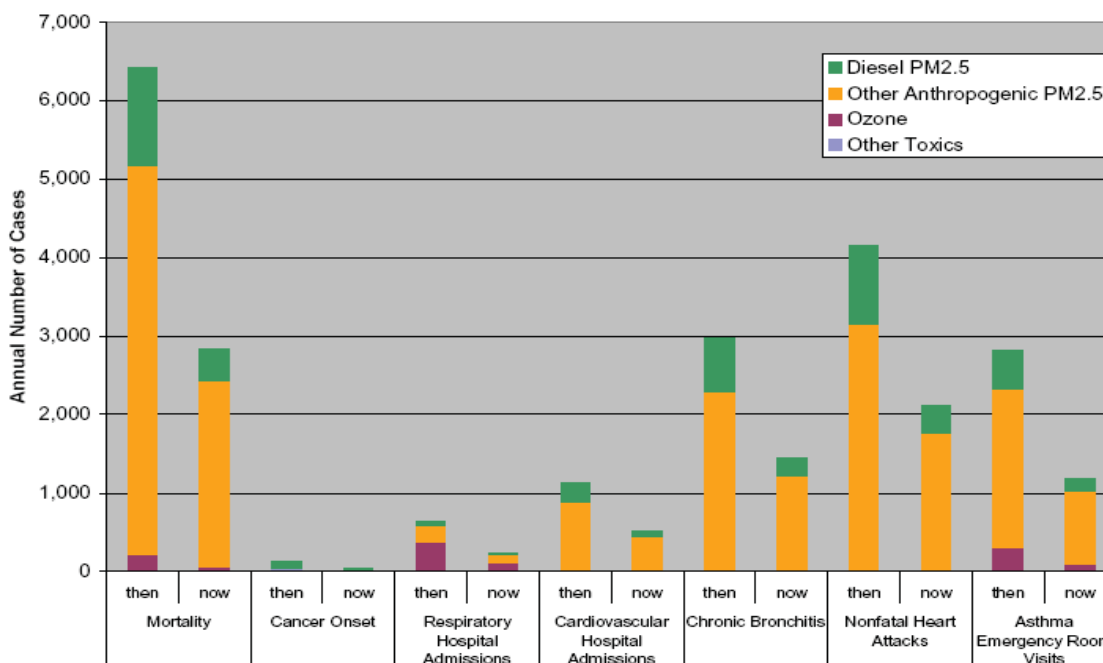
Bay Area example of pollution impacts and Environmental Injustices

Californians are still being negatively impacted by poor air quality, especially low-income communities of color. The San Francisco Bay region is frequently talked about as having much better air quality than the severe problems in the Los Angeles region. It is important to note that the Bay Area is a major oil refining region with much other heavy industry, has a major international port, goods movement, severe impacts from diesel trucking, and heavy traffic. This section provides details on the Bay Area example of air pollution impacts, as an example of fossil fueled pollution that burdens communities of color most severely (with reduced lifespans), and also impacts all Californians. Cap and trade will not only fail to improve this severe burden but can make it worse, as discussed above. Also see attachment L (California Department of Health Services (CDHS)) discussed in the part B above, which summarizes severe disproportionate impacts in one area of Southern California (Wilmington), and the San Joaquin Valley.

Since the Scoping Plan was adopted, the Bay Area Air Quality Management District (BAAQMD) released its 2010 Clean Air Plan (CAP), in which it takes a multi-pollutant approach. The prioritized pollutants in the CAP are: ground-level ozone and ozone precursors: ROG and NOx; Particulate matter (PM): both directly-emitted PM and secondary PM; key air toxics, such as diesel PM, benzene, 1-3 butadiene, acetaldehyde, formaldehyde, and the “Kyoto 6” greenhouse gases (GHGs), including carbon dioxide, methane and nitrous oxide.

The figure below (BAAQMD CAP, 2010) shows the incidence of selected health effects among San Francisco Bay Area residents from air pollution in 2008 compared to when data was first available. The “then” in the figure above represents the earliest data available – 1970 for zone, and the late 1980s for toxics and PM. The “now” presents data from 2008.

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Premature mortality related to air pollution is still an estimated 2,800 deaths per year in the Bay Area, largely attributed to other anthropogenic PM 2.5 and diesel PM 2.5, even though reductions have been made. According to BAAQMD, most premature deaths linked to PM 2.5 are associated with cardiovascular problems rather than cancer. Diesel PM 2.5 is still a large contributor to cancer onset.<sup>22</sup> Diesel exhaust contributes to 10-20% of PM-related mortality caused by cardiovascular problems. Other sources of PM, including secondary formation, is a primary contributor to PM-related deaths caused by cardiovascular problems. Cancer deaths related to diesel PM 2.5 exposures are 80-90 deaths per year.

The BAAQMD estimates annual health and societal costs from air pollution to be \$2 billion and a societal cost of \$28 per ton of greenhouse gases / CO2-equivalents emitted (See table below). Greenhouse gases have risen in the past 30 years.<sup>23</sup>

<sup>22</sup> Bay Area Air Quality Management District. Adopted September 15, 2010. Appendix A – Bay Area Air Pollution Burden: Past & Present. Final Bay Area 2010 Clean Air Plan. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx> (Attached as CBE Exhibit N BAAQMD air pollution burden)

<sup>23</sup> *Id.*

Health Effect	Unit Value (Cost per Incident, 2009 dollars)
Mortality (all ages)	\$6,900,000
Chronic Bronchitis Onset	\$409,189
Respiratory Hospital Admissions	Age 65 < : \$35,228 Age 65 > : \$33,375
Cardiovascular Hospital Admissions	Age 65 < : \$43,889 Age 65 > : \$38,759
Non-Fatal Heart Attacks	\$84,076
Asthma Emergency Room Visits	\$468
Acute Bronchitis Episodes	\$534, for a 6 day illness period
Upper Respiratory Symptom Days	\$35
Lower Respiratory Symptom Days	\$22
Work Loss Days	Daily Median Wage by County (\$168 to \$243)
School Absence Days	\$91
Minor Restricted Activity Days	\$61
Cancer	\$1,750,000
Greenhouse Gases	\$28 per metric ton (CO <sub>2</sub> equivalent)

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Although lifetime risks have dropped since the 1980's and 1990's from carcinogenic toxics in the Bay Area, risks are still high. Diesel lifetime cancer risks in 2008 were 318 per million Bay Area residents. Lifetime cancer risks (2008) were 405.3 per million Bay Area Residents (see table below). Currently the Bay Area mean PM 2.5 concentration is about 9.5 µg/m<sup>3</sup> with anthropogenic PM 2.5 contributing an average 6.5 µg/m<sup>3</sup>. Health burdens are mostly from premature mortality at about 2,800 annually costing approximately \$6.9 million per case (2008).

Compound	1 <sup>st</sup> year	Most recent year	Estimated Annual Bay Area Mean (µg/m <sup>3</sup> )		Lifetime Risk per million per ug/m3	Lifetime Risk per million Bay Area Residents		
			Earliest	2008		1990	2008	Reduction
Diesel	1987	2008	3.50	1.06	300.0	933.2	318.0	66%
Benzene	1987	2008	1.80	0.23	29.0	146.1	20.9	86%
1,3-butadiene	1989	2008	0.37	0.04	170.0	131.5	14.0	89%
Formaldehyde	1996	2008	2.11	1.37	6.0	18.2	10.1	44%
Acetaldehyde	1996	2008	0.84	0.69	2.7	4.5	3.4	25%
Carbon tetrachloride	1987	2006	0.10	0.10	42.0	27.0	26.2	3%
Methylene dichloride	1987	2006	0.83	0.31	1.0	2.6	1.1	59%
Perchloroethylene	1987	2008	0.39	0.02	5.9	13.1	0.7	95%
PAHs (risk-weighted)	1995	2004	0.15	0.09	1320.0	0.2	0.1	57%
Hexavalent chromium	1991	2006	0.28	0.07	150000.0	43.3	10.9	75%
Lifetime cancer risk	1990	2006				1318.7	405.3	69%

Because these estimates assume residents are exposed to the mean of each toxic, these are higher in impacted communities such as environmental justice communities, which bear the brunt of chemical exposures. In a community-based participatory research study on PM 2.5 air monitoring in East Oakland, CBE members found extremely high levels of PM 2.5 in East

Oakland, exceeding county levels, levels in the Oakland hills and state and federal standards up to four times (see figure below).<sup>24</sup>

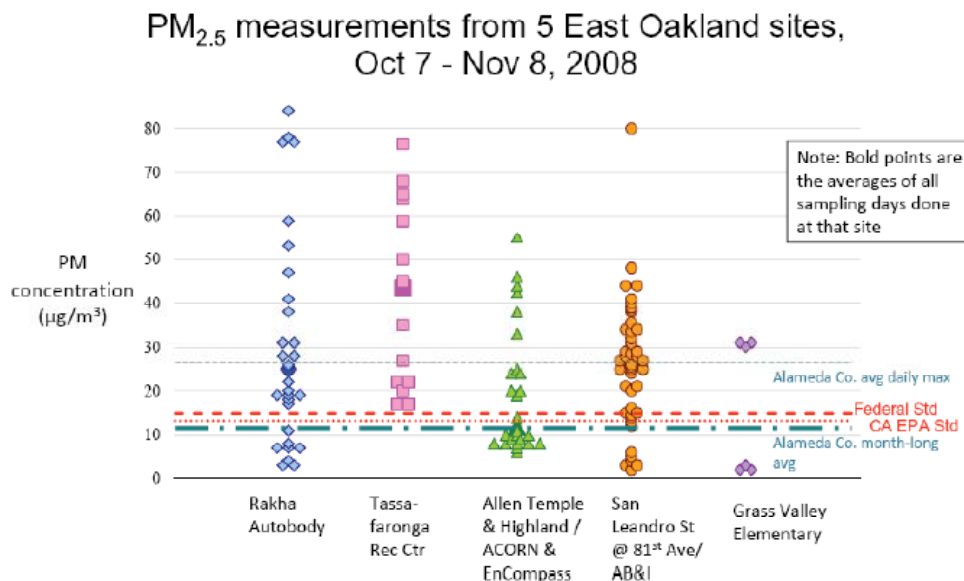


Figure 1. PM 2.5 measurements from 5 East Oakland sites, October 7-November 8, 2008. Each site is represented by a colored icon (left to right, x-axis): Rakha Autobody/ residential (blue diamond); Tassafaronga Recreation Center (pink squares); Allen Temple Baptist Church/ Highland Elementary/ ACORN Woodland Elementary/ Encompass Academy/ (green triangle); San Leandro street/ AB&I (orange circle); and Grass Valley Elementary (purple diamond). Each **bold** icon indicates the average concentration measured on a day of measurement. The average concentration of particulate matter per day increases with placement on the graph vertically (y-axis). The horizontal lines represent the Alameda County average daily maximum (blue line, 27 µg/m<sup>3</sup>) and the month-long average (blue line, 11 µg/m<sup>3</sup>); the U. S. EPA (EPA, 15 µg/m<sup>3</sup>) and the California EPA annual standard (red line, 12 µg/m<sup>3</sup>).

Health disparities in the flatlands of Oakland – East and West Oakland – translate to a life expectancy about 10 years less than someone living the Oakland Hills, which is only one to two miles away, and less than the Alameda County and Bay Area averages.<sup>25</sup> Environmental regulations –including land use decisions – must reduce pollution and exposures, first and foremost, in vulnerable communities, including environmental justice communities who bear the brunt of unhealthy conditions.

<sup>24</sup> Lee, Anna Y, et al. September 2010. East Oakland Particulate Matter 2.5 Community-based Air Monitoring Research Report. Communities for a Better Environment. Available at: <http://cbecal.org/campaigns/oakland.html> , (Attached as CBE Exhibit O East Oakland PM report Lee)

<sup>25</sup> Alameda County Public Health Department. 2008. Life and Death from Unnatural Causes – Health and Social Inequity in Alameda County. Available at: [http://www.acphd.org/user/data/DataRep\\_ListbyCat.asp?DataRepdivId=2&DataRepdivcatid=62](http://www.acphd.org/user/data/DataRep_ListbyCat.asp?DataRepdivId=2&DataRepdivcatid=62) (Attached as CBE Exhibit P Alameda health disparities)

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**E. CARB needs to adequately screen for communities impacted by air pollution in order to assess impacts of various alternatives**

To adequately assess impacts of the Scoping Plan and various alternatives on vulnerable Californians and specifically on low-income communities of color, the California Air Resources Board should consider recommendations from the AB 32 Environmental Justice Advisory Committee (EJAC). The EJAC recommended utilizing the Environmental Justice Screening Methodology developed by Dr.'s Manuel Pastor, Rachel Morello-Frosch and Jim Sadd.<sup>26</sup> This tool compared to another proposed by CARB staff, includes more evidence-based vulnerability indicators, regionally-appropriate indicators, prioritizes communities based on cumulative impacts, utilizes clear mapping results and includes proximity and land use analyses. This screening is important for ensuring that equitable and sufficient benefits are given and burdens are assessed and mitigated in a transparent way in the implementation of AB 32.

**F. New evidence shows carbon trading is causing harm to indigenous people through the offsets program/ REDD and is not effective in achieving real greenhouse gas reductions**

Around the world – environmental justice advocates, indigenous communities, forest-dependent communities and the Global South – are united that REDD — Reducing emissions from Deforestation and Degradation – has negative impacts on indigenous communities and is inadequate for addressing climate change. Despite protests, former California Governor Arnold Schwarzenegger signed an agreement with Chiapas, Mexico and Acre, Brazil.<sup>27</sup> REDD, REDD+ projects far too often exclude the needs of local and indigenous communities and their livelihoods, incentivize eviction of communities from their rightful land, and exacerbate poverty, while prioritizing profits for the industrial and agricultural sectors over forestry management and a number of other concerns.<sup>28, 29, 30</sup> The following are examples of the inadequacies of these programs:

<sup>26</sup> AB 32 Environmental Justice Advisory Committee. August 25, 2010. AB32 Environmental Justice Advisory Committee Comments on the Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution for AB 32 Assessments. California Air Resources Board. Available at: <http://www.arb.ca.gov/cc/ejac/meetings/081610/ejac-letter-ej-screening-method.pdf> (Attached as CBE Exhibit Q EJ Health Screening)

<sup>27</sup> Tropical Forest Group. November 21, 2010. Text of CA, Chiapas, Acre MOU on REDD (11/16/2010). <http://tropicalforestgroup.blogspot.com/2010/11/text-of-ca-chiapas-acre-mou-on-redd.html> (Attached as CBE Exhibit R Chiappas)

<sup>28</sup> EurekAlert. January, 24 2010. Bioscience Technology. New study suggests global pacts like REDD ignore primary causes of destruction of forests. <http://www.biosciencetechnology.com/News/Feeds/2011/01/industries-new-study-suggests-global-pacts-like-redd-ignore-p/> (Attached as CBE Exhibit S EurekAlert REDD)

<sup>29</sup> Climate Justice Research Project. December 2, 2010. Climate Justice Research Project Scholarly Note: Top Ten Disasters to Heed from REDD/REDD+ projects. Dartmouth College. <http://www.box.net/shared/zslxcet36> (Attached as CBE Exhibit T Climate Justice REDD)

<sup>30</sup> Indigenous Environmental Network. REDD Reader. <http://www.ienearth.org/REDD/index.html> (Attached as CBE Exhibit U IEN REDD)

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- A 2010 Assessment shows that South America has lost 4 million hectares per year to deforestation and [a] Africa lost 3.4 million hectares annually between 2000 and 2010 to deforestation.<sup>31</sup>
- Incidents of land grabs by governments and individuals who scheme to take advantage of REDD's forest-based carbon credits are growing and raising more concerns.<sup>32,33</sup>
- On the land grabs from communities in Chiapas as a result of the California-Chiapas REDD Agreement, one journalist, Jeff Conant (2010), writes:<sup>34</sup>

REDD will restrict access to forests for livelihoods and cultural practices; it will reduce biodiversity; it will force subsistence farmers into the wage economy; it will violate human rights and indigenous rights; and it will not reduce global warming... The greatest threat to indigenous communities in Chiapas is the loss of their livelihoods and their natural resource base to the profit-driven industrial sector that has traditionally sought access to their oil, their timber, their water, their pastureland and their other resources, and which now seeks access to their productive lands for the purpose of producing jatropha curca and other biofuel-producing crops to generate carbon offsets.

- Two decades after the rise of the Zapatista Movement in Chiapas, the Lacondon Community is still suffering from the State government attempt to takeover of their land. The government is using a monthly REDD payment of 2000 pesos to landholders for forest protection, in exchange, they can access vast areas of forest, but end up with limited jobs and opportunities.<sup>35</sup> In one forest-community called Amador Hernández, vaccinations were being sanctioned to force them to move or negotiate and even after accepting moving and relinquishing all rights to return to their land, the State did not follow through on promises that their new homes and land would be good, with good schools and health services, modern sewage and drainage systems.<sup>36</sup> Instead, they developed health problems and insecurity from poor housing construction, failing water and sanitation, lack of medicine and medical attention and poor land to grow food.
- Shiney Varghese (2010) writes about the impacts of carbon pacts on vulnerable communities and the inadequacy of these programs:<sup>37</sup>

<sup>31</sup> EurekAlert. January, 24 2010. Id.

<sup>32</sup> EurekAlert. January, 24 2010. Id.

<sup>33</sup> Jeff Conant. May 16, 2011. Apartheid Housing Posed as Solution to Climate Vulnerability in Chiapas. Global Justice Ecology Project. <http://climate-connections.org/2011/05/16/apartheid-housing-posed-as-solution-to-climate-vulnerability-in-chiapas/> (Attached as CBE Exhibit V Apartheid Housing)

<sup>34</sup> Jeff Conant. December 17, 2010. California-Chiapas REDD Partnership Heating up Quickly: Hearings in Sacramento. California's Global Warming Law AB 32 Greenlights Dangerous Cap and Trade Propositions. Global Justice Ecology Project. <http://climate-connections.org/2010/12/17/california-chiapas-redd-partnership-heating-up-quickly-hearings-in-sacramento/> (Attached as CBE Exhibit W California-Chiappas)

<sup>35</sup> Jeff Conant. April 7, 2011. A Broken Bridge to the Jungle: The California-Chiapas Climate Agreement Opens Old Wounds. Global Justice Ecology Project. <http://climate-connections.org/2011/04/07/a-broken-bridge-to-the-jungle-the-california-chiapas-climate-agreement-opens-old-wounds/> (Attached as CBE Exhibit X Broken Bridge Chiappas)

<sup>36</sup> Jeff Conant. April 7, 2011. Id.

<sup>37</sup> Shiney Varghese. November 24, 2010. The cost of adding carbon credits to clean water. <http://iatp.typepad.com/thinkforward/2010/11/cost-of-adding-carbon-credits-to-clean-water.html> (Attached as CBE Exhibit Y carbon credits cost to clean water)

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Even if problems associated with carbon trading practices and carbon markets were to be fixed, some fundamental problems would persist. First of all, when carbon credits are allocated to GHG-reduction activities, often practiced by communities and countries in the South, it is a means for passing on the responsibility of GHG reduction to those countries whose climate footprint is limited but whose climate vulnerability is high. In the case of water poor, they need finances, and are willing to carry the burden in order to have access to funds to help climate-proof their nation. Second it allows polluting communities and companies to continue with their current GHG-emitting practices at almost no cost to themselves. Thirdly, carbon trading becomes a means for generating profit from doing almost nothing, or close to nothing.

- Panama's REDD plan possibly endangers the Kuna people of Panama, with a cultural and spiritual identity inextricably linked to their land and who are already suffering from rising sea levels and increasingly intense storms, and the indigenous Emberá peoples of Darién region who have already suffered from the fastest rate of deforestation in Panama (40% of the Emberá territory over the past 15 years).<sup>38</sup> The plan may not even thwart deforestation or cause any net greenhouse gas reduction.<sup>39</sup>
- Greenpeace warned that timber and oil palm companies were taking over the billion-dollar REDD deal between Norway and Indonesia for converting 40% of remaining natural forest, including 80% of peatland and 50% of orangutan habitat, to plantations; conversions that have made Indonesia the world's third biggest emitter of greenhouse gases, rife with corruption.<sup>40</sup>

Climate negotiations bring only vague promises of money for climate adaptation and mitigation for indigenous communities even though they are most vulnerable to climate change and are targeted for REDD and REDD+ projects.

"...at least 19 of the plans explicitly contain provisions for tree plantations, which displace forest dwellers, degrade biodiversity, and cause high fire risk. Plantations are tolerated under the United Nations' definition of forests. They satisfy carbon investors who like precise measurement and predictability — not messy, biodiverse forest habitat... The Emberá of Panama, like the Ogiek of Kenya, have been the stewards of the land for millennia. But at best REDD would promise them compensation — and a dubious dependence on a cash economy, which tends to erode traditional culture. Especially in an age of climate chaos, the erosion of such stewardship is unacceptable. And in any case, nobody should mistake the initiative for a real solution to a changing climate. That remains what it was in Kyoto, and what it will be later this year in Durban: cut greenhouse gas emissions."<sup>41</sup>

<sup>38</sup> Ruxandra Guidi. December 8, 2010. Will a UN Climate-Change Solution Help Kuna Yala? National Geographic Daily News. <http://blogs.nationalgeographic.com/blogs/news/chiefeditor/2010/12/will-a-un-climate-change-solution-help-kuna-yala.html> (Attached as CBE Exhibit Z Guidi UN Climate)

<sup>39</sup> *Id.*

<sup>40</sup> Arlina Arshad, Agence France-Presse. November 23, 2010. Indonesia's Billion-Dollar Forest Deal in Danger: Greenpeace. Jakarta Globe. <http://www.thejakartaglobe.com/home/indonesias-billion-dollar-forest-deal-in-danger-greenpeace/408073> (Attached as CBE Exhibit AA Indonesia forest danger)

<sup>41</sup> Dennis Martinez. January 10, 2011. Slow death by carbon credits: Indigenous peoples can suffer from pollution compensation plan. The Boston Globe. [http://articles.boston.com/2011-01-10/bostonglobe/29338554\\_1\\_indigenous-peoples-carbon-credits-forests](http://articles.boston.com/2011-01-10/bostonglobe/29338554_1_indigenous-peoples-carbon-credits-forests) (Attached as CBE Exhibit BB slow death carbon credits)

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Between 150,000 to 200,000 people in the Congo basin alone have been evicted off their land – often by military force.<sup>42</sup>

**G. Offsets programs, including forestry trades have been notorious for false carbon reductions**

Evidence shows that the REDD program — Reducing emissions from Deforestation and Degradation – and REDD+ are flawed with fraud, lack of accountability, weak legislative language. The following are examples of how offsets programs have terrible impacts on vulnerable communities and are ineffective:

- Widespread fraud in trading carbon in the Europe’s Emissions Trading Scheme and large polluters have gamed the process that resulted in an overallocation of permits and crashed the markets.<sup>43</sup> Hendersen (2011) writes:

There was a failure to disclose that setting up carbon caps and trading mechanisms actually entailed the creation of costly, complicated new bureaucracies. Monitoring, verifying the offsets, RECs (renewable energy certificates) while lowering the levels (caps) on CO2 emissions was opposed by the polluters. The CO2 permits were to be auctioned, but this quickly turned into massive giveaways to polluters, which then sold them at a profit, as global levels continued to rise. Thus ‘cap and trade’ turned out to be less efficient than direct taxing and regulation. Meanwhile our Ethical Markets Green Transition Scoreboard researching all private investments in green technologies since 2007 reported \$ 2 trillion by Q1 2011. While politicians argued, Ethical Markets urged global pension funds and institutional investors to shift at least 10 per cent of their portfolios to green companies.

At the same time, the re-think on climate policy produced two ground-breaking reports from IPCC and UNFCCC itself with the World Meteorological Organisation. They advised broader approaches to global emissions beyond CO2 to focus on soot, methane, VOCs and ozone — pointing out that this could decelerate global warming more rapidly.

- The program fails to differentiate between forests and plantations and so companies deforest to create plantations and claim them as carbon offsets. One example is the Japanese company Oji Paper that wants to take forest-land in central Laos and plant 50,000 hectares of eucalyptus plantations and get REDD funding for it.<sup>44</sup>
- REDD-Monitor reported that Australian David John Nilsson, representing Hong Kong company (SCRL, Sustainable Carbon Resources Limited) falsely promised the remote Matsés indigenous people of Peru that they would make billions of dollars if they handed

<sup>42</sup> *Id.*

<sup>43</sup> Hazel Henderson. May 24, 2011. *Id.* <http://www.deccanherald.com/content/163665/emissions-trading-shown-ineffective.html>

<sup>44</sup> Chris Lang. November 29, 2010. Forest destroyer Oji Paper to carry out REDD feasibility study in Laos. REDD-Monitor. <http://www.redd-monitor.org/2010/11/29/forest-destroyer-oji-paper-to-carry-out-redd-feasibility-study-in-laos/#more-6560> (Attached as CBE Exhibit CC Oji Paper REDD)

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over the carbon rights to their forests, and promised to share 50% of the profits with the communities.<sup>45</sup>

- Another example in the South Indian community of Mettur in Tamil Nadu is Chemplast Sanmar, which has been emitting “unsafe” levels of mercury, chloroform and vinyl chloride, yet makes \$10 million a year from selling carbon credits to offset pollution emitted from American and European companies because it stopped emitting HFC-23, a potent greenhouse gas pollutant, costing the company \$2.2 million.<sup>46</sup>
- Guyana has failed to adequately implement the 2009 agreement with Norway because of project delays; violating limits on deforestation; lack of safeguarding the Guyana REDD+ Investment Fund; lack of transparency, public access to information and safeguards for land allocation to the indigenous Amerindians’ misuse of funds and inaccurate independent verification.<sup>47</sup>
- The Africa Carbon Exchange (ACX), launched in Nairobi on March 24, 2011 which, “because the bulk of forest and agriculture land is used by local communities, significant risks are associated with land tenure issues and social conflicts, with research showing an increase in land grabs of large areas of customary land in Africa by agribusiness and government agencies and...has serious implications for food production and food security in Africa.”<sup>48</sup> Shefali Sharma also points out that resources are needed for African countries to adapt to climate change.<sup>49</sup>
- Another example of false GHG-reductions is the case of the Vestergaard Frandsen company, which can accrue carbon credits worth billions for themselves for false GHG-reduction practices in order to provide clean water to poor sub-Saharan Africa.<sup>50</sup>
- In Costa Rica, Friends of the Earth Costa Rica / Coecoceiba stated its absolute opposition to the inclusion of the REDD program in carbon market mechanisms, and proposed analyzing alternative approaches.<sup>51</sup>
- Nigeria is aligning itself to include one million hectares of tropical forest with endemic primates and endangered tree species in REDD+ and Friends of the Earth Nigeria / Environmental Rights Action have already expressed concerns about including

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<sup>45</sup> Chris Lang. May 3, 2011. AIDSEP and COICA condemn and reject “carbon cowboy” David Nilsson and demand his expulsion from Peru. REDD-Monitor. <http://www.redd-monitor.org/2011/05/03/aidesep-and-coica-condemn-and-reject-carbon-cowboy-david-nilsson-and-demand-his-expulsion-from-peru/#more-8275> (Attached as CBE Exhibit DD Carbon Cowboy rejected)

<sup>46</sup> Will Evans. May 21, 2011. Global carbon market’s dirty secret. GlobalPost. (Attached as CBE Exhibit EE carbon market dirty secret) <http://www.globalpost.com/dispatch/news/regions/asia-pacific/india/110224/carbon-credits-india-environment>

<sup>47</sup> Chris Lang. March 25, 2011. Eight problems with Norway’s REDD support to Guyana: Open letter to Erik Solheim. <http://www.redd-monitor.org/2011/03/25/eight-problems-with-norways-redd-support-to-guyana-open-letter-to-erik-solheim/> (Attached as CBE Exhibit FF 8 problems Norway REDD)

<sup>48</sup> Shefali Sharma. April 21, 2011. Id. <http://www.iatp.org/files/The%20hype%20versus%20the%20reality%20of%20carbon%20markets042011.pdf>

<sup>49</sup> Id.

<sup>50</sup> Shiney Varghese. November 24, 2010. Id. <http://iatp.typepad.com/thinkforward/2010/11/cost-of-adding-carbon-credits-to-clean-water.html>

<sup>51</sup> Ronnie Hall. 2010. REDD: The Realities in Black and White. Friends of the Earth International. <http://www.foei.org/en/resources/publications/pdfs/2010/redd-the-realities-in-black-and-white/view?searchterm=cameroon%20redd> (Attached as CBE Exhibit GG FOE REDD)

indigenous communities, land evictions and carrying on culture and livelihoods for forest-dependent communities.<sup>52</sup>

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#### IV. Other Alternatives Are Reliable & Avoid Cap & Trade's Significant Environmental Impacts

CARB could entirely avoid the major negative impacts from Cap and Trade, through an alternative set of direct pollution controls (additional details provided in the text after the table below). These are much more reliable than Cap and Trade to achieve well over the current 17 million metric tonnes CO<sub>2</sub> equivalent (MMTCO<sub>2</sub>e) cap and trade target. The measures use existing, cost-effective technologies. Most use commonplace methods that could be adopted quickly and achieve major emissions reductions of both greenhouse gases and toxic co-pollutants within five years or much less. One is more ambitious in scope (the 33% Renewable Portfolio Standard for oil refineries), but entirely feasible, using only existing technologies and practices. That measure requires overcoming big political obstacles for California regulators to challenge the oil industry. This industry has up to now been subject to far less stringent requirements under greenhouse gas and clean energy requirements compared to the electricity sector. (Oil refineries currently have requirements for zero tonnes of greenhouse gas reductions, either through the Low Carbon Fuel Standard, or through Cap and Trade.)

There are likely additional ways that CARB could directly reduce emissions from the sources listed below, but serious development within the Scoping Plan of such direct measures for Industrial sources is completely missing, so we have identified some feasible options.

#### Direct controls alternatives cut smog, toxics, & can replace > 17 MMTCO<sub>2</sub>e Cap & Trade target

	GHG Reduction Estimations (metric tonnes <sup>53</sup> CO <sub>2</sub> e per year)	Estimated Co-pollutant Reduction Benefits (US tons per day or year)
<b>Industrial</b>		
1. Industrial Energy Efficiency Improvements (saves money)	~ <b>3 million or more</b> - Including Boiler and Heater upgrades and others. Thorough audits need to be implemented and calculations made public to more specifically assess other reductions	Thousands of tons per year of TOG, CO, NO <sub>x</sub> , SO <sub>x</sub> , PM, PM <sub>10</sub>  (If 10% refinery reduction met, from statewide inventory)
2. Industrial methane exemption removal & other methane	<b>3 million or more</b> – through control of fugitive methane emissions in oil drilling and other industrial operations, potentially also CO <sub>2</sub> emissions from the same sources	~136,000 tpy smog-forming methane
3. Clean Electricity for Refineries (they use signif. grid)	<b>1.2 million</b> – through requirements for replacement of average grid electricity with clean renewable contracts	+ criteria and toxic emissions reductions

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<sup>52</sup> Ronnie Hall. 2010. REDD: Id.

<sup>53</sup> Note that metric tonnes (1000 kilograms or 2200 lbs) and U.S. tons (2000 lbs) are similar, but are different units of measurement and frequently spelled differently to differentiate them

electricity)		
4. Clean Electricity for Cement Plants,	<b>1 million</b> – through requirements for replacement of average grid electricity with clean renewable contracts	+ criteria and toxic emissions reductions
5. Other Cement Plant reductions	<b>1.3 million</b> – through requirements for replacement of average grid electricity with clean renewable contracts	Mercury
6. Crude Quality Requirements	<b>8 million</b> compared to current baseline, <b>also avoids 20 million</b> increase that would occur by 2020 without stopping the higher carbon crude oil switch well documented to be occurring in CA refineries	Crude Quality Requirements
7. 33% Renewable Portfolio Standard (RPS) for Oil Refineries  (already required for power plants, can be phased in))	<b>12 million</b> (from refineries) + Plus much more from vehicles replaced with Zero Emission Vehicles (ZEV), clean electricity, fuel efficiency, expanded public transit  Methods: reinstating original 10% pure Zero Emission Vehicles (ZEV) for auto mfg. would have reduced 13 million from vehicles + another couple million from reduced refinery production	<u>Refineries</u> - Tens of thousands of tons per year of TOG, CO, NOx, SOx, PM, PM10 (33% of statewide refinery emissions)  <u>Vehicles</u> - Even higher criteria and toxic pollutant reductions from major replacement of 1/3 of state's fossil-fueled vehicles with clean alternatives
<b>Expanded clean transportation goals (paired with 33% RPS for oil refineries )</b>		
8. Reinstate 10% pure ZEV (Zero Emission Vehicle) mandate for auto makers, beginning with 10% by 2020 (originally was to be met in 2003)		
9. <b>Public Transit funding</b> through these models:		
<ul style="list-style-type: none"> <li>• <b>Oil drilling fee:</b> A 6% fee on oil drilling (at 240 million barrels extracted from California in 2008) would generate more than \$1 billion a year.<sup>54</sup> (CA is only state not requiring this.)</li> <li>• <b>Canada's carbon fee:</b> generated \$740 million in 2010-11, another \$950 million expected 2011-12.<sup>55</sup></li> <li>• <b>Washington State carbon fee:</b> University of Washington<sup>56</sup> found at \$30/tonne CO<sub>2</sub>, this would reduce Washington emissions by 8.4%, with \$2.1 billion in revenues in 2035</li> </ul>		
<b>Additional large sources can bring GHG reductions, copollutant benefits, and funding:</b>		
10. Other major sources should be similarly assessed for reductions, including:		
<ul style="list-style-type: none"> <li>• Added <u>Power Plant</u> requirements – stop building unnecessary new fossil fueled plants, don't provide credits to offset their emissions, speed up alternatives deployment</li> </ul>		

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<sup>54</sup> The CEC found about 240 million barrels of crude extracted in 2008 from CA lands and waters, with price at \$70/bbl, a 6% tax contemplated by Proposition 87 would have generated more than \$1 billion a year.<sup>54</sup>  
<http://articles.latimes.com/2009/jun/15/business/ft-hiltzik15> (Attached as CBE Exhibit HH CEC carbon fee gives \$1billion)

<sup>55</sup> *B.C. may put carbon tax toward transit*, by Kelly Siniski, Vancouver Sun, May 18, 2011,  
<http://www.vancouversun.com/technology/carbon+toward+transit/4799888/story.html> (Attached as CBE Exhibit II BC Carbon fee toward transit)

<sup>56</sup> University of Washington, Evans School of Public Affairs study <http://evans.washington.edu/students/forms-advising/degree-projects/archive/washington-state-carbon-tax-fiscal-and-environmental-impacts> (Attached as CBE Exhibit JJ -UnivWashington carbon fee \$2billion revenues)

<ul style="list-style-type: none"> <li>• <u>Large Agricultural</u> sources – Require solar pumping, return biomass to soil, biofilter methane.</li> <li>• <u>Port &amp; Rail</u> expanded electrification replacing diesel, use clean electricity, require energy efficiency measures, prevention refrigerant coolant leaks.</li> <li>• <u>Low Carbon Fuel Standard</u> - Ban importing any Canadian Tar Sands-derived oils; stop allowing worsening of crude oil inputs; remove corn ethanol as acceptable fuel; remove pollution trading</li> </ul>
<b>TOTAL</b> Much greater than 17 MMTCO <sub>2</sub> e cap and trade target

**The direct industrial reductions measures above are realistic from a technical and cost-effectiveness view, for example:**

- Industrial Energy Efficiency Improvements: There are already-identified measures that CARB has documented for replacing and improving grandfathered Industrial Boilers & Heaters, which saves money, but these are currently inside the Cap and Trade program. As a result, feasible direct cleanup becomes a mere option. It is also very likely that if energy efficiency audits are thorough and made public, best practices will be identified for separate refinery operations which can be implemented at all facilities. When required, such efficiency pays off over time because of major fuel cost savings, and are also jobs-producing. However, audits and calculations are currently allowed by CARB to be kept secret by industrial facilities, with only a summary of results reported.
- Industrial methane exemption removal & other methane reductions: During continued regional ground-level ozone rulemaking, rules are constantly updated. The State should require that each regional air quality agency immediately begin removing these exemptions, to be completed within 5 years. Other reductions were identified by CARB as achievable. (See section below.)
- Clean Electricity for Refineries and Cement Plants, and additional Cement reductions: Refiners and Cement producers can purchase grid power from zero-emission renewable suppliers such as wind and/or thermal solar generation suppliers; the suppliers can provide it and in fact would further expand production with the financial support those purchases would bring. ARB also identified additional reductions achievable from direct controls on cement facilities. ARB can and should require that they do so.

Additional measures in the table are feasible using available technologies, and are discussed in the detailed sections below. Currently, the Scoping Plan has no requirements for direct emission reductions from oil refineries, cement plants, and other large industrial sources.

#### Industrial Energy Efficiency, including Boiler & Heater replacement & optimization

CBE proposed doing industrial energy efficiency audits, and implementing their results during the original Scoping Plan development. Energy efficiency is known to get the biggest bang for the buck in reducing emissions, since less polluting fuel burned means the associated pollution is entirely prevented (not just reduced). Energy efficiency is also quite cost-effective, saving the cost of fuel. CARB did add an energy efficiency audit regulation to the Scoping

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Plan, but it allows the unscientific practice of audits kept secret by the large industrial sources such as the oil companies with only generalized summaries submitted to CARB, and implementation of results are not required.<sup>57</sup>

CARB has recently announced that it intends to require implementation of results of the industrial audits so that facilities will have to reduce their energy use. If this occurs, it would make the measure the only requirement for direct greenhouse controls for industrial facilities in California,<sup>58</sup> but reliable reductions would still depend on audits being publicly verifiable. CARB has not yet provided details or a public process related to this intention. Also, the audit implementation will be inside the Cap and Trade program, so it is unclear how such a requirement would result in any direct reductions of local emissions, or would still be tradeable. The tons of reduction are unknown. Still, if data begins to be collected and publicly verified, and energy audit results are required to be implemented, this tool can achieve substantial reductions in energy use, greenhouse gases, and criteria and toxic co-pollutants near these large facilities.

One example of achievable measures for industrial sources is replacement of old and inefficient boilers and heaters, upgrading existing ones, and maintenance. These sources burn large amounts of fossil fuels at oil refineries and other industries and largely drive these industrial processes. Oil refineries make up the bulk of the emissions and reduction opportunities from this category, and perhaps should be separately treated compared to less hazardous facilities, such as Food industries.

CARB's staff identified large reductions in fuel use that would be achievable and very cost-effective, using different methods listed below, but these were evaluated under the Cap and Trade program as: compliance pathways," which are currently tradeable and not required to be carried out. CARB evaluated Department of Energy Data on industrial boilers and heaters and provided two datasheets<sup>59</sup> as part of the Cap and Trade program, under the compliance pathways appendix.<sup>60</sup> Instead of evaluating these as part of a Cap and Trade program, CARB require these improvements directly, using the identified equipment improvement methods. CARB identified many options for greatly and cost-effectively reducing fuel use from industrial boilers and heaters, including the following:

1. Replace low and medium efficiency Boilers
2. Optimize Boilers by reducing excess air
3. Retrofitting Feedwater Economizers

<sup>57</sup> Only very generalized summaries of the audits are required to be submitted to CARB. This over-protectiveness of large industrial facilities by CARB in keeping information out of even CARB's possession means the public has no basis for judging the results. This is unnecessary overkill since CARB already removes Confidential Business Information when the public makes records act requests, and is also unscientific since secret calculations cannot be the basis of proven results. Without being required to submit and substantiate the results, industry energy audits have a poor chance of even identifying worst and best individual equipment units and practices. This is especially unfortunate in the oil industry, where each refinery is highly complex and customized.

<sup>58</sup> A small possible exception is that requirements for oil drilling operations are slated for 1.1 MMTCO<sub>2</sub>e reductions in the Scoping Plan, but in the recent CARB document on status of the plan, CARB announced that this measure is under review and may not be met. (See our comments in this letter on methane source reductions.) Oil refineries and all other industrial sources are required to get zero tons of direct reductions in the Scoping Plan.

<sup>59</sup> Compliance Pathways Analysis – Boilers, available at <http://www.arb.ca.gov/cc/capandtrade/capandtrade/compauthboiler.xls> and Compliance Pathways Analysis – and Process Heaters, available at <http://www.arb.ca.gov/cc/capandtrade/capandtrade/compauthprocessheat.xls>

<sup>60</sup> Page <http://www.arb.ca.gov/regact/2010/capandtrade10/capv3appf.pdf>

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4. Retrofit with Air Preheaters
5. Blowdown Reduction With Controls and with Feedwater Cleanup
6. Blowdown Heat Recovery
7. Optimize Steam Quality
8. Optimize Condensate Recovery
9. Minimize Vented Steam
10. Insulation Maintenance
11. Steam Trap Maintenance
12. Steam Leak Maintenance
13. Replace Low and Medium Efficiency Heaters
14. Optimize Heaters
15. Recover Flue Gas Heat
16. Replace Refractory Brick
17. Insulation Maintenance

These reduction measures in total achieve about 4 million TCO<sub>2</sub>E/year, and save about \$46 million dollars, as shown in the following charts excerpted from the data CARB provided.

In our proposed set of environmentally superior alternatives that should replace Cap and Trade, we only included 3 MMTCO<sub>2</sub>E/year, since these are not necessarily all additive (some of these methods may be overlapping, such as replacing or improving boilers). However, this is one source of energy efficiency measures identified, and industrial audits are likely to identify many others. The following tables show the specific data we compiled from the datasheets CARB provided:

#### Industrial Boilers: Annual Greenhouse Gas Reductions

Sub Sector	1. Replace Boilers		2. Optimize Boilers		3. Feedwater Economizer		TOTAL 1-3
	Low Efficiency Boilers (Category 1)	Medium Efficiency Boilers (Category 2)	Reduce Excess Air of Boilers (Category 1)	Reduce Excess Air of Boilers (Category 2)	Retrofit with Feedwater Economizer (Category 1)	Retrofit with Feedwater Economizer (Category 2)	
Petroleum	177,002	172,685	79,533	47,720	35,400	21,240	533,579
Food	11,416	12,532	7,010	4,206	5,461	3,276	43,902
Wood Products	13,277	12,953	5,966	3,579	4,647	2,788	43,210
Chemicals	26,155	25,517	11,752	7,051	5,231	3,139	78,846
Oil and Gas	160,875	109,866	50,600	30,360	39,414	23,649	414,764
Total	388,724	333,552	154,862	92,917	90,153	54,092	1,114,300
Sub Sector	4. Air Preheater		5. Blowdown Practices		6. Blowdown Heat Recovery		TOTAL 4-6
	Retrofit with Air Preheaters (Category 1)	Retrofit with Air Preheaters (Category 2)	Reduction With Controls (Category 1)	Reduction with Feedwater Cleanup (Category 2)	Heat Recovery (Category 1)	Heat Recovery (Category 2)	
Petroleum	8,850	5,310	10,030	30,090	17,700	10,620	82,601
Food	936	562	1,279	3,838	1,560	936	9,112
Wood Products	797	478	1,089	3,266	1,328	797	7,754
Chemicals	1,657	994	1,482	4,446	2,616	1,569	12,764
Oil and Gas	6,757	4,054	9,234	27,703	11,261	6,757	65,766
Total	18,996	11,398	23,114	69,343	34,465	20,679	177,995

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	7. Optimize Steam Quality		8. Optimize Condensate		9. Minimize Vented Steam		
Sub Sector	Optimize Steam Quality (Category 1)	Optimize Steam Quality (Category 2)	Optimize Condensate Recovery (Category 1)	Optimize Condensate Recovery (Category 2)	Minimize Vented Steam (Category 1)	Minimize Vented Steam (Category 2)	TOTAL 7-9
Petroleum	6,844	4,106	9,440	5,664	12,095	7,257	45,407
Food	1,175	705	832	499	1,664	999	5,875
Wood Products	1,000	600	708	425	1,416	850	4,999
Chemicals	1,011	607	1,395	837	1,787	1,072	6,710
Oil and Gas	8,483	5,090	6,006	3,604	11,449	6,869	41,501
Total	18,514	11,109	18,381	11,029	28,412	17,047	104,492
	10. Insulation Maint.		11 Steam Trap Maint.		12 Steam Leak Maint.		
Sub Sector	Insulation Maintenance (Category 1)	Insulation Maintenance (Category 2)	Steam Trap Maintenance (Category 1)	Steam Trap Maintenance (Category 2)	Steam Leak Maintenance (Category 1)	Steam Leak Maintenance (Category 2)	TOTAL 10-12
Petroleum	165,202	44,250	177,002	177,002	59,001	35,400	657,856
Food	14,562	3,900	15,602	15,602	5,201	3,120	57,987
Wood Products	12,392	3,319	13,277	13,277	4,426	2,655	49,345
Chemicals	24,412	6,539	26,155	26,155	8,718	5,231	97,210
Oil and Gas	105,105	28,153	112,612	112,612	37,537	22,522	418,542
Total	321,671	86,162	344,648	344,648	114,883	68,930	1,280,941
						GRAND TOTAL	2,677,728
Total from Petroleum, Chemicals, Oil & Gas (Excluding Food & Wood Products)						MMTCO <sub>2</sub> e	2,455,546

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**Industrial Boilers: Annual Costs and Savings from GHG reduction measures \$36 million/year**

Industrial Boiler: Annual Costs and Savings from GHG Reduction Measures - \$50 million/year							
	1. Replace Boilers		2. Optimize Boilers		3. Feedwater Economizer		
Sub Sector	Low Efficiency Boilers (Category 1)	Medium Efficiency Boilers (Category 2)	Reduce Excess Air of Boilers (Category 1)	Reduce Excess Air of Boilers (Category 2)	Retrofit with Feedwater Economizer (Category 1)	Retrofit with Feedwater Economizer (Category 2)	TOTAL 1-3
Petroleum	\$12,643,626	\$ 26,045,204	\$ (8,059,514)	\$ (1,703,494)	\$ 1,254,479	\$ 3,307,725	\$33,488,026
Food	\$2,144,114	\$ 3,249,083	\$ (710,413)	\$(150,156)	\$ (158,390)	\$ 158,334	\$ 4,532,572
Wood Products	\$ 1,307,731	\$ 2,432,751	\$ (604,536)	\$ (127,777)	\$ (134,784)	\$134,737	\$3,008,121
Chemicals	\$2,201,467	\$ 4,292,845	\$ (1,190,943)	\$ (251,723)	\$240,895	\$ 544,301	\$5,836,841
Oil and Gas	\$2,475,871	\$ 18,482,945	\$ (5,127,634)	\$ (1,083,799)	\$ (1,412,167)	\$873,891	\$14,209,107
Total	\$ 20,772,809	\$ 54,502,827	\$ (15,693,040)	\$ (3,316,950)	\$ (209,967)	\$ 5,018,987	\$ 61,074,667
	4. Air Preheater		5. Blowdown Practices		6. Blowdown Heat Recovery		
Sub Sector	Retrofit with Air Preheaters (Category 1)	Retrofit with Air Preheaters (Category 2)	Reduction With Controls (Category 1)	Reduction with Feedwater Cleanup (Category 2)	Retrofit with Air Preheaters (Category 1)	Retrofit with Air Preheaters (Category 2)	Reduction With Controls (Category 1)
Petroleum	\$ (509,239)	\$158,881	\$ (138,514)	\$900,325	\$ (1,018,477)	\$ 8,146	\$ (598,879)
Food	\$ (37,490)	\$ 36,455	\$ (17,668)	\$ 114,839	\$ (89,775)	\$718	\$7,080
Wood Products	\$ (31,903)	\$ 31,022	\$ (15,035)	\$ 97,723	\$ (76,395)	\$ 611	\$ 6,024
Chemicals	\$ (51,852)	\$ 81,895	\$ (20,468)	\$133,040	\$ (150,499)	\$ 1,204	\$ (6,681)
Oil and Gas	\$ (270,596)	\$263,129	\$ (127,523)	\$828,884	\$ (647,977)	\$5,182	\$51,099
Total	\$ (901,079)	\$ 571,382	\$ (319,208)	\$2,074,810	\$ (1,983,123)	\$15,861	\$ (541,357)
	7. Optimize Steam Quality		8. Optimize Condensate		9. Minimize Vented Steam		
Sub Sector	Optimize Steam Quality (Category 1)	Optimize Steam Quality (Category 2)	Optimize Condensate Recovery (Category 1)	Optimize Condensate Recovery (Category 2)	Minimize Vented Steam (Category 1)	Minimize Vented Steam (Category 2)	
Petroleum	\$ (543,459)	\$ (146,498)	\$ (336,777)	\$ 210,755	\$ (1,489,351)	\$ (787,825)	\$ (3,093,155)
Food	\$ (93,330)	\$ (25,158)	\$ (29,686)	\$18,577	\$ (204,925)	\$ (108,400)	\$ (442,921)
Wood Products	\$ (79,420)	\$ (21,409)	\$ (25,261)	\$15,809	\$ (174,384)	\$ (92,244)	\$ (376,910)
Chemicals	\$ (80,306)	\$ (21,648)	\$ (49,765)	\$31,143	\$ (220,079)	\$ (116,416)	\$ (457,071)
Oil and Gas	\$ (673,636)	\$ (181,589)	\$ (214,265)	\$ 134,087	\$ (1,409,779)	\$ (745,734)	\$ (3,090,916)
Total	\$ (1,470,151)	\$ (396,303)	\$ (655,754)	\$ 410,371	\$ (3,498,518)	\$ (1,850,618)	\$ (7,460,974)
	10. Insulation Maint.		11 Steam Trap Maint.		12 Steam Leak Maint.		
Sub Sector	Insulation Maintenance (Category 1)	Insulation Maintenance (Category 2)	Steam Trap Maintenance (Category 1)	Steam Trap Maintenance (Category 2)	Steam Leak Maintenance (Category 1)	Steam Leak Maintenance (Category 2)	
Petroleum	\$ (9,505,789)	\$ (641,639)	\$ (17,925,175)	\$(14,116,067)	\$ (4,684,991)	\$ 672,186	\$ (46,201,475)
Food	\$ (837,896)	\$ (56,558)	\$ (1,580,031)	\$ (1,244,274)	\$ (412,963)	\$59,250	\$ (4,072,471)
Wood Products	\$ (713,020)	\$ (48,129)	\$ (1,344,549)	\$ (1,058,832)	\$ (351,416)	\$ 50,420	\$ (3,465,526)
Chemicals	\$ (1,404,657)	\$ (94,814)	\$ (2,648,778)	\$ (2,085,911)	\$ (692,295)	\$99,328	\$ (6,827,127)
Oil and Gas	\$ (6,047,784)	\$ (408,225)	\$ (11,404,376)	\$ (8,980,941)	\$ (2,980,691)	\$427,659	\$ (29,394,357)
Total	\$(18,509,146)	\$ (1,249,365)	\$ (34,902,909)	\$(27,486,024)	\$ (9,122,356)	\$1,308,843	\$ (89,960,957)
					GRAND TOTAL		\$ (36,888,620)
Total from Petroleum, Chemicals, Oil & Gas (Excluding Food & Wood Products)							\$ (36,084,589)

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Cont'd



**Industrial Heaters: Annual GHG Reductions**

	1. Replace Heaters		2. Optimize Heaters		3. Recover Flue Gas Heat		
Petroleum	426,777	267,169	147,659	88,595	65,724	39,434	1,035,358
Food	8,168	5,113	2,826	1,696	2,201	1,321	21,324
Iron and Steel	3,917	2,452	1,355	813	1,056	633	10,227
Chemical	10,058	6,297	3,480	2,088	1,549	929	24,402
<b>Total</b>	<b>448,920</b>	<b>281,031</b>	<b>155,320</b>	<b>93,192</b>	<b>70,530</b>	<b>42,318</b>	<b>1,091,311</b>
	4. Replace Refract. Brick		5. Insulation Maint.				
Petroleum	8,763	5,258	306,710	82,155			402,886
Food	168	101	5,870	1,572			7,711
Iron and Steel	80	48	2,815	754			3,698
Chemical	207	124	7,229	1,936			9,495
<b>Total</b>	<b>9,218</b>	<b>5,531</b>	<b>322,624</b>	<b>86,417</b>			<b>423,790</b>
<b>GRAND TOTAL</b>							<b>1,515,101</b>
Total Petroleum & Chemical (excluding Iron & Steel, & Food) MMTCO <sub>2</sub> e							<b>1,472,141</b>

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**Annual Costs and Savings due to implementing GHG reduction measures (from saved fuel costs)**

→ Saves \$9.8 million/year - DOUBLE CHECK

	1. Replace Heaters		2. Optimize Heaters		3. Recover Flue Gas Heat		
Sub Sector	Replace Low Effic. Heaters	Replace Med. Effic. Heaters	Optimize Heater (Category 1)	<b>Total 1-3</b>	Recover Flue Gas Heat (Category 1)	Recover Flue Gas Heat (Category 2)	<b>Total 1-3</b>
Petroleum	\$9,271,118	\$32,414,511	\$(14,953,610)	\$(3,160,661)	\$529,433	\$4,341,452	\$28,442,242
Food	\$347,654	\$790,578	\$(286,186)	\$(60,489)	\$17,732	\$145,403	\$954,692
Iron and Steel	\$166,735	\$379,162	\$(137,255)	\$(29,011)	\$8,504	\$69,736	\$457,871
Chemical	\$317,153	\$862,606	\$(352,433)	\$(74,492)	\$12,478	\$102,321	\$867,633
<b>Total</b>	<b>10,102,660</b>	<b>\$34,446,857</b>	<b>\$(15,729,484)</b>	<b>\$(3,324,653)</b>	<b>\$568,147</b>	<b>\$4,658,912</b>	<b>\$30,722,439</b>
	4. Replace Refract. Brick		5. Insulation Maint.				
Sub Sector	Replace Refractory Brick (Category 1)	Replace Refractory Brick (Category 2)	Insulation Maintenance (Category 1)	Insulation Maintenance (Category 2)			<b>Total 4-5</b>
Petroleum	\$(810,811)	\$(302,542)	\$(17,648,272)	\$(1,134,544)			\$(19,896,169)
Food	\$(15,517)	\$(5,790)	\$(337,757)	\$(21,713)			\$(380,777)
Iron and Steel	\$(7,442)	\$(2,777)	\$(161,988)	\$(10,414)			\$(182,621)
Chemical	\$(19,110)	\$(7,130)	\$(415,942)	\$(26,739)			\$(468,922)
<b>Total</b>	<b>\$(852,880)</b>	<b>\$(318,239)</b>	<b>\$(18,563,959)</b>	<b>\$(1,193,411)</b>			<b>\$(20,928,489)</b>
<b>GRAND TOTAL</b>							<b>\$9,793,950</b>
Total Petroleum & Chemical (excluding Iron & Steel, & Food)							<b>\$8,944,785</b>

Removal of methane exemptions and other reductions from methane sources

During the development of the 2008 Scoping Plan, CBE commented that it is no longer justifiable to exempt methane from smog regulations, as methane is now known to be both a smog precursor and potent greenhouse gas.<sup>61</sup> Although ARB did not adopt a requirement in the Scoping Plan for removing methane exemptions from all smog regulations in the state, ARB did include two control measures for methane sources (and CO<sub>2</sub> from these same sources). These were Oil and Gas Extraction and Transmission (drilling) with 1.1 MMTCO<sub>2</sub>e reduction planned, and Recycling and Waste (Landfill Methane), with 1.0 MMTCO<sub>2</sub>e. These appear to be the two largest methane sources in the State (excluding agriculture sources).

ARB has not yet carried out regulation of these sources, but has prepared additional studies and surveys of emissions. In these surveys, ARB found emissions higher than the Scoping Plan inventory. This is not surprising since methane is exempt in most smog regulations, and since there were no greenhouse gas regulations, methane was not rigorously monitored. In the category of oil and gas extraction and transmission, a 2009 ARB staff presentation<sup>62</sup> evaluating both methane and CO<sub>2</sub> emissions from this source, found that vented and fugitive emissions, (estimated in the Scoping Plan at 0.8 MMTCO<sub>2</sub>E) was actually 2.9 to 3.4 MMTCO<sub>2</sub>E, and combustion emissions (estimated at 17.9) was 19 to 19.5 MMTCO<sub>2</sub>E (page 12). Together these add up to 3.1 to 4.1 additional MMTCO<sub>2</sub>E compared to the Scoping Plan for this source.

Despite the higher emissions for this source, the Scoping Plan update<sup>63</sup> (page 5) found, without identifying a reason, that it may not get reductions from these oil drilling operations,

**Industrial Measures (for sources covered under cap-and-trade program)**

Industrial measures implemented by sources not covered under cap-and-trade program address emissions from oil and gas extraction and transmission operations. The Scoping Plan identifies a potential reduction of 1.1 MMTCO<sub>2</sub>e for these measures. These measures are under review; potential reductions are uncertain at this time.

<http://www.arb.ca.gov/cc/oil-gas/oil-gas.htm>

<http://www.arb.ca.gov/cc/gas-trans/gas-trans.htm>

Regarding the fugitive sources, CARB's update does not identify why these emission reductions were uncertain. Control of industrial fugitive emissions sources are well-known, through requirements for leak standards for valves, flanges, pumps, and compressors and LDAR

<sup>61</sup> CBE May 2008 Comments on AB32 Scoping Plan, (Attached as CBE Exhibit KK CBE comments May 2008 Scoping Plan)

<sup>62</sup> CARB staff presentation, Oil & Natural Gas Production, Processing, and Storage Public Workshop, [http://www.arb.ca.gov/cc/oil-gas/meetings/Workshop\\_Presentation\\_12-8-09.pdf](http://www.arb.ca.gov/cc/oil-gas/meetings/Workshop_Presentation_12-8-09.pdf)

<sup>63</sup> [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf), p 5.

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programs (Leak Detection and Repair). Most of these fugitive emissions of 2.9 to 3.4 MMTCO<sub>2</sub>E could be eliminated through such programs. The source also includes another approximate 19 MMTCO<sub>2</sub>E from combustion, which also likely has options for reducing emissions through improved efficiency, reduced flaring, etc.

It is important to achieve the fugitive and combustion source reductions from industrial operations not only to reduce GHG emissions, but also to reduce toxic and odorous copollutants such as hydrogen sulfide. People who live near oil drilling operations have great difficulty getting relief from these odors despite existing odor abatement programs at local air districts.

It is likely that other industrial methane sources have higher emissions than the state inventories indicate especially for fugitive sources that are harder to monitor. For compounds exempt in smog regulations, it is even less likely that inventories capture the full emissions. The staff presentation on oil drilling operations confirms this problem: "Districts typically do not inventory GHGs" (page 5). We urge CARB to add to the Scoping Plan a requirement that all methane exemptions be removed within five years, and that methane emissions be more accurately inventoried.

We included a reduction only of 3 MMTCO<sub>2</sub>E from this entire source category, which should be achievable from the oil drilling fugitives and venting category alone, but reductions may also come from oil drilling combustion sources and from oil refinery and other industrial source methane emissions.

Clean electricity use by Oil Refineries: renewable grid purchase GHG reduction is available

California refineries consumed a total of 15.85 TWh of electricity purchased from the grid during the period 2006–2010.<sup>64</sup> Based on emission factors developed, documented and used for U.S. reporting of GHG emissions under international agreements, and conservatively assuming the California grid factor,<sup>65 66</sup> statewide refineries emit 0.3713 tonnes/MWhr purchased electricity, or 1.18 million tonnes/year as CO<sub>2</sub>e.

Refiners can purchase grid power from zero-emission renewable suppliers such as wind and/or thermal solar generation suppliers; the suppliers can provide it and in fact would further expand production with the financial support those purchases would bring; and ARB can and should require refiners to do so. This readily available action would eliminate 1.18 million tonnes/year as CO<sub>2</sub>e with the additional benefit of directly supporting the expansion of renewable energy.

<sup>64</sup> *M13 Refinery Data*; California Energy Commission: Sacramento, CA; Aggregated California annual data, 2006–2010 from PIIRA Form M13 Monthly Refinery Fuels reports provided in response to request for information; Per. Comm., Greg Karras, CBE with Susanne Garfield, 26 May 2011 and with Andre Freeman, 27 May 2011 and 14 June 2011. Original data report inserted into text above as received: see *M13 Refinery Data*.

<sup>65</sup> *Voluntary reporting of greenhouse gases program*; U.S. Energy Information Administration: Washington, D.C., 2010. Emission factors and global warming potentials, EIA Web site (Attached as CBE Exhibit LL EIA data) [www.ia.doe.gov/oiaf/1605/emission\\_factors.html#](http://www.ia.doe.gov/oiaf/1605/emission_factors.html#) emissions; accessed 27 May 2010.

<sup>66</sup> Conti et al., 2007. *Documentation for emissions of greenhouse gases in the United States*; DOE/EIA-0638 (2005); U.S. Energy Information Administration: Washington, D.C., EIA Web site [www.eia.doe.gov/oiaf/1605/ggrpt/index.html](http://www.eia.doe.gov/oiaf/1605/ggrpt/index.html). (Attached as CBE Exhibit MM Conti EIA GHG data)

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Refiner	MIS Fuel Used							
Year	Sum of Natural Gas, Used As Refinery Fuel (In 000s of Cubic Feet)	Sum of Purchased Electricity (In 000s of kWh)	Sum of Purchased Steam (In 000s of LBS.)	Sum of Catalyst Petroleum Coke, Used As Refinery Fuel (In Barrels)	Sum of Marketable Petroleum Coke, Used As Refinery Fuel	Sum of Still Gas, Used As Refinery Fuel (In Barrels)	Sum of Liquefied Petroleum Gases, Used As Refinery Fuel (In Barrels)	Sum of Distillate Fuel Oil, Used As Refinery Fuel (In Barrels)
2006	131,406,502	3,257,114	12,711,886	11,703,973	4,103,846	39,823,767	1,014,660	78,238
2007	137,790,854	3,113,372	12,627,689	10,853,047	4,309,031	39,159,175	969,964	62,947
2008	142,678,331	3,303,884	12,255,475	9,764,562	4,562,146	37,843,341	1,005,211	121,967
2009	146,279,344	3,059,266	12,888,132	9,229,478	4,012,484	35,002,150	929,717	157,679
2010	153,761,736	3,113,923	12,179,804	8,882,309	4,976,373	34,785,751	392,422	177,741

Require cement sector to use clean electricity and other measures identified by CARB

**Cement Industry Clean Electricity requirement:** The Cement Sector, another industry that uses large amounts of grid electricity, like the refining industry, can be required to contract with clean renewable energy producers, which would be only too happy to get the business. The United Nations Environment Program (UNEP) Global Environmental Alert Service publicized the cement industry as one of the most polluting in *Environmental Science Alert, Greening Cement Production has a Big Role to Play in Reducing Greenhouse Gas Emissions:*<sup>67</sup>

The industry has a large ecological footprint: it uses significant amounts of natural resources such as limestone and sand, and depending on the variety and process, requires 60-130 kg of fuel oil and 110 kWh of electricity to produce each tonne of cement. In addition, the cement industry is second only to power generation in the production of CO<sub>2</sub>. Producing one tonne of portland cement releases roughly one tonne of CO<sub>2</sub> to the atmosphere, and sometimes much more, and the cement industry accounts for 7-8 per cent of the planet's human-produced CO<sub>2</sub> emissions. Half of it comes from producing clinker (the incombustible remains of coal combustion), 40 per cent from burning fuel and 10 per cent from electricity use and transportation (Mahasenan and others 2003, WBCSD 2005).

And the Lawrence Berkeley Labs found California's cement industry is the largest in the U.S., and quantified its electricity use:

**California is the largest cement producing state in the U.S., accounting for between 10% and 15% of U.S. cement production and cement industry employment.** The cement industry in California consists of 31 sites that consume large amounts of energy, annually: **1,600 GWh of electricity**, 22 million therms of natural gas, 2.3 million tons of coal, 0.25 tons of coke, and smaller amounts of waste materials, including tires.

<sup>67</sup> <http://na.unep.net/geas/science/pdfs/GEAS%20November.pdf> (Attached as CBE Exhibit NN UNEP Greening Cement Alert)

PG&E published its own CO2 emissions rates, and the national average CO2 emissions in pounds CO2 per megawatt-hour of electricity produced:<sup>68</sup>

Emissions Rates	PG&E Corporation* 1	National Average* 2
CO2 Fossil-Fuel Units Only	1,454	1,950
CO2 All Generation Sources	850	1,392

\*Pounds per megawatt hour of electricity produced

1. Emissions rates for 2002

2. National average is from U.S. EPA's eGRID Database (Version 2.01 Released 2003, provides data for 2000, latest year available for complete comparison)

With California's cement industry using 1,600 GWh (billion watt-hours) of grid electricity annually, and calculating the range of emissions using the lowest emission rate above (850 lbs/megawatt-hr), and the highest above (1,950 lbs/megawatt-hr), this results in a range of emissions reductions that would be achieved by avoiding these emissions, through a requirement for contracting with clean renewable energy producers. The reduction ranges from 0.6-1.4 MMTCO2E per year, depending on the supply of electricity used.<sup>69</sup> We will use the average of these two, at 1 MMTCO2E/year.

**Other Cement reductions :** CARB identified specific measures within the Cap and Trade Appendix F Compliance Pathways for reducing GHGs from the Cement industry, but did not consider them as part of a direct regulation strategy.

**Table F-3: Cement Cost and Reduction Summary**

Abatement Strategy	Total Annual Capital Cost (30% discount rate) (\$)	Total Fuel Reduction	Total GHG Reduction (MMTCO2e)	Cost of Strategy (\$/MMTCO2e)
Replace Long Dry Kiln with PH/PC Kiln	5,294,499	803,280	0.08	38
Install Better Insulating Refractory Brick	45,642	361,476	0.04	-28
Improve Clinker Cooler Efficiency	60,248	45,902	0.01	-34
Improve Kiln Combustion	182,569	286,886	0.03	-23
Use Alternative Fuels	32,000,000	0	0.55	36
Increase Supplementary Cementitious Material Blending	0	0	0.60	-17

<sup>68</sup> PG&E 2002 Environmental Report, Page 21, (Attached as CBE Exhibit OO PGE CO2 other emissions)  
[http://www.pgecorp.com/corp\\_responsibility/environmental/report/2002/images/PGE\\_2002ER.pdf](http://www.pgecorp.com/corp_responsibility/environmental/report/2002/images/PGE_2002ER.pdf)

<sup>69</sup>  $1600 \times 10^9 \text{ watt-hrs} \times 850 \text{ lbs} / (10^6 \text{ watt-hrs}) / (2200 \text{ lbs/metric tonne}) / 1 \text{ million} = 0.6 \text{ MMTCO}_2\text{e}$ . Using the national average of 1,950 lbs/megawatt-hour, emissions are 2.3 times higher, resulting in emissions of 1.4MMTCO2e

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This chart developed by CARB shows a total of 1.31MMTCO<sub>2</sub>e/year of feasible reductions. Directly controlling these emissions would not only much more reliably achieve more quantifiable reductions, but would be much more enforceable. **There is no question that local inspection options in California are inherently and vastly more enforceable than verifying pollution trades on an international basis.** Direct, local control also reduces criteria pollutants and the highly toxic mercury emissions in California, with the largest cement industry in the country. The cost per ton of reduction is also very reasonable, ranging from savings of \$34, to a cost of \$38/MTCO<sub>2</sub>e.

The Natural Resources Defense Council (NRDC) commented on the cement sector regarding other reduction methods for CO<sub>2</sub> emissions, but also for reducing the co-pollutant mercury (Hg), which is highly hazardous at extremely low emissions:<sup>70</sup>

Researchers have identified an extensive list of practical energy efficiency measures for cement plants.<sup>4</sup> These include relatively inexpensive energy savings measures with short pay back times, such as automated process control and management systems (potential annual CO<sub>2</sub> and Hg emission reductions of .07-.14 million metric tons (MMT) and 12-24 lbs respectively) and improved preheating kiln technology (potential annual CO<sub>2</sub> and Hg emission reductions of .2 MMT and 30.5 lbs respectively).

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Require a 33% RPS for Oil Refineries, as now required for Electrical Power Plants

To make real progress solving climate change and smog, we have no choice but to consciously decide that we will need to begin to replace fossil fuel production (not just reduce emissions). Available alternatives need to be phased in, step by step, while we deliberately reduce fossil fuel production, including oil refinery production. Pretending that we will be able to solve climate change, smog, and toxic emissions without phasing out production of these sources in-state, merely puts off our obvious and inevitable responsibility. California's greenhouse gases are equivalent to the 9<sup>th</sup> largest country in the world, and we have the worst smog nationwide.

There are many successful precedents for eliminating production (or greatly reducing it) in an inherently polluting industry. Examples include California's 33% Renewable Portfolio Standard (RPS) for phasing in renewable electricity (already being implemented), the Montreal Protocol (which phased out production of chlorofluorocarbons (CFCs)), earlier bans on DDT, and others. The Montreal Protocol for example, was not only cost-effective, it resulted in windfall profits for chemical companies at the same time that economical replacement products became available. This major environmental achievement would not have been possible without a decision to stop making these harmful products.

In contrast, oil refineries are now allowed to continue to switch to dirtier, higher carbon feedstock, requiring even more energy to refine. This must be stopped, and reversed. Oil

<sup>70</sup> Center for Energy Efficiency and Renewable Technologies, Environment California, Natural Resources Defense Council, Planning and Conservation League, Sierra Club, California, January 22, 2007, [http://www.arb.ca.gov/cc/ccea/comments/jan/CFEEART\\_012207.pdf](http://www.arb.ca.gov/cc/ccea/comments/jan/CFEEART_012207.pdf) (CBE Exhibit PP Cement comments)



refineries currently are responsible for about half California's greenhouse gas emissions, with oil refineries directly emitting about 10% of statewide emissions (and growing), and responsible for another ~40% emitted due to burning refinery products (gasoline, diesel, jet fuel, etc.). We cannot prevent climate change disaster without gradually phasing out large percentages of oil refinery production. This is no longer a revolutionary idea; it is imminently necessary to begin the process, rather than allowing a permanent higher carbon oil refinery infrastructure to be built.

In addition to the model 33% RPS for power plants, other electrical sector regulation provides models for oil refinery production replacement, over a reasonable timeframe. **The Loading Order Priority for power plants of the Public Utilities Commission (PUC) requires environmentally superior options be used first** as numbered below, with cleaner fossil fueled sources dispatched last:

1. Energy Efficiency (using less energy always gets the biggest bang for the buck)
2. Demand Response<sup>71</sup> (voluntary reduced consumer use during peak periods based on higher prices during peaks)
3. Renewable Sources (such as required by the 33% RPS)
4. Distributed Generation (local power advantage, including needing less transmission)
5. Clean and Efficient Fossil-Fuel Generation (listed so as to be chosen last)

Of course there are big differences in the regulation of power plants and refineries. Electricity is pooled on the grid through common transmission lines, with three major utilities providing most of the electricity (Southern California Edison, Pacific Gas and Electric, and San Diego Gas and Electric), and with the Independent System Operator (ISO) dispatching the power. This is compared to a larger number of oil refining companies (BP, ConocoPhillips, Valero, Tesoro, Chevron, Exxon Mobil, Shell, and a few smaller) selling their products directly to the public at myriad gas stations. However, many of the methods used to meet the PUC's loading order requirements for energy efficiency and renewable are very similar to measures available for oil refineries. These include measures that are already being implemented in California, but which can and need to be greatly expanded. California has taken very important new steps in recent years such as the Pavley Bill<sup>72</sup> which will reduce vehicle greenhouse gases.

However, we can greatly increase the requirements for automakers to provide inherently lower pollution vehicles. We had such regulations in the past through significant percentages of pure ZEVs, stronger CAFÉ standards (Corporate Average Fuel Economy) without SUV loopholes, and now have the added option for increasing plug in hybrids. In the past our public transit was much more robust, and needs to be re-invigorated and funded (see section below on Carbon Fee for funding public transit). These programs would transition our fossil fuel based economy over a reasonable time period to a green economy, achieve major emissions reductions, and create jobs.

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<sup>71</sup> "Demand response is a resource that allows end-use electric customers to reduce their electricity usage in a given time period, or shift that usage to another time period, in response to a price signal, a financial incentive, an environmental condition or a reliability signal. Demand response saves ratepayers money by lowering peak time energy usage, which are high-priced. This lowers the price of wholesale energy, and in turn, retail rates. Demand response may also prevent rolling blackouts by offsetting the need for more electricity generation and can mitigate generator market power" <http://www.cpuc.ca.gov/PUC/energy/Demand+Response/>

<sup>72</sup> <http://www.arb.ca.gov/cc/ccms/ccms.htm>

- **The ZEV (Zero Emission Vehicle) program can be reinstated to its original higher numbers:** CARB's original ZEV program required 10% Zero Emission Vehicles in each manufacturer's fleet sold in California by 2003.<sup>73</sup> California had about 18 million automobiles in 2003;<sup>74</sup> removing 10% would have meant about 1.8 million ZEVs replacing fossil fueled vehicles. The California Energy Commission's (CEC's) December 2006 Inventory of California Greenhouse Gas Emissions and Sinks: 1990 TO 2004<sup>75</sup> states gives total California 2004 emissions from burning motor gasoline at 131 MMTCO<sub>2</sub>e in 2004. With 10% of that replaced by Zero Emission Vehicles, over 13 MMTCO<sub>2</sub>e would have been removed, in addition to a reduction in oil refinery emissions from decreased production. This program was gutted due to automobile and oil industry pressure.<sup>76</sup> There is new hope for an expanded ZEV rule and for expanding mandates for clean vehicles in California. For example, the ZEV rule is up for review at CARB this year.
- **CAFE Standards:** If the U.S. increased fuel economy to 45% higher miles per gallon using cost-efficient techniques, we'd save over 50 billion gallons of gasoline/year. (National Academy of Sciences<sup>77</sup>) This is equivalent to saving about 3 1/3 California's worth of gas use each year (California used about 15 billion gallons per year in 2003).<sup>78</sup> Increasing fuel efficiency of cars & trucks by only 3 miles per gallon can save > 1million barrels of oil / day or five times the amount of Arctic Refuge might produce."<sup>79</sup> The Pavley Bill and CARB clean cars efforts increase fuel efficiency, and should be utilized to the maximum achievable levels.
- **PLUG IN HYBRIDS:** For each mile driven on electricity instead of gasoline, CO<sub>2</sub> emissions would be reduced 42% on average in the US (although this advantage could be hurt by coal-generated electric power plants)<sup>80</sup> Plug-ins encourage development of renewable electricity because they provide distributed battery storage. Running a plug-in would reduce average fuel cost by about half, (based on a price of \$2.77/gallon for gasoline (Sept 2005) and 8 cents per kWh for electricity, (Jan 2006)).

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<sup>73</sup> Regulations were adopted as described in *CARB Staff Report: Initial Statement of Rulemaking, Proposed Amendments to Low-Emission Vehicle Regulations*, August 1995 "Beginning in 1998 all large volume manufacturers with sales in California exceeding 35,000 vehicles per year (General Motors, Ford, Chrysler, Toyota, Nissan, Mazda and Honda), are required to introduce the following percentages of their passenger cars and very light-duty trucks as ZEVs," <http://www.arb.ca.gov/msprog/levprog/stfrpt.pdf> (Attached as CBE Exhibit QQ ZEV rule)

<sup>74</sup> <http://www.fhwa.dot.gov/policy/ohim/hs03/htm/mv1.htm> (Attached as CBE Exhibit RR 18 million vehicles 2003)

<sup>75</sup> CEC, Inventory of California Greenhouse Gases and Sinks: "Motor gasoline is the single largest subcategory of transportation emissions at 131 MMTCO<sub>2</sub>E in 2004." p. 39, CEC, December 2006, <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF> (Attached as CBE Exhibit SS CEC Inventory)

<sup>76</sup> See *Who Killed the Electric Car*, for a very illuminating documentation of the attack on this regulation by the auto and oil industry, at <http://www.whokilledtheelectriccar.com/>

<sup>77</sup> *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*, National Academy of Sciences, 2002, <http://www.nap.edu/openbook.php?isbn=0309076013>

<sup>78</sup> *Market Power in California's Gasoline Market*, University of California Energy Institute, Center for the Study of Energy Markets, 2004, page 4, <http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1035&context=upei/csem>

<sup>79</sup> According to the Arctic Refuge Defense Campaign, <http://www.arcticrefuge.org/>

<sup>80</sup> *Tackling Climate Change in the U.S.: Potential Carbon Emissions Reductions from Energy Efficiency and Renewable Energy by 2030*, American Solar Energy Society, Charles F. Kutscher, Editor, January 2007, <http://www.ases.org/climatechange/toc/exec-summary.pdf>



A 33% RPS for oil refineries would replace a third of the state's refinery capacity with clean transportation sources. The following table shows CARB's statewide inventory for emissions from oil refineries. (This appears to underestimate at least two pollutants compared to regional air quality agency data.)

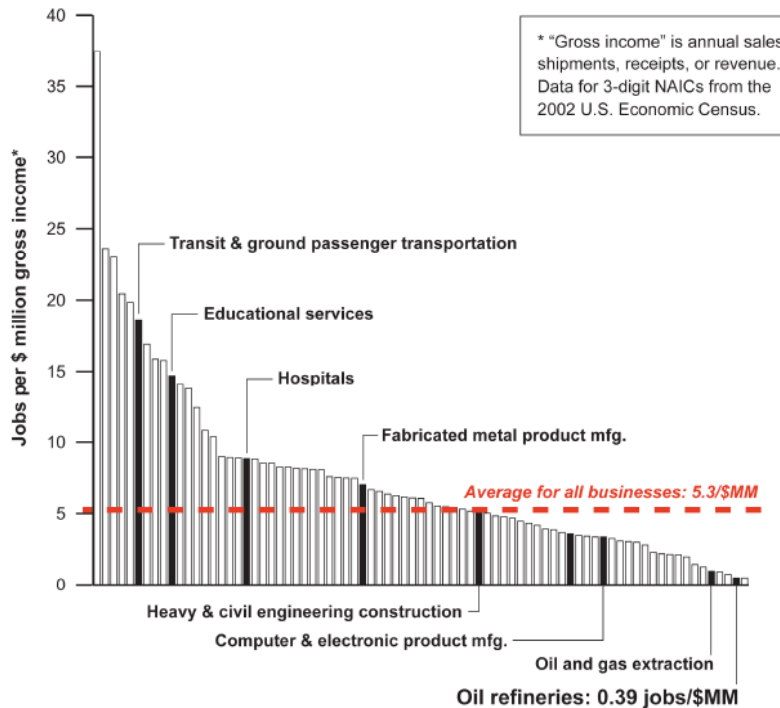
	TOG (total organic gases)	ROG (reactive organic gases, a subset of TOG)	CO (carbon monoxide)	NOx (nitrogen oxides)	SOx (sulfur oxides)	PM (particulate matter)	PM10 (particulate matter <10 microns)
Statewide emissions from CARB statewide criteria pollutant inventory, most recent available, 2008 <sup>[1]</sup>  tons per year	10,139	6,787	7,219	10,767	13,494	3,150	2,439
33% of statewide refineries	3,376	2,260	2,404	3,586	4,494	1,049	812
10% of statewide refineries	1,014	679	722	1,077	1,349	315	244

Replacing 33% of the state's refining capacity with clean, non-fossil fueled energy and energy efficiency would not only remove CO<sub>2</sub>e emissions of about 12 MMTCO<sub>2</sub>e, it would also remove over 3300 tons per year (tpy) of TOG, over 2200 tpy or more of CO, over 3500 tpy NO<sub>x</sub>, almost almost 4500 tpy SO<sub>x</sub>, and over 1000 tpy PM. An interim requirement for a 10% refinery RPS would achieve almost 4 MMTCO<sub>2</sub>e, and more with dirtier crude phasing in, plus all the criteria pollutants listed above in the last row of the chart.

As discussed in the section below regarding carbon taxes, clean transportation sources are generating thousands of new jobs in California, including electric vehicle manufacture. Phasing out oil industry production would reduce jobs, and California needs to fund the transition for workers from high pollution industries to other fields. Our proposals for increasing oil refinery efficiency would add thousands of construction jobs. But as a general matter, the oil industry is last in producing jobs compared to almost every other economic sector in the state, as shown in the following chart excerpted from CBE's fact sheet – Big Oil Little Jobs.<sup>81</sup> The oil industry makes record profits, but is 2<sup>nd</sup> to last for number of jobs produced per income, especially compared to public transit and other sectors:

<sup>81</sup> Available at: <http://www.cbecal.org/pdf/Big%20Oil%20little%20jobs%20051910.pdf> (Attached as CBE Exhibit UU Big Oil Little Jobs)

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This bar chart shows employment and “gross income” (annual sales, shipments, receipts, or revenue) for 79 business types in California’s economy, which are grouped by their North American Industrial Classification. Businesses with more jobs per million dollars of income are shown as taller bars. The dashed horizontal line shows the weighted average jobs per million dollars for all of them. Oil refining ranks next-to-last among all these businesses for jobs per million dollars. California businesses on average are about ten times more jobs-intensive than oil refining. **Public transit creates about twenty times as many jobs as oil refining. Heavy construction creates about ten times as many jobs as oil refining.** The table below shows that these differences persist over decades.

#### A Carbon fees could fund public transit, and avoid environmental impacts of carbon trading

Carbon taxes can provide significant revenue that could fund clean public transit. Public transit cuts greenhouse gases, smog, and toxic emissions, replaces the need for driving, and a portion of oil production. Carbon taxes are the environmentally superior option compared to Cap and Trade, but as a supplement to direct control of local pollution.

**Oil drilling fee example:** 2009 article -- According to the state Energy Commission, about 240 million barrels of crude were extracted last year from California lands and waters, including federal waters offshore. At the current world benchmark price of about \$70, the 6% fee contemplated by Proposition 87 would have generated more than \$1 billion a year.<sup>82</sup> California is the only state that does not tax oil extracted in the state.

<sup>82</sup> <http://articles.latimes.com/2009/jun/15/business/fi-hiltzik15> , Id.

**Canadian Carbon carbon fee example:** Canadian report – “Brought in \$740 million in 2010-11 and another \$950 million expected in 2011-12.”<sup>83</sup>

**Washington State carbon fee example:** A study by the University of Washington Evans School of Public Affairs,<sup>84</sup> requested by the Washington State Department of Commerce, found at \$30/metric ton of CO<sub>2</sub>, would reduce greenhouse gases by 8.4% in the state from projected 2035 emissions, with revenues of \$2.1 billion that year, and recommended upping to \$70 per ton and using with complementary policies.

Clean transportation also creates jobs, so funding public transit through a carbon fee is not a simple cost, it is a transfer of money from the high carbon oil industry to cleaner transportation sources that sustain the economy while reducing pollution directly. A report by the Green Economy Post listed many examples of jobs creation in California from transit projects and other clean transportation sources (such as electric vehicle manufacture), but in summary it stated:

California’s clean transportation sector is growing and is creating thousands of new green jobs in the state; from the thousands of new jobs that are being created in the high speed passenger rail network now being built to the jobs that are opening up in the electric car manufacturing and related industries and manufacturing that has clustered in California; to the continued growth in job opportunities in mass transit.<sup>85</sup>

Not only could a carbon fee fund public transit, it avoids negative impacts caused by a cap and trade program. Flaws identified in carbon trading and present in California’s cap and trade program, and why carbon fees avoid them:<sup>86</sup>

- Carbon fees lend predictability to energy prices; **cap-and-trade aggravates price volatility** that historically has discouraged investments in lower carbon electricity, energy efficiency and carbon-replacing renewable energy.

Price volatility, especially low prices, undermines emissions reduction and encourages high carbon infrastructure.

- Carbon fees are transparent and easily understandable, making them more likely to elicit the necessary public support than **an opaque and difficult to understand cap-and-trade system.**

<sup>83</sup> *B.C. may put carbon tax toward transit*, by Kelly Siniski, Vancouver Sun, May 18, 2011, Id.

<http://www.vancouversun.com/technology/carbon+toward+transit/4799888/story.html>

<sup>84</sup> <http://evans.washington.edu/students/forms-advising/degree-projects/archive/washington-state-carbon-tax-fiscal-and-environmental-impacts>, Id.

<sup>85</sup> *The Clean Transportation Jobs in California*, <http://greeneconomypost.com/green-resource-center/green-jobs-careers/find-green-jobs-state/find-green-jobs-california/clean-transportation-jobs-california> (Attached as CBE Exhibit XX Clean Transportation provides new jobs)

<sup>86</sup> Carbon Tax Center, Vs Cap & Trade, *April 2009 updates*: <http://www.carbontax.org/issues/carbon-taxes-vs-cap-and-trade/> (Attached as CBE Exhibit YY compare fees and carbon trading)

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- Carbon fees can be implemented with far less opportunity for manipulation by special interests, while **a cap-and-trade system's complexity opens it to exploitation by special interests and perverse incentives that can undermine public confidence and undercut its effectiveness.**
- Carbon fee revenues would most likely be returned to the public through dividends or progressive tax-shifting, while the **costs of cap-and-trade systems are likely to become a hidden tax as dollars flow to market participants, lawyers and consultants.**

In addition, money from cap-and-trade doesn't go back to the people who are paying it, but to the lawyers, consultants, and economists who are trying to make the market work, whereas carbon fee dollars can be easily directed back to the consumers, either through dividends, or through public services like funding mass transit.

Regarding the issue of whether such a tax could be put in place after the passage of Prop 26, a legal analysis of the proposition is not the subject of this document. It is clear however that there was a broad misunderstanding of the language of that proposition. The public was largely unaware that industrial polluters backers of the proposition were looking for tax breaks for themselves, rather than protecting the public from taxes. Should the proposition be brought back for a re-vote, there is now broad support for repealing tax breaks for the oil industry. Even a U.S. Republican Congressman from Virginia publicly supported eliminating tax breaks for the oil industry:<sup>87</sup>

3. ENERGY POLICY: Cantor would support oil subsidy rollback in 'broader' tax reform

House Majority Leader Eric Cantor (R-Va.) today said that he could support eliminating subsidies for major oil companies "in a broader, broader sense" as part of a tax reform effort that would close loopholes while lowering overall rates.

### **Ports & Rail**

Ports and rail are sources of large greenhouse gas, smog, and toxic emissions. The Ports of Los Angeles, Long Beach, and Oakland, and associated goods movement (rail and trucks) highly impact communities of color in Southern and Northern California. While the adopted Scoping Plan does include 3.5 MMTCO<sub>2</sub>e, the update (Status of Scoping Plan Measures<sup>88</sup>) states that:

Goods Movement includes measures to reduce emissions from shipping and port operations including such actions as reducing vessel speed and electrifying port equipment. The Scoping Plan attributed 3.5 MMTCO<sub>2</sub>e to these system-wide measures. **System-wide efficiency improvements are in progress but are not likely to provide significant GHG reductions by 2020.**

<http://www.arb.ca.gov/planning/gmerp/gmerp.htm>

<sup>87</sup> *E&ENews PM*, 04/27/2011 Elana Schor, E&E reporter,  
[http://www.eenews.net/public/eenewspm/2011/04/27/3?page\\_type=print](http://www.eenews.net/public/eenewspm/2011/04/27/3?page_type=print)

<sup>88</sup> page 4, [http://www.arb.ca.gov/cc/scopingplan/status\\_of\\_scoping\\_plan\\_measures.pdf](http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf)

It appears from the above statement that CARB is retreating from even the 3.5 MMTCO<sub>2</sub>e commitment for ports. This needs to be clarified. Port and rail pollution prevention instead needs to be expanded, especially with major plans for port expansion. Available expanded port and rail pollution prevention methods include electrification, clean electricity requirements, energy efficiency, and stopping refrigerant leaks.

Other major reductions options are available that should be similarly assessed outside the cap and trade program as direct control measures:

This should include at least:

- Added Power Plant requirements – stop building unnecessary new fossil fueled plants, don't provide credits to offset their emissions, speed up alternatives deployment
- Large Agricultural sources – Require solar pumping, return biomass to soil, biofilter methane.
- Low Carbon Fuel Standard - Ban importing any Canadian Tar Sands-derived oils; stop allowing worsening of crude oil inputs; remove corn ethanol as acceptable fuel; remove pollution trading

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**V. The Alternatives Analysis Must Take into Account New Information That Demonstrates the Need for Bigger Reductions and That Shows That Cap and Trade in the Oil Refinery Sector Will Significantly Increase GHG Emissions in California**

**A. GHG emissions reductions needed are much higher than previously assessed because emissions transfers through imports are greatly increasing GHG emissions**

GHG emissions reductions needed are higher than previously assessed because emissions transfers through imports are greatly increasing GHG emissions, according to a study published in the proceedings of the National Academy of Sciences.<sup>89</sup> This study found: “Most developed

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<sup>89</sup> *Growth in emission transfers via international trade from 1990 to 2008*, Glen P. Peters et al, Center for International Climate and Environmental Research–Oslo, Edited by William C. Clark, Harvard University, Cambridge, Ma, and approved March 29, 2011 (received for review May 12, 2010)

**ABSTRACT:** Despite the emergence of regional climate policies, growth in global CO<sub>2</sub> emissions has remained strong. From 1990 to 2008 CO<sub>2</sub> emissions in developed countries (defined as countries with emission reduction commitments in the Kyoto Protocol, Annex B) have stabilized, but emissions in developing countries (non-Annex B) have doubled. Some studies suggest that the stabilization of emissions in developed countries was partially because of growing imports from developing countries. To quantify the growth in emission transfers via international trade, we developed a trade-linked global database for CO<sub>2</sub> emissions covering 113 countries and 57 economic sectors from 1990 to 2008. We find that the emissions from the production of traded goods and services have increased from 4.3 Gt CO<sub>2</sub> in 1990 (20% of global emissions) to 7.8 Gt CO<sub>2</sub> in 2008 (26%). Most developed countries have increased their consumption-based emissions faster than their territorial emissions, and non-energy-intensive manufacturing had a key role in the emission transfers. The net emission transfers via international trade

countries have increased their consumption-based emissions faster than their territorial emissions, and non-energy-intensive manufacturing had a key role in the emission transfers.” CARB needs to re-evaluate the emission reduction targets and bring more reductions into the alternatives assessment to consider this impact over the long term.

**Cuts in carbon emissions by developed countries since 1990 have been cancelled out three times over by increases in imported goods from developing countries such as China, according to the most comprehensive global figures ever compiled. . . . .**

Campaigners say this allows rich countries unfairly to claim they are reducing or stabilising their emissions when they may be simply sending them offshore – relying increasingly on goods imported from emerging economies that do not have binding emissions targets under Kyoto.

According to standard data, developed countries can claim to have reduced their collective emissions by almost 2% between 1990 and 2008. **But once the carbon cost of imports have been added to each country, and exports subtracted – the true change has been an increase of 7%.** If Russia and Ukraine – which cut their CO2 emissions rapidly in the 1990s due to economic collapse – are excluded, the rise is 12%.

Rajendra Pachauri, chair of the UN Intergovernmental Panel on Climate Change, said: **‘The 7% increase in emissions of developed countries since 1990 is a deviation from what the IPCC fourth assessment report had assessed as the most cost-effective trajectory for limiting emissions ...** if [that rate] is to continue then not only would we encounter more serious impacts of climate change over time, but mitigation actions undertaken later to reduce emissions would prove far more costly.’

Glen Peters, of the Centre for International Climate and Environmental Research in Oslo, who was lead researcher on the paper published in Proceedings of the National Academy of Sciences, said: **‘Our study shows for the first time that emissions from increased production of internationally traded products have more than offset the emissions reductions achieved under the Kyoto Protocol ...** this suggests that the current focus on territorial emissions in a subset of countries may be ineffective at reducing global emissions without some mechanisms to monitor and report emissions from the production of imported goods and services.

This is also very relevant to California, which has very high levels of imported products brought in through the Ports of Los Angeles, Long Beach, Oakland, etc. Without taking into account and addressing our imports of high-carbon goods, we are offsetting any reductions we achieve, by buying goods with high carbon manufacturing processes from outside the U.S.

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from developing to developed countries increased from 0.4 Gt CO2 in 1990 to 1.6 Gt CO2 in 2008, which exceeds the Kyoto Protocol emission reductions. Our results indicate that international trade is a significant factor in explaining the change in emissions in many countries, from both a production and consumption perspective. We suggest that countries monitor emission transfers via international trade, in addition to territorial emissions, to ensure progress toward stabilization of global greenhouse gas emissions.  
<http://www.pnas.org/content/early/2011/04/19/1006388108.full.pdf+html>, and attached.

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**B. Oil refinery impacts will increase GHG emissions 20 million tonnes/year by 2020 due to worsening refinery Crude Feed Quality if not addressed, but could be decreased from current levels by 8 million tonnes/year if Crude Limits were required**

**California refineries emit much more GHG per barrel crude refined than other U.S. refineries. They *could* emit less: others do.** They emit more because they run the worst quality, highest density crude of any major U.S. refining region. Putting a bigger share of the denser crude barrel through aggressive processing to make vehicle fuels from it takes more energy and burns more fuel for that energy, increasing emissions from refineries. The steps in this causal chain are proven and measured based on national data—and now new statewide refinery data. California refineries' claim that they cannot change their crude is dead wrong: their crude supply is changing drastically right now.

**Setting crude density and sulfur limits for the California industry to meet the average East Coast refinery crude input quality would cut statewide GHG emissions by 7.8 million tonnes annually—and prevent a switch to even worse heavy oil that could increase statewide refinery emissions by 19.6 million tonnes/yr.** ARB's alternatives analysis ignores this evidence; problem, huge emissions reduction opportunity, and enormous emissions threat. Worse, ARB's cap-and-trade scheme would sell refiners exemptions for the "dirtier" crude emissions increase for less than they make from price discounts on dirtier crude, *encouraging* them to go the wrong way, and virtually ensuring the worst-case emissions increase. An estimated 27.4 million tonnes/year of emissions is at stake because of this fatal flaw in cap-and-trade alone.

The technical support for this is conclusive. The documentation is as follows:

With respect to petroleum refinery emissions intensity, crude feed quality, crude switching, and crude discounting, the Air Resources Board (ARB) alternatives analysis commits a series of individually serious and cumulatively fatal errors. Correcting these errors will show that ARB's pollution trading scheme will pollute while alternatives will clean up.

**1. ARB ignores the highest refinery emissions intensity in the U.S here in California.**

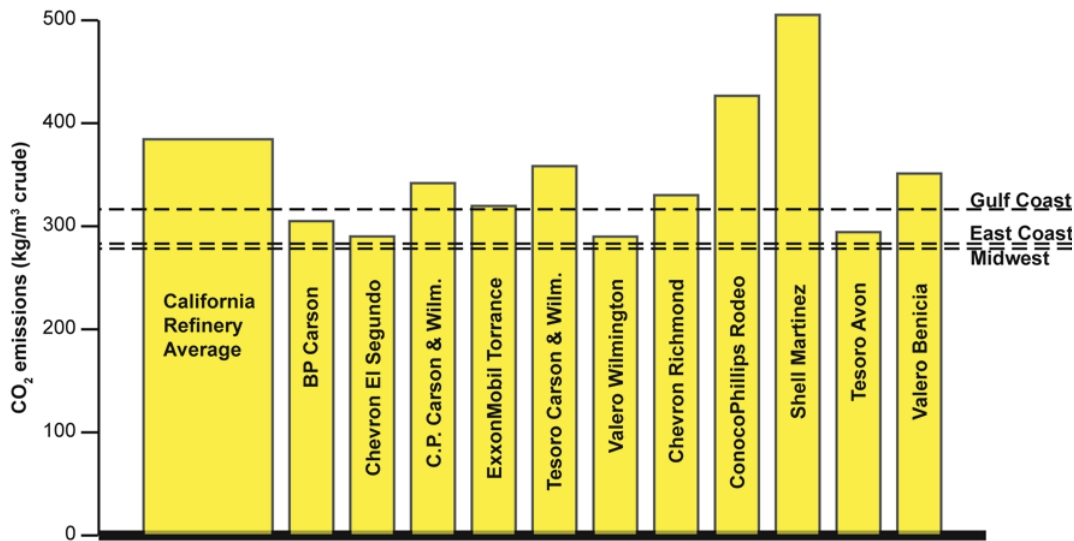
Average California refinery emissions intensity is at the extreme-high end of the range among U.S. refining regions, exceeding that of any other region by a wide margin. See Figure Crude-1. This is demonstrated by publicly reported data that were available to ARB, but had to be gathered and analyzed by non-profit organizations after it became clear that ARB would not perform and report this analysis at this time.<sup>90</sup> Further, ARB's data cannot rebut this conclusion, as shown by the refinery emissions for individual facilities in this chart. These are based on ARB-reported emissions and 100% utilization of refinery capacity, which is necessary because

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<sup>90</sup> Research presented in this section was conducted in part for the Union of Concerned Scientists to develop a GHG performance benchmark for refineries. All conclusions presented herein are those of CBE alone. The data referenced are presented and documented in Attachment Crude-1, which is attached hereto, and incorporated into this comment. References cited in this section (e.g., (22)) are given in Attachment Crude-1. (Attached as CBE Exhibit ZZ Attachment Crude-1)

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facility capacity utilization is not reported, but underestimates emission intensity. Also, ARB's emissions reports are not publicly verifiable because ARB allows refiners to keep the underlying data secret. Nevertheless, and despite this underestimation, ARB-reported emissions from all major California refineries exceed average Midwest and East Coast emissions and seven major California refineries exceed average Gulf Coast refinery emissions.



**Figure Crude-1. Refinery CO<sub>2</sub> emission intensity, California vs other U.S. regions**

U.S. East Coast, Midwest, and Gulf Coast (PADDs 1-3): five year average of 2003-2008 data from reference 1. California refinery average: five year average of 2004-2009 data from Table 2-1 attached. Facility emissions: two year average of 2008-2009 facility-reported emissions per vol. atmospheric crude distillation capacity; data from tables 2-5, 2-6 attached. Facility emissions may be underestimated by the assumption of 100% capacity utilization and/or errors in facility-reported emissions.

Refinery emissions performance across the rest of the U.S. demonstrates what refineries can achieve under the right conditions. Average statewide refinery emissions in California (384 kg/m<sup>3</sup> crude refined, 2004-2009) could be reduced by roughly 18 % if California refineries matched Gulf Coast refinery average performance (316 kg/m<sup>3</sup>) and by roughly 28 % if California matched Midwest refinery average performance (278 kg/m<sup>3</sup>). ARB's analysis commits a serious error by ignoring this evidence that a large refinery emission reduction is available. ARB does not, propose this measure.

## **2. ARB fails to analyze what California refineries are refining**

The increasing energy-and emissions-intensities of processes<sup>91</sup> to make gasoline, distillate and jet fuel from denser and more contaminated crude oil has been demonstrated and measured across U.S. refineries. (See references in Attachment Crude-1, 1, 3, 4, 9, 28-33,

<sup>91</sup> Carbon rejection, hydrogen injection, and supporting processes



referred to from here on only by reference number.) In 2007, a seminal paper by researchers that ARB separately used as key technical advisors warned: ***“A transition to low-quality and synthetic petroleum resources such as tar sands or coal-to-liquids synfuels could raise upstream GHG emissions by several gigatonnes of carbon (GtC) per year by mid-century unless mitigation steps are taken.”*** (30) In 2008 and 2009 CBE provided ARB detailed data, analysis, and advice on this issue. In 2010 CBE’s work showing how crude feed quality not only drives, but also predicts, refinery CO<sub>2</sub> emissions intensity was published in the peer reviewed American Chemical Society journal *Environmental Science & Technology* with the following abstract:

The greenhouse gas emission intensity of refining lower quality petroleum was estimated from fuel combustion for energy used by operating plants to process crude oils of varying quality. Refinery crude feed, processing, yield, and fuel data from four regions accounting for 97% of U.S. refining capacity from 1999–2008 were compared among regions and years for effects on processing and energy consumption predicted by the processing characteristics of heavier, higher sulfur oils. Crude feed density and sulfur content could predict 94% of processing intensity, 90% of energy intensity, and 85% of carbon dioxide emission intensity differences among regions and years and drove a 39% increase in emissions across regions and years. Fuel combustion energy for processing increased by approximately 61 MJ/m<sup>3</sup> crude feed for each 1 kg/m<sup>3</sup> sulfur and 44 MJ/m<sup>3</sup> for each 1 kg/m<sup>3</sup> density of crude refined. Differences in products, capacity utilized, and fuels burned were not confounding factors. Fuel combustion increments observed predict that a switch to heavy oil and tar sands could double or triple refinery emissions and add 1.6–3.7 gigatons of carbon dioxide to the atmosphere annually from fuel combustion to process the oil. (1)<sup>92</sup>

Importantly, this peer reviewed work showed that **the high emission intensity reported by San Francisco Bay Area refineries as a group can be explained by the relatively low quality of the S.F. Bay area refinery crude feed.**

More recently, CBE gathered extensive additional data specific to California refineries. Review of these data (*Attachment Crude-1*)<sup>93</sup> reveals that California refineries are not different except that they are extreme: their performance falls along a continuum observed among U.S. refining regions. **California refinery performance is extreme for the factors linked to emissions from processing lower quality crude. These are energy intensity, processing intensity, by-production of coke and fuel gas associated with processing intensity, hydrogen production, and crude feed density.** California performance is similar to other regions for factors that are not linked to crude quality and emissions nationally: secondary products processing; motor fuels yield; the mix of fuels burned in refineries.

<sup>92</sup> This paper: Karras, 2010. Combustion emissions from refining lower quality oil: What is the global warming potential? *Env. Sci. Technol.* 44(24): 9584–9589. DOI 10.1021/es1019965; including Supporting Information available from the American Chemical Society free of charge at: <http://pubs.acs.org/doi/abs/10.1021/es1019965> is hereby attached electronically. This paper has been given to ARB previously. Its supporting documentation is lengthy and more efficiently addressed and accessible to all parties electronically. It is referenced formally herein as attached for the record

<sup>93</sup> Research presented in Attachment Crude-1 was conducted in part for the Union of Concerned Scientists to develop a GHG performance benchmark for refineries. All conclusions presented herein are those of CBE alone.

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Applying the same analysis method used in our peer reviewed work (1) to the California data confirms that the driving impact of crude feed quality on emissions explains California refiners' extreme-high emission intensity. Figure Crude-2 below shows observations for California refineries 2004–2009 with those published from the national work for each of the four largest U.S. Petroleum Administration Defense districts (PADDs) 1999–2008. (1) Each of the 46 observations shown represent the annual average for one of these five regions in one year. The ten observations appearing closest to the California observations are from PADD 5, which includes California. Note the trend among these observations with respect to the positions of observed (vertical scale) and predicted (horizontal scale) energy intensity. Refining lower quality crude increases energy intensity left to right in this chart. Refining higher quality (lower density, lower sulfur, or both) crude reduces refinery energy intensity right to left in the chart.

Energy intensity—the amount of fuel energy refiners burn to process each cubic meter of crude—relates to refinery emissions intensity. Energy intensity (*EI*) relates directly to emissions intensity for California refineries, as shown in the detailed results illustrated in this chart, which are presented in Table Crude-1 below. This makes sense because burning more of the same fuels emits more combustion products; it emits more CO<sub>2</sub>.

**Figure Crude–2. Refinery energy intensity predicted by crude feed density and sulfur content**

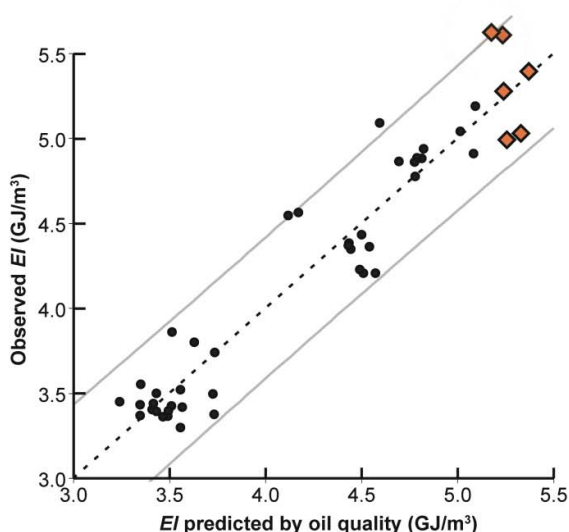
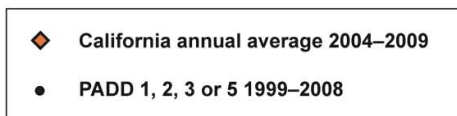
Prediction for California refineries on 1999–2008 data from U.S. refineries

$R^2$  0.90

Diagonal lines bound the 95% confidence of prediction for observations

Figure adapted from Figure 1 in *Env. Sci. Technol.* 44(24) 9584–9589; DOI 10.1021/es1019965; American Chemical Society

Data from Table Crude–1



Observed California emissions fall within the prediction in four of six cases and fall within 2% of the confidence of prediction in all cases. Overall, emissions predicted by crude feed quality are within 1% of the average 2004–2009 California refinery emissions observed. Thus, the driving causal factor boosting California refinery emissions intensity to its extreme high, and also driving the less extreme performance in other U.S. refining regions that California refineries could achieve, is known. This supports the availability of refinery emissions reductions that ARB's analysis ignores.

ARB staff says it believes “[h]eavier sour crude oil inherently takes more energy to process.” (40). But despite this assertion, and contrary to its confusing LCFS document titles, which imply that it analyzed crude quality impacts of the “average crude refined in California” (34, 35), ARB has reported no quantitative analysis of California crude feed quality impacts on

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refinery emissions. None. Moreover, ARB could not have done any such analysis by its own admission. On 23 June 2011, months after CBE requested the data informally and weeks after CBE filed a formal request pursuant to the California Public Records Act, ARB staff finally admitted that they could find no records relating to the density and/or sulfur content of crude oil refined in California. (15)<sup>94</sup> Since ARB did not collect the data to find out what was being refined—with respect to the key refinery emission intensity drivers crude feed density and sulfur—ARB did not analyze the effects of crude feed quality on refinery emissions.

Having failed to identify California refiners' extreme-high emissions intensity, ARB then fails to analyze its major cause. Ignoring both the less polluting refinery performance everywhere else, and the causal evidence showing how California refineries can achieve this less polluting performance, ARB's analysis ignores available emission reductions.

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<sup>94</sup> See Attachment Crude-1 for ARB's response to this CBE Public Records Act request.

**Table Crude-1. Refinery energy intensity and CO<sub>2</sub> emission intensity predicted by crude feed quality**

PADD	Year	<i>EI</i>	density	sulfur	cap.	prod.	<i>EI</i> pred. 95% confidence			Fuel mix	Emit pred. 95% conf.			Obs. CO
		(GJ/m <sup>3</sup> )	(kg/m <sup>3</sup> )	(kg/m <sup>3</sup> )	ut. (%)	ratio	Lower	Central	Upper	(kg/GJ)	Lower	Central	Upper	(kg/m <sup>3</sup> )
1	1999	3.451	858.20	8.24	90.9	3.668	2.877	3.241	3.604	81.53	235	264	294	281
1	2000	3.430	860.18	8.00	91.7	3.489	2.987	3.349	3.711	80.34	240	269	298	276
1	2001	3.518	866.34	7.71	87.2	3.479	3.198	3.559	3.919	81.85	262	291	321	288
1	2002	3.426	865.71	7.45	88.9	3.605	3.152	3.511	3.870	81.08	256	285	314	278
1	2003	3.364	863.44	7.43	92.7	3.321	3.133	3.493	3.853	81.51	255	285	314	274
1	2004	3.416	865.44	7.79	90.4	3.397	3.209	3.568	3.927	81.46	261	291	320	278
1	2005	3.404	863.38	7.17	93.1	3.756	3.048	3.410	3.772	81.23	248	277	306	277
1	2006	3.440	864.12	7.17	86.7	3.522	3.054	3.417	3.780	80.40	246	275	304	277
1	2007	3.499	864.33	7.26	85.6	3.443	3.067	3.433	3.800	82.28	252	282	313	288
1	2008	3.551	863.65	7.08	80.8	3.400	2.972	3.352	3.733	83.26	247	279	311	296
2	1999	3.368	858.25	10.64	93.3	4.077	2.984	3.347	3.711	78.11	233	261	290	263
2	2000	3.361	860.03	11.35	94.2	4.132	3.104	3.468	3.832	77.56	241	269	297	261
2	2001	3.396	861.33	11.37	93.9	4.313	3.126	3.495	3.863	77.46	242	271	299	263
2	2002	3.393	861.02	11.28	90.0	4.345	3.068	3.432	3.796	77.90	239	267	296	264
2	2003	3.298	862.80	11.65	91.6	4.281	3.195	3.558	3.922	78.00	249	278	306	257
2	2004	3.376	865.65	11.86	93.6	4.167	3.369	3.733	4.098	77.25	260	288	317	261
2	2005	3.496	865.65	11.95	92.9	4.207	3.362	3.725	4.089	77.27	260	288	316	270
2	2006	3.738	865.44	11.60	92.4	3.907	3.380	3.738	4.095	75.84	256	283	311	284
2	2007	3.800	864.07	11.84	90.1	4.161	3.270	3.629	3.989	75.55	247	274	301	287
2	2008	3.858	862.59	11.73	88.4	4.333	3.154	3.515	3.875	74.97	236	263	291	289
3	1999	4.546	869.00	12.86	94.7	3.120	3.759	4.117	4.476	71.61	269	295	321	326
3	2000	4.563	870.29	12.97	93.9	3.120	3.813	4.172	4.531	71.87	274	300	326	328
3	2001	4.348	874.43	14.34	94.8	3.128	4.086	4.444	4.803	72.43	296	322	348	315
3	2002	4.434	876.70	14.47	91.5	3.251	4.140	4.499	4.859	72.71	301	327	353	322
3	2003	4.381	874.48	14.43	93.6	3.160	4.076	4.435	4.794	72.81	297	323	349	319
3	2004	4.204	877.79	14.40	94.1	3.228	4.213	4.572	4.930	73.43	309	336	362	309
3	2005	4.205	878.01	14.40	88.3	3.316	4.149	4.511	4.873	73.24	304	330	357	308
3	2006	4.367	875.67	14.36	88.7	3.176	4.067	4.433	4.798	74.15	302	329	356	324
3	2007	4.226	876.98	14.47	88.7	3.205	4.127	4.491	4.856	74.93	309	337	364	317
3	2008	4.361	878.66	14.94	83.6	3.229	4.165	4.540	4.915	74.48	310	338	366	325
5	1999	4.908	894.61	11.09	87.1	2.952	4.713	5.082	5.451	70.27	331	357	383	345
5	2000	5.189	895.85	10.84	87.5	3.160	4.725	5.092	5.460	69.09	326	352	377	358
5	2001	5.039	893.76	10.99	89.1	3.231	4.648	5.014	5.380	69.38	322	348	373	350
5	2002	4.881	889.99	10.86	90.0	3.460	4.450	4.814	5.178	69.15	308	333	358	338
5	2003	4.885	889.10	10.94	91.3	3.487	4.422	4.788	5.153	69.40	307	332	358	339
5	2004	4.861	888.87	11.20	90.4	3.551	4.410	4.775	5.140	69.89	308	334	359	340
5	2005	4.774	888.99	11.38	91.7	3.700	4.409	4.780	5.151	69.88	308	334	360	334
5	2006	4.862	887.65	10.92	90.5	3.615	4.331	4.695	5.060	69.32	300	325	351	337
5	2007	5.091	885.54	11.07	87.6	3.551	4.235	4.594	4.953	69.12	293	318	342	352
5	2008	4.939	890.16	12.11	88.1	3.803	4.456	4.824	5.191	68.39	305	330	355	338
<b>Predictions for California refineries</b>														
Calif. average,	2004	899.23	11.46	93.0	3.633	4.881	5.256	5.632	70.82	346	372	399	354	
Calif. average,	2005	900.56	11.82	95.0	3.801	4.937	5.329	5.721	71.06	351	379	407	358	
Calif. average,	2006	899.56	11.73	91.5	3.845	4.861	5.239	5.616	72.65	353	381	408	384	
Calif. average,	2007	899.84	11.89	88.3	3.814	4.866	5.234	5.603	71.43	348	374	400	401	
Calif. average,	2008	902.00	12.85	91.0	4.087	4.980	5.370	5.759	71.02	354	381	409	383	
Calif. average,	2009	901.38	11.70	82.9	4.045	4.837	5.200	5.564	70.54	341	367	392	397	

*EI*: refinery energy intensity as measured by fuel energy consumed/vo. crude refined.

Cap. ut.: operable refinery capacity utilization as defined by U.S. EIA.

Prod. ratio: the ratio by volume of gasolines, distillate, kerosenes and naphtha to other refinery products.

Fuel mix emission intensity measured from reported data as detailed in Table 2-1.

Data from Table 2-1.

CBE asks ARB to note that this evidence also supports ARB's "clean fuels" standard by further debunking industry claims that making California gasoline and diesel pollutes.

106-6  
Cont'd

Specifically, refiners wrongly blame the extra product treating and hydrogen needed to meet ARB fuel sulfur and aromatics standards alone for higher refinery emissions. But California refiners' average product hydrotreating and reforming capacities are similar to those of other regions and even a bit lower than the Midwest averages, on an equivalent capacity basis. (*Data from Table 2-1.*) This alone makes their claim nearly impossible.

Further, the aggressive hydrogen addition and removal of process catalyst poisons needed to make gasoline and diesel blendstocks from denser, more contaminated oils—whether for California fuels or those sold elsewhere—uses much more hydrogen/m<sup>3</sup> oil feed than does product stream hydrotreating of gasoline and diesel. (*1, 38*) This is why refinery hydrogen production increases with crude feed density (*1, 3*), and capacity for aggressive hydroprocessing rather than product hydrotreating (*1*), nationwide.

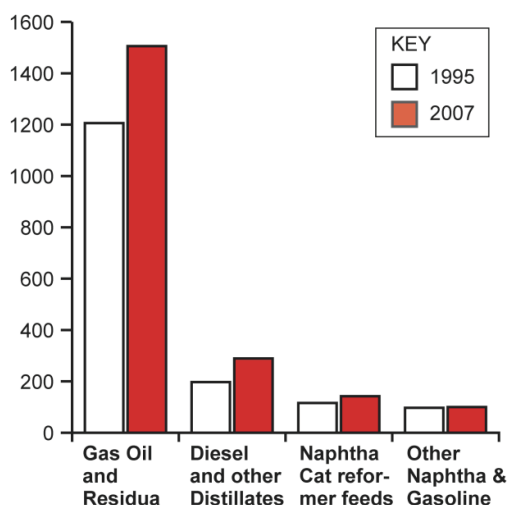
Refinery capacity for this aggressive hydrocracking and hydrotreating of gas oil and residua is higher in California than other regions, while product hydrotreating capacity is not. (*Table 2-1*) Thus, the vast majority of the hydrogen energy and emissions commitments for California refining are for making product from the extra gas oil and residua in lower quality crude. See Figure Crude-3.

106-6  
Cont'd

**Figure Crude-3. Hydrogen use for hydroprocessing various feeds, California refineries, 1995 and 2007 (MMscf/d)**

**Based on 100% capacity**

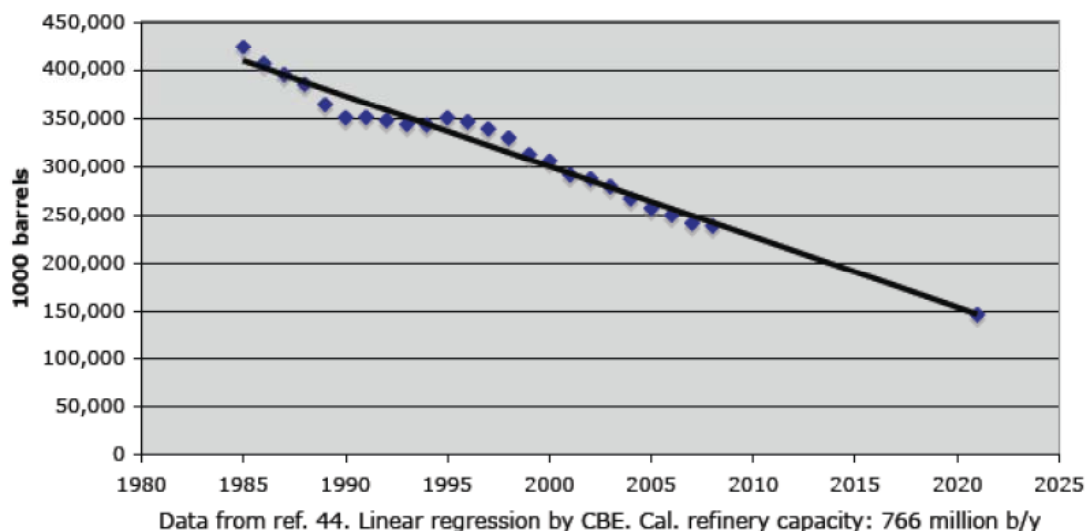
*Figure adapted from CBE (2008) analysis citing references 6 and 38 herein.*



In sum, “dirty” crude, not “clean” fuels, is the main causal factor driving California refineries’ extreme-high CO<sub>2</sub> emission intensity.



Figure Crude-4. California crude oil production 1985–2008



106-6  
Cont'd

### 3. ARB fails to analyze emissions from changes in what refineries are refining.

Refiners often claim it is impossible or too difficult to switch from an existing high-pollution crude supply. This claim is not correct in this case, and ARB knows of at least one reason to suspect it is wrong: California refiners have spent the last two years asking ARB to change its LCFS so that they can refine new sources of crude. Nevertheless, ARB’s refinery emissions reduction analysis essentially ducks analysis of this question altogether. That is a serious error.

The long, terminal decline of California’s existing crude production sources that has continued since the mid-1980s (Figure Crude-3); government analysis (18); and industry analysis (19) all project with confidence that some 70–76% of crude processed by California refineries in 2020 will not be from existing California production. Further, the ongoing decline of Alaska’s current production (18, 19) and the ease of decadal switching among foreign supplies demonstrated historically (14) show that, for all practical purposes, up to three-quarters of the 2020 California crude feed will be from “new” sources. California refineries must select and adjust to new and different crude oils.

Since California refineries must change the driving factor causing their extreme-high emission intensity, they can choose blends of “new” crude oils of better quality, like every other major U.S. refining region does, and that would curb their emissions. Replacing the 70% of refinery crude input that will be lost from current California production by 2020 with crude the quality of the total average East Coast refinery input could curb average California refinery emission intensity to approximately 308 kg/m<sup>3</sup>, a reduction of –20% or –7.8 million tonnes/year, as CO<sub>2</sub>. This is based on the same data and methods that predicted currently observed California refinery emissions within 1% on average (1), and is detailed in Table Crude-2 below.

**Table Crude-2. 2020 California refinery CO<sub>2</sub> emission predictions for two scenarios**

PADD	Year	EI	density	sulfur	cap.	prod.	EI pred. 95% confidence			Fuel mix	Emit pred. 95% conf.			Obs. CO <sub>2</sub>
		(GJ/m <sup>3</sup> )	(kg/m <sup>3</sup> )	(kg/m <sup>3</sup> )	ut. (%)	ratio	Lower	Central	Upper	(kg/GJ)	Lower	Central	Upper	(kg/m <sup>3</sup> )
1	1999	3.451	858.20	8.24	90.9	3.668	2.877	3.241	3.604	81.53	235	264	294	281
1	2000	3.430	860.18	8.00	91.7	3.489	2.987	3.349	3.711	80.34	240	269	298	276
1	2001	3.518	866.34	7.71	87.2	3.479	3.198	3.559	3.919	81.85	262	291	321	288
1	2002	3.426	865.71	7.45	88.9	3.605	3.152	3.511	3.870	81.08	256	285	314	278
1	2003	3.364	863.44	7.43	92.7	3.321	3.133	3.493	3.853	81.51	255	285	314	274
1	2004	3.416	865.44	7.79	90.4	3.397	3.209	3.568	3.927	81.46	261	291	320	278
1	2005	3.404	863.38	7.17	93.1	3.756	3.048	3.410	3.772	81.23	248	277	306	277
1	2006	3.440	864.12	7.17	86.7	3.522	3.054	3.417	3.780	80.40	246	275	304	277
1	2007	3.499	864.33	7.26	85.6	3.443	3.067	3.433	3.800	82.28	252	282	313	288
1	2008	3.551	863.65	7.08	80.8	3.400	2.972	3.352	3.733	83.26	247	279	311	296
2	1999	3.368	858.25	10.64	93.3	4.077	2.984	3.347	3.711	78.11	233	261	290	263
2	2000	3.361	860.03	11.35	94.2	4.132	3.104	3.468	3.832	77.56	241	269	297	261
2	2001	3.396	861.33	11.37	93.9	4.313	3.126	3.495	3.863	77.46	242	271	299	263
2	2002	3.393	861.02	11.28	90.0	4.345	3.068	3.432	3.796	77.90	239	267	296	264
2	2003	3.298	862.80	11.65	91.6	4.281	3.195	3.558	3.922	78.00	249	278	306	257
2	2004	3.376	865.65	11.86	93.6	4.167	3.369	3.733	4.098	77.25	260	288	317	261
2	2005	3.496	865.65	11.95	92.9	4.207	3.362	3.725	4.089	77.27	260	288	316	270
2	2006	3.738	865.44	11.60	92.4	3.907	3.380	3.738	4.095	75.84	256	283	311	284
2	2007	3.800	864.07	11.84	90.1	4.161	3.270	3.629	3.989	75.55	247	274	301	287
2	2008	3.858	862.59	11.73	88.4	4.333	3.154	3.515	3.875	74.97	236	263	291	289
3	1999	4.546	869.00	12.86	94.7	3.120	3.759	4.117	4.476	71.61	269	295	321	326
3	2000	4.563	870.29	12.97	93.9	3.120	3.813	4.172	4.531	71.87	274	300	326	328
3	2001	4.348	874.43	14.34	94.8	3.128	4.086	4.444	4.803	72.43	296	322	348	315
3	2002	4.434	876.70	14.47	91.5	3.251	4.140	4.499	4.859	72.71	301	327	353	322
3	2003	4.381	874.48	14.43	93.6	3.160	4.076	4.435	4.794	72.81	297	323	349	319
3	2004	4.204	877.79	14.40	94.1	3.228	4.213	4.572	4.930	73.43	309	336	362	309
3	2005	4.205	878.01	14.40	88.3	3.316	4.149	4.511	4.873	73.24	304	330	357	308
3	2006	4.367	875.67	14.36	88.7	3.176	4.067	4.433	4.798	74.15	302	329	356	324
3	2007	4.226	876.98	14.47	88.7	3.205	4.127	4.491	4.856	74.93	309	337	364	317
3	2008	4.361	878.66	14.94	83.6	3.229	4.165	4.540	4.915	74.48	310	338	366	325
5	1999	4.908	894.61	11.09	87.1	2.952	4.713	5.082	5.451	70.27	331	357	383	345
5	2000	5.189	895.85	10.84	87.5	3.160	4.725	5.092	5.460	69.09	326	352	377	358
5	2001	5.039	893.76	10.99	89.1	3.231	4.648	5.014	5.380	69.38	322	348	373	350
5	2002	4.881	889.99	10.86	90.0	3.460	4.450	4.814	5.178	69.15	308	333	358	338
5	2003	4.885	889.10	10.94	91.3	3.487	4.422	4.788	5.153	69.40	307	332	358	339
5	2004	4.861	888.87	11.20	90.4	3.551	4.410	4.775	5.140	69.89	308	334	359	340
5	2005	4.774	888.99	11.38	91.7	3.700	4.409	4.780	5.151	69.88	308	334	360	334
5	2006	4.862	887.65	10.92	90.5	3.615	4.331	4.695	5.060	69.32	300	325	351	337
5	2007	5.091	885.54	11.07	87.6	3.551	4.235	4.594	4.953	69.12	293	318	342	352
5	2008	4.939	890.16	12.11	88.1	3.803	4.456	4.824	5.191	68.39	305	330	355	338

**Predictions for California refineries in 2020**

Emit reduction case	883.14	8.24	91.8	3.836	3.953	4.313	4.674	71.40	282	308	334	--
Emit increase case	948.39	22.59	91.8	3.836	7.511	8.037	8.563	71.40	536	574	611	--

Key to S.F. Bay Area prediction cases. Case inputs:

Emit reduction case: 2020 crude feed is 70/30 blend of PADD 1 quality/California-produced crude.

Emit increase case: 2020 crude feed is 70/30 blend of heavy oil/California-produced crude.

California-produced crude quality is 2004–2008 average density and sulfur content from Table 2-3.

PADD 1 quality is 2004–2008 avg. from Table 2-1; USGS avg. heavy oil (957.4 kg/m<sup>3</sup> d; 27.8 kg/m<sup>3</sup> S) (1, 28)

2020 California capacity utilization, products ratio & fuel mix are 2004–2008 averages from Table 2-1.

EI: refinery energy intensity as measured by fuel energy consumed/vol. crude refined.

Cap. ut.: operable refinery capacity utilization as defined by U.S. EIA.

Prod. ratio: the ratio by volume of gasolines, distillate, kerosenes and naphtha to other refinery products.

Fuel mix emission intensity measured from reported data as detailed in Table 2-1.

U.S. Refinery data from Table 2-1.

106-6  
Cont'd

Avoiding continuation of that 7.8 million tonnes/year of CO<sub>2</sub> emissions directly at the refineries would also curb GHG co-pollutants impacting communities near refineries, and it would support ARB's LCFS as California's massive refining industry would no longer be creating market pressure to expand heavy oil and tar sands production. Compared to total crude barrel price swings approaching \$100/barrel—which we do notice at the gas pump—the dirty-oil price discount refiners would be giving up for the environment by this measure (~\$5/m<sup>3</sup> or ~2 cents per gallon, see Table Crude–3) might not even be noticeable at the pump. Two cents/gallon is less than 1% of \$100/barrel crude.

**Table Crude–3. Light–heavy crude price spreads, U.S. imports<sup>a</sup>**

Density range	Discount from PADD 1–range crude 1983–2009			
	25th Percentile	Mean	75th Percentile	
30.1–35.0 °API	—	—	—	U.S. PADD 1 falls in this range <sup>b</sup>
25.1–30.0 °API	\$1.95/m <sup>3</sup>	\$5.08/m <sup>3</sup>	\$7.39/m <sup>3</sup>	California refining falls in this range <sup>b</sup>
< 20 °API	\$21.42/m <sup>3</sup>	\$32.67/m <sup>3</sup>	\$36.67/m <sup>3</sup>	Heavy oil falls in this range <sup>c</sup>

<sup>a</sup> Landed costs of imported crude from Table 24 in Petroleum Marketing Annual; DOE/EIA-0487 (2009);

<sup>b</sup> Based on average PADD 1, California refinery crude feeds 2004–2008, data from Table 2-1.

<sup>c</sup> Heavy oil as defined by U.S. Geological Survey, and worldwide average density, from reference 28.

However, that two cents on the gallon cost adds up to an attractive profit-boosting opportunity when refiners account for the great volume of crude they process. They can be expected to switch to cheaper crude if otherwise allowed, which could greatly increase their already extreme emissions intensity. In fact, industry trade journals advertise this strategy even as the best of them acknowledge that it will increase emissions. (20, 33) This means a worsening of the driving factor causing California's extreme-high refinery emission intensity is more than likely to further increase emissions unless curbed.

Replacing the 70% of refinery input that will no longer be from existing California production by 2020 with the average heavy oil, as defined by the USGS (957.4 kg/m<sup>3</sup> *d*; 27.8 kg/m<sup>3</sup> *S*) (28, 1) would boost average California refinery emissions to approximately 574 kg/m<sup>3</sup>, an increase of 49% or 19.6 million tonnes/year. See Table Crude–2.

Thus, instead of some imagined barrier to switching crude sources that ARB might cite to excuse allowing 7.8 million tonnes of avoidable refinery emissions annually, crude sources are changing and that will further increase emissions unless policy limits refinery emissions, crude feed quality, or both.

Failing to analyze changes in what refiners are refining—the driving factor for their high emissions which it also ignored—ARB ignores both a readily achievable emission reduction and an enormous pollution threat.

106-6  
Cont'd



**4. ARB's cap-and-trade scheme will increase refinery emissions dramatically.**

ARB asserts generally that it intends to allow emissions to continue or even increase from some sources so long as total emissions meet a declining cap, and even if it did not make this crucial admission, that is undeniably the central logic and actual effect of its cap-and-trade pollution trading scheme. It replaces direct emissions control requirements on specific sources because it must create the “flexibility” that allows some sources to pay for actions intended to occur elsewhere. This is at the core of its concept.

Here, ARB has grossly mistaken the emissions performance, emission reduction opportunity, and emission increase potential of the largest refining center in the U.S. West, and this industry is uniquely entrenched.<sup>96</sup> Setting aside its numerous other severe flaws and injustices for a moment to focus on this one clearly, applying ARB's cap-and-trade scheme to refineries will incent a crude switch that almost certainly would increase emissions drastically; it will do so because this is the way it is designed; and ARB's analysis inappropriately ignores this fundamental error in ARB's program design.

California's refining industry must switch crude supplies 2011–2020 as documented above. Oil companies will net profits by actions that increase their pollution under ARB's scheme. This is simple math. From the emissions increment caused by switching to 70% heavy oil instead of PADD 1-quality oil (0.266 tonnes/m<sup>3</sup> crude, Table Crude–2), and the 25-year average price discount on heavy vs. PADD 1-quality oil (\$32.67/m<sup>3</sup>, Table Crude–3), switching to heavy crude would save refiners about \$121 per tonne of incremental GHG emitted by this “dirty crude” switch. This exceeds any “carbon price” ARB has talked about seriously by several times. By telling refiners they can emit the extra CO<sub>2</sub> for, say \$25/tonne, ARB is telling them the dirtier oil is more profitable.

That means ARB's cap-and-trade scheme will incent refiners to profit from making an historic crude switch in exactly the wrong direction and sell them exemptions from the emission control requirements we need to prevent the drastic emission increase that is sure to follow and might add +20 million tonnes/y. Total refinery emissions would then preclude meeting IPCC climate targets in California alone, even if every other emission source went to zero. Toxic GHG copollutants—which always emit along with CO<sub>2</sub> from burning refinery fuels—would increase, perhaps by a similar percentage, worsening already-severe and disparate environmental health threats in communities near refineries.

Further, ARB's own U.C. advisors warned in writing that including the oil industry in a multi-sector cap-and-trade scheme will not work—that oil companies would buy emission credits instead of curbing pollution—because oil is so firmly and uniquely entrenched.<sup>95</sup> The new evidence on crude switching and crude price discounts provides additional evidence that independently proves the point. Together, the two bodies of evidence appear irrefutable. Tragically, ARB continues to ignore this crucial problem.

<sup>95</sup> Farrell and Sperling, 2007. *A low carbon fuel standard for California, part 1: Technical Analysis*; UCD-ITS-RR-07-07; Institute of Transportation Studies, U.C. Davis: Davis, California. 1 August 2007; see pages 22–24.

CONCLUSION

CBE urges you to take seriously the failures of cap and trade and its potential to cause significant environmental and health harm, and to adopt feasible superior alternatives that avoid these impacts and have a greater measure of effectiveness.

Thank you for your consideration,  
Sincerely,

/s/

/s/

/s/

/s/

/s/

Julia May

Anna Yun Lee

Greg Karras

Adrienne Bloch

Maya Golden-Krasner

106-6  
Cont'd

## **L106 Response**

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- 106-1      The commenter provides a summary of more specific comments addressed in the applicable responses below.
- 106-2      ARB disagrees with the commenter's statement that a cap-and-trade program does not meet the project objectives with regard to cost-effectiveness, achieving a GHG reduction goal due to overallocation, leakage, and the preventing impacts in disadvantaged communities. The FED analysis determined a cap-and-trade program is more cost-effective than the alternatives proposed by CBE, see table 2.8.1.

In preparing the 2008 Scoping Plan and subsequently in development of the proposed Cap-and-Trade Regulation, ARB has thoroughly researched other emission trading systems that resulted in overallocation of allowances, met with numerous academic experts and stakeholders, in order to identify means to ensure that overallocation would not occur and leakage would be minimized in a California cap-and-trade system. The commenter's concerns about gaming should be discussed within the context of the proposed Cap-and-Trade rule development process. Please refer to response 4-1.

The commenter's claim that ARB did not analyze the impact of a cap-and-trade program and identify mitigation options. However, the FED clearly summarizes the impacts of the program and identifies an adaptive management plan to monitor for and address any impacts identified as the program is implemented. Please refer to the response to comment 106-4 for an explanation of how a cap-and-trade program would meet the objectives of AB 32 that relate to impacted communities and co-pollutant emissions. Please refer to responses to comment letter 37 and response 106-4 below regarding adaptive management.

- 106-3      This comment asserts that the latest evidence shows that all carbon trading program designs have major flaws.

To the extent that ARB selects similar design elements as other carbon trading programs, but choosing these design elements is not a guarantee that California would have similar outcomes. ARB has learned from the existing carbon markets and made adjustments that would ensure that the California program functions as intended.

The over allocation problem in the other carbon programs has been the result of inadequate information on actual emissions. California had several years' worth of verified emissions data to use to determine the

number of allowances that would be made available. As a result, it is very unlikely that a California market would be over allocated.

The California program would auction a significant portion of the allowances and allowances would not be given freely to electricity generators. At the onset of the program some allowances would be freely allocated to provide for transition assistance and to prevent economic leakage but the amount of free allocation would decline over time. This allocation design is intended to avoid the types of windfall profits that were seen in the EU ETS. Both of the existing carbon markets are transitioning towards less free allocation and more auctioning of allowances.

Banking is a necessary design feature that helps prevents price volatility. Because of its reliance on hydroelectric power, California is particularly vulnerable to price volatility that could accompany a multi-year drought. Banking does not eliminate reductions; it just moves them to another period.

Offsets help minimize adverse economic impacts. Analyses have shown that the economic impacts from a program that does not allow for the use of offsets would be substantially greater. In the proposed regulation, the number of offset credits that a covered entity may use to meet its compliance obligation would be limited. Offset credits must be real, additional, permanent, verifiable, enforceable, and quantifiable.

Contrary to the comments, emission reductions have occurred in both the EU-ETS and RGGI areas though some of these reductions are a response to the global economic slowdown.

ARB's proposed Cap-and-Trade program design has learned from these other programs and the design choices balance achieving environmental improvements while not significantly impacting the economy.

106-4

The commenter cited the study Minding the Climate Gap and claims it provides evidence that a cap-and-trade program would cause existing inequities to worsen. This assertion is not substantiated by the findings of the study. The data and research in the study clearly indicate that a disproportionate share of facilities with high GHG emissions is located in low-income communities with a high percentage of minorities. The study also finds that the average population weighted annual co-pollutant emission burden from large GHG emitting facilities is larger for minorities, the largest of which is due to co-pollutant emissions from petroleum refineries. This information further reinforces the fact that minorities are disproportionately impacted by co-pollutant emissions. However, there is no evidence in the study that the facilities located in minority neighborhoods are more likely to buy allowances or offsets instead of

reducing their GHG emissions and are therefore are going to incur less benefits than other communities. In fact, previous research suggests otherwise. Numerous studies have evaluated the potential for inequitable impacts from emissions trading programs on minority neighborhoods (Ringquist, 2011; Corburn, 2002; Ringquist, 1998), racial and ethnic groups (Shadbegian, 2007), and general community demographics (Fowlie, 2009) and found trading did not have a disproportionate impact.

[See Ringquist, EJ, Trading Equity for Efficiency in Environmental Protection? Environmental Justice Effects from the SO<sub>2</sub> Allowance Trading Program (2011) Social Science Quarterly 92(2):297-323.

Corburn J, Emissions Trading and Environmental Justice: Distributive Fairness and the USA's Acid Rain Programme.(2002) Environmental Conservation 28(4):323–32.

Ringquist EJ, Efficiency vs. Equity in Environmental Protection: Trading SO<sub>2</sub> Emissions Under the 1990 Clean Air Act.(1998) Delivered at the APSA Annual Meeting. Boston, MA.

Shadbegian R, Gray W, Morgan C, Benefits and Costs from Sulfur Dioxide Trading: A Distributional Analysis (2007) In Gerald Visgillio and Diana Whitelaw, eds., Acid in the Environment: Lessons Learned and Future Prospects. New York: Springer.

Fowlie, M, Howland S, Mansur E, What Do Emissions Markets Deliver and for Whom? Evidence from Southern California's NO<sub>x</sub> Trading Program. (2009) NBER Working Paper 15082. Washington, DC: NBER.]

As noted by the Market Advisory Committee:

“[a] U.S. Environmental Protection Agency staff analysis found that under the SO<sub>2</sub> emission trading program, the largest reductions occurred in areas with the highest emission levels. This finding was true both regionally and at individual plants.”

See Market Advisory Committee to the California Air Resources Board, Recommendations for Designing a Greenhouse Gas Cap and Trade System for California (hereafter “MAC Recommendations”) at 10 (2007) [citing The Acid Rain Program and Environmental Justice: Staff Analysis” (September 2005) U.S. Environmental Protection Agency, Office of Air and Radiation, Clean Air Markets Program]. Thus, it is possible that the areas with highest emissions could observe disproportionate benefits from a cap-and-trade program. To illustrate the risk that air pollution poses to communities, the commenter cites the Bay Area Air Quality Management District’s 2010 Clean Air Plan (CAP). The CAP found co-pollutant

emissions in the Bay Area disproportionately impact residents of East and West Oakland. According to Table 2 on page 19, supplied by the commenter, diesel pollution is responsible for a significantly higher percentage of lifetime cancer risk than other pollutants (318 cancer cases out of 406) in the Bay Area. The most effective way to reduce the impacts of diesel pollution in East and West Oakland is to implement programs that identify and reduce diesel pollution directly. While a GHG focused program could likely reduce diesel emissions along with GHG emissions, it is not the most effective mechanism for decreasing exposure to co-pollutants. ARB and the air districts have implemented several programs to reduce diesel pollution in California and at the Port of Oakland. More information about these programs is available on our website at <http://www.arb.ca.gov/diesel/diesel.htm>.

The commenter also states the California Department of Public Health's (CDPH) Health Impacts Assessment (HIA) did not evaluate the potential for environmental and health inequities from a cap-and-trade program. We disagree with this assertion. CDPH's HIA discussed the potential impact of a cap-and-trade program on health inequities. However, as the HIA states "there is a limited ability to predict these local impacts because of scarce local level data and an inadequate ability to accurately predict or model local impacts related to cap-and-trade." Nevertheless, the document evaluates health disparities in three areas – Wilmington, Richmond, and the San Joaquin Valley.

Moreover, through the Energy Efficiency and Co-benefits Assessment Regulation for Large Stationary Sources, ARB is currently collecting information on opportunities for further GHG and co-pollutant emission reductions. ARB is scheduled to receive this data by the end of 2011. Staff would initiate a process to ensure that large industrial sources subject to the regulation be required to take all cost-effective actions identified under those audits. The audit results, due to ARB by the end of 2011, will inform the development of regulatory requirements staff intends to propose to the Board in 2012. Staff plans to initiate a separate public process in Fall 2011 to discuss metrics and actions to implement this commitment.

The commenter advocates the use of the Environmental Justice Screening Method developed by Dr. Manual Pastor to identify communities impacted by air pollution and "in order to assess the impacts of various alternatives." As suggested by the Environmental Justice Advisory Committee (EJAC), ARB used the Environmental Justice (EJ) Screening Method developed by Dr. Pastor when selecting communities for the Cap-and-Trade Emissions Assessment, a subset of which were also used by CDPH in the HIA. However, when the Emissions

Assessment and the HIA were written, the EJ Screening Method only applied to the South Coast and could not be used to identify a comprehensive list of impacted communities in California. Since then, Cal/EPA has financed additional research to expand the EJ Screening Method to the Bay Area and Central Valley. A report of these findings will be available in Fall 2011. Even if these findings were currently available, the EJ Screening Method cannot be used to determine the future impacts of a cap-and-trade program or any alternatives. It is composed of retrospective data on air pollution and socioeconomic indicators and does not have the capability to evaluate prospective impacts.

As stated in the FED, ARB and CDPH thoroughly evaluated the health and environmental impacts of a cap-and-trade program to the best of our ability. The commenter provided no evidence supporting the assertion that a cap-and-trade program will exacerbate or widen inequities and previous research suggests otherwise. Nevertheless, if the proposed Cap-and-Trade Regulation is adopted, ARB staff is committed to monitoring the implementation of regulation to identify and to address any situations where the program has caused an increase in criteria air pollutant or toxic emissions. ARB staff is currently developing a proposed adaptive management component of the proposed Cap-and-Trade program, and would be seeking stakeholder input. At least once each compliance period, ARB would use information collected through the mandatory reporting regulation, the proposed Cap-and-Trade Regulation, the industrial efficiency audit, and other sources of information to evaluate how individual facilities are complying with the regulation. If any adverse impacts are identified ARB would, if feasible, modify the program to lessen the impacts.

ARB notes that the Scoping Plan is a framework document outlining the regulatory course that ARB expects to pursue to achieve the GHG limits imposed by AB 32. The Scoping Plan does not commit ARB to adopting any regulation. Regulations would be considered and adopted following their respective review and approval processes, during which the details and elements of each will be developed. Please refer to responses 4-1 and 37. The same holds true for adaptive management. Specific adaptive management programs that may accompany future regulation must wait to be developed as part of the process for those regulations. The Scoping Plan does not, nor cannot, predetermine what adaptive management would look like for these future regulations.

REDD as part of a cap-and-trade program would have to be developed under a separate rulemaking process and brought before the Board for approval. The rulemaking process to include REDD would have a full public process and environmental review.

Please also refer to response 81-1. Please refer to responses to comment letter 37 and response 106-4 regarding adaptive management.

106-5 The commenter indicates that other alternatives are reliable and avoid significant environmental impacts from a cap-and-trade program. ARB examined a reasonable range of alternatives in this supplement, as required under CEQA, and the array of source-specific measures recommended in the comment presents a scenario of additional regulatory actions, and provides a basis for technical and cost-effectiveness for each proposed measure.

The commenter suggests that ARB should have looked at the array of measures within the comment in the construct of the Supplement. The measures in the 2008 Scoping Plan and the Supplement are necessarily consistent. This Supplement is intended to examine the relative merit of each of the alternatives included in the Functional Equivalent Document prepared for 2008 Scoping Plan, evaluate them for environmental impacts, and determine whether each alternative meets the goals and objectives of AB 32. ARB is not reopening the 2008 Scoping Plan; however, ARB would consider potential new measures when preparing the first update of the AB 32 Scoping Plan, scheduled for 2013. The comment does not pertain to the adequacy of the environmental analysis in the Supplement; however, ARB provides a response in the enumerated paragraphs below.

The commenter contends that far more reductions have been identified than the 17 MMTCO<sub>2</sub>E that the “direct regulation” alternative revised FED seeks to replace reductions needed from a cap-and-trade program. The commenter identifies seven measures and indicates they could achieve almost 30 MMTCO<sub>2</sub>E. ARB staff believe that most of the measures suggested by the commenter are not feasible and the remaining measures, while they have some reduction potential, may be substantially inflated relative to what a rule approach might achieve.

1. Industrial Energy Efficiency (~3MMTs) – The commenter draws on material prepared by ARB staff for the proposed Cap-and-Trade rulemaking (Appendix F), and contends that the conceptual emission reductions that might be obtained with these measures could be required as a direct regulation. Staff is currently evaluating how facility-specific cost-effective emission reduction opportunities identified by energy efficiency and co-benefits audits due by the end of 2011 would be mandated under a regulatory program. The commenter is assuming the results of a broad analysis (like that contained in Appendix F) or audits are applicable over a diverse set of sources requiring widespread efficiency improvements. Staff does not believe that mandated improvements of this type are administratively feasible



under a regulation at this time. The commenter also rightfully notes the uncertainty in estimates of emission reductions possible from these types of measures due to potential overlapping of estimated reduction opportunities (such as replacing or improving boilers).

2. Industrial Methane Exemptions (~3MMTs) – The commenter states the belief that additional emission reductions from fugitive emissions are possible from oil and gas operations and industrial sources. The commenter relies on work by ARB staff related to higher than expected fugitive emissions from oil and operations, and contend that higher emissions are also likely from industrial sources, and could be reduced by eliminating current exemptions for methane in district rules. ARB believes that CBE's potential emission reductions from this measure are overestimated. Nevertheless, as identified in the 2008 Scoping Plan and Status of Scoping Plan Recommended Measures, ARB is exploring a measure to reduce fugitive methane emissions from oil and gas production, processing, and storage. In addition, the commenter states that ARB has not acted on a control measure for landfill methane below. This is not true. ARB adopted a landfill methane control measure in 2009 (Table 2.3-1 in the Supplement). The commenter further states their belief that additional emission reductions from fugitive emissions are possible from oil and gas operations and industrial sources. As identified in the 2008 Scoping Plan and Status of Scoping Plan Recommended Measures, ARB is exploring a measure to reduce fugitive methane emissions from oil and gas production, processing, and storage. Based on preliminary staff work, we believe CBE's potential emission reductions from oil and gas operations measure are overestimated. The discussion of potential fugitive emissions from industrial sources provided by the commenter is speculative. ARB does not have an estimate of fugitive methane emissions from industrial sources but believes these emissions are likely to be small because of potential safety issues associated with fugitive methane emissions.
3. Clean Electricity at Refineries (~1.2MMTs) – The commenter calls for a rule to require refiners to directly purchase renewable electricity equal to their entire consumption of grid power. It would be in addition to the existing 33 percent RPS imposed on utilities. Essentially the measure targets refineries to pay more for power than other large users, but provides no rationale as to why this is a proper policy. Because refineries need large amounts of power every hour of every day and renewable generation is not predictable or even, this measure would not remove the need for utilities to provide power to refineries. Refiners presumably would have to “offset” their net power use with renewables. Because refineries consume about 1 percent of the

MWhs in the state this would effectively raise the statewide target for renewable generation from 33 percent to about 34 percent. As a general rule, refiners like other industrial sources purchase electricity through either independent or publically owned utilities. There is not a mechanism or process for a refiner to purchase power directly from a generating source to cover their electricity needs. Onsite renewable distributed generation could be problematic because of space constraints, permitting, and other local land use and siting issues. Refiners could potentially fund offsite renewable projects that qualify as distributed generation or might provide generation capacity to the grid but potential benefits would be difficult to quantify and enforce. The intermittent nature of renewables, grid interconnection, transmission, load balancing, and other issues associated with integrating renewables is most effectively handled through the utilities. The 33 percent renewables requirement for utilities ensures that renewable energy is effectively integrated into the grid and emission reductions are realized. Singling out a specific industry to obtain all their onsite power needs from renewable resources does not ensure that additional actual GHG emission reductions would occur and is not mandated by AB 32.

4. Clean Electricity at Cement Plants (~1MMTs) – The commenter calls for a rule to require cement plants to directly purchase renewable electricity equal to their entire consumption of grid power. It would be in addition to the existing 33 percent RPS imposed on utilities. Essentially the measure targets cement plants to pay more for power than other large users, but provides no rational why this is a proper policy. Because cement plants need large amounts of power every hour of every day and renewable generation is not predictable or even, this measure would not remove the need for utilities to provide power to cement plants. Operators presumably would have to “offset” their net power use with renewables. Because cement plants consume about to 0.5 percent of the MWhs in the state this would, when combined with the same measure for refiners, effectively raise the statewide target for renewable generation from 33 percent to almost 35 percent. As a general rule, cement plants like other industrial sources purchase electricity through either independent or publically owned utilities. There is not a mechanism or process for a cement plant to purchase power directly from a generating source to cover their electricity needs. Onsite renewable distributed generation could be problematic because of space constraints, permitting, and other local land use and siting issues. Cement plants could potentially fund offsite renewable projects that qualify as distributed generation or might provide generation capacity to the grid but potential benefits would be difficult to quantify and enforce. The intermittent nature of renewables,

grid interconnection, transmission, load balancing, and other issues associated with integrating renewables is most effectively handled through the utilities. The 33 percent renewables requirement for utilities ensures that renewable energy is effectively integrated into the grid and emission reductions are realized. Singling out a specific industry to obtain all their onsite power needs from renewable resources does not ensure that additional actual GHG emission reductions would occur nor can it be accurately quantified and is not mandated by AB 32.

5. Other cement plant reductions (~1.3MMTs) – The commenter draws on material prepared by ARB staff for the proposed Cap-and-Trade rulemaking (Appendix F), and contends that the emission reductions from cement related measures could be required by direct regulation. About 90 percent of the targeted 1.3 MMT reduction would come from two measures: alternative fuels and blended cement. ARB staff notes that the alternative fuel requirement would rely heavily on combustion of tires and installation of tire feeding infrastructure (Proposed Cap-and-Trade ISOR Appendix F-27) which may be infeasible in many communities because of concerns over emissions from tire combustion. Staff also notes that the blended cement measure occurs downstream of cement production, and would need to be combined with a production cap, otherwise it would simply displace imports. A blending measure would also require regulation of batch plants which are not directly responsible for emissions. Staff is also evaluating how facility-specific cost-effective emission reduction opportunities identified by energy efficiency and co-benefits audits due by the end of 2011 would be mandated under a regulatory program.
6. Crude Oil Requirements (~8MMTs) – The commenter claims that California refineries emit more GHG emissions per barrel of crude refined than other U.S. refineries, and that by switching to less dense and lower-sulfur crude oils—such as those processed by East Coast refineries—statewide GHG emissions could be reduced by nearly 8 million metric tons per year. The commenter states that, by not requiring California refineries to process lighter, sweeter crude oils, ARB is ignoring “both a readily achievable emission reduction and an enormous pollution threat.”

The commenter’s premise—that heavier, higher sulfur crudes require more energy to refine, and therefore result in higher GHG emissions per unit of output—is valid. Because much of the State’s crude is heavy (produced only through steam injection or similar techniques), and Alaskan crude is also relatively heavy and higher sulfur, California

refineries have been configured to handle a tougher-to-refine mix of crude oils than those elsewhere in the U.S. The commenter also correctly notes that California's historic crude supplies are changing as the State's internal production declines and as crude supplies from Alaska also decline.

However, the commenter analysis does not consider the other important reason why California refineries have higher energy use per unit of crude input. On average, California refineries are far more complex and create higher percentages of highly refined products than refineries in the rest of the nation. Additionally, a much higher fraction of refineries in other parts of the U.S. are lower-complexity refineries, which use much less energy per barrel refined (and therefore have lower GHG emissions), but also must use light crude supplies and still cannot produce a high percentage of motor fuels from crude. Thus, even if all California refiners were to switch to lighter crudes, GHG emissions would not be reduced by the amounts suggested by the commenter.

Furthermore, the cost-effectiveness of switching completely to lighter, sweeter crudes would be significant. Lighter, sweeter crudes are on the order of \$10/barrel more expensive than heavier crudes. If the entire California refiner complex were forced to switch to these crudes, the cost could exceed \$500 per metric ton (MT)—10 to 50 times greater than that estimated with a cap-and-trade program—even if the full 8 MMT reduction asserted by the commenter occurred. This proposal would increase crude prices by \$4 billion. Therefore, the assertion that mandating a complete switch to lighter, sweeter crudes would be a viable, cost-effective measure to make California refiners match the lower refinery emissions profile of refineries nationwide is not correct. The prescriptive approach in this proposal would cost significantly more than the cap on refinery emissions described in Alternative 4, and would be more likely to result in leakage of GHG emissions to other regions which would lose some of their supplies of easier to refine lighter crudes.

7. "33% RPS" for refineries (~12MMTs) – This measure is not really a refinery "RPS". Instead it is predicated on expanding the ARB's zero-emission vehicle rule to at least its former 10 percent mandate, increased fuel efficiency standards for cars, and increased numbers of plug-in hybrid vehicles in order to reduce fuel demand by about 33 percent by 2020. ARB is currently developing regulations to further reduce emissions from cars (Advanced Clean Cars regulation) and is re-evaluating the zero-emission vehicle program. Although ARB supports further GHG emission reductions from the transportation

sector, it believes that achieving a 33 percent reduction by 2020 is infeasible. ARB's current car emission standards run through 2016, and sufficient lead time is needed by industry in order to meet any new emission standards. It is not possible to achieve a 33 percent reduction in demand for on-road transportation fuel with new car regulations starting in 2017. Based on ARB's emission model, new cars represent about 6 percent of the total car fleet each year. Passenger vehicles account for 80 percent of GHG emissions from on-road transportation fuel use ([http://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scoping\\_plan\\_00-08\\_2010-05-12.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scoping_plan_00-08_2010-05-12.pdf)). This means that if 100 percent of new cars introduced into California each year between 2017 and 2020 were zero-emission vehicles, GHG from transportation would decrease by less than 20 percent. Zero-emission vehicles currently make up significantly less than 1 percent of each year's vehicle sales.

The commenter also assumes that a 33 percent drop in transportation fuel use in California would result in a similar cut in refinery emissions because refineries would reduce output as demand drops. This may not be the case. If California demand drops, refineries may choose to continue to produce the same amount of fuel for export out of the state. If a refinery did choose to reduce output, reductions in emissions may not be commensurate with reductions in output. If the equipment was designed to operate most efficiently at high throughput, operating at lower throughputs may not reduce emissions in proportion to the reduction in output.

Please also refer to response 15-1 regarding a carbon fee.

106-6      The commenter indicates that there are more emissions being generated than ARB is accounting for, and the issue of how ARB would compensate for GHG generated out of state or out of country, when goods are transported into the state. The commenter is describing a variant of the issue of leakage, which is one of the project objectives against which each of the alternatives have been evaluated.

The commenter also states that refineries are converting to using tar sands and heavier crude for fuels, which may result in increases in criteria pollutants. Facilities are required to operate within terms and conditions of permits, and are not allowed to exceed their conditions of their permits. The commenter is also referred to response 106-5 (6) above.

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**L107**

July 28, 2011

TO: The Honorable Mary Nichols, Chair  
California Air Resources Board

FR: John Larrea, Governmental Affairs  
California League of Food Processors (CLFP)

RE: Comments on Revised Functional Equivalent Document

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In a previous workshop on the Supplement to the AB 32 Scoping Plan Functionally Equivalent Document (FED) staff heard comments from parties familiar with California Environmental Quality Act (CEQA) as to the need to allow for more time in order to produce a document sufficient to meet the requirements under CEQA. Clearly, this remains the case.

A thorough review of the alternative compliance mechanisms set forth in the FED is a necessary part of the process of determining the best methodology for achieving the greenhouse gas reductions required under AB 32. Add to that that this is a California-only endeavor, the costs of which will be borne by over 600 of California's industries, there is clearly a need for much more than a second cursory review of the alternative programs. While CEQA doesn't require a state agency to develop a full environmental impact report (EIR), CLFP believes that the issues demand something more than what is presented.

**Lack of Economic Analysis of Alternative Compliance Mechanisms Violate Board's Direction under Resolution 10-42**

In CARB Resolution 10-42 (passed December 16, 2010), the Board addresses the FED (pages 8-10) and specifically directs the Executive Officer to take the following

actions regarding the FED:

“...

4. Determine whether there are feasible alternatives or mitigation measures that could be implemented to reduce or eliminate any potential adverse environmental impacts while at the same addressing the serious economic recession and its impact on industry and residents of the State; ...” (emphasis added)

In the latest FED iteration, though CARB staff discuss the possible alternative compliance options for the regulated industrial community they have not, in any reasonable manner, met the Board’s requirement to address the recession and its implications in the comparison of alternative compliance mechanisms.

107-1  
Cont'd

**Relocation of Facilities Should be Considered as Additional Alternative Compliance Mechanism**

In previous comments, CLFP urged staff to consider an additional alternative compliance option to the five listed; that of relocation of facilities. Food processing facilities, subject to either cap-and-trade or a carbon tax rule or other compliance mechanism, will be hard pressed to pass any compliance costs on to the consumer. It is very likely that the facilities will either relocate out of the state or shutdown the operation. In the event of a shutdown, the demand for the end product will be unchanged and production will be increased in other areas. This will cause an economic loss in California and will not reduce greenhouse gas emissions as well as lead to an increase of GHG emissions because California processing facilities are some of the most efficient in the world. The CEQA analysis needs to fully address the high potential for leakage among processing facilities.

107-2

Additionally, the economic and social impact on the rural communities either through reduced food processing and production or a shutdown will be severe. These small agricultural communities are highly dependent on food processing operations as a substantial source of employment CARB staff needs to examine the impacts on both the food processing industry and the residents of these California communities pursuant to the Board’s direction on page 10, item 4, cited above.

**Additional Considerations per Resolution 10-42**

Other factors that need to be considered in CARB’s analysis of alternative compliance methodologies should include:

1. The continuing economic decline both in California and in the U.S.: There is diminishing likelihood of any cap-and-trade being initiated at the federal level

107-3



before 2020. That in and of itself should spur more inquiry into determining if a California-only program is sufficient to achieve the GHG goals without imposing significant economic damage to an already injured state economy. At the least, the current economic situation, and likely continuing economic malaise, will have a major impact ANY compliance program the CARB decides upon.

107-3  
Cont'd

2. The enfeebled Western Climate Initiative (WCI): The WCI is a ghost of its former self, with more observers than active partners. Not a single partner stands ready to join California's cap-and-trade program in any significant way. New Mexico, the most viable U.S. cap-and-trade partner, is currently addressing a strong challenge to its climate regime. Most of the remaining partners of WCI are all hopeful international offset providers looking to cash in on California captive industries in a restricted market.

### **California's Economic Reality No Longer Supports an Aggressive Climate Policy**

Clearly, since the adoption of the scoping plan in 2008, the state's economic landscape, touted to support an aggressive climate policy, has suffered a significant reversal. Since 2008, California has consistently ranked either first, second or third among the states hit hardest by the recession. Unemployment hovers at or near 12%, three to four percentage points above the national average and shows no sign it will move anytime soon. Actual new jobs created in California in the last few years can be counted in the hundreds, not in the four to six figures necessary to signal true economic recovery.

107-4

In its Final Resolution, the CARB Board found that "economic growth between 2007 and 2020 is projected to continue at a rate of 2.4 percent;" Yet, since 2008, the state's GDP growth rate slowed to 0.4% in 2008 after having grown 3.1% in 2006 and 1.8% in 2007 (Bureau of Economic Analysis, U.S. Dept. of Commerce). For a state of 35 million, the need for policies that will spur economic growth and put people back to work is vital.

In light of these factors, CLFP urges CARB to, at the very least, determine the two most viable compliance options, whether cap-and-trade and a carbon tax or a command and control mechanism, and provide an in-depth analysis of these alternatives so as to allow stakeholders to make informed decisions as to which will likely achieve the AB 32 goals in the most reasonable and rational means possible.

Given there is little chance for any federal program before 2020 (let's be honest, there is zero chance for any federally mandated program occurring before 2020), CARB should review all elements of the scoping plan to ensure that 1) a California-only program will best provide for meeting the emission reduction goals and providing the much touted economic stimulus promised under AB 32 and, 2) that the stakeholders and the public are provided the best possible information, a thorough understanding of the choices and potential detriments based on realistic assumptions as to the true costs of the proposed compliance mechanisms.

Thank you for considering our comments. Should you have any questions or need anything further, please feel free to contact John Larrea at (916) 640-8150.

107-4  
Cont'd

## **L107 Response**

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- 107-1      The commenter requested an economic study that pertains to the Supplement. ARB developed the Supplement as an expanded alternatives analysis that supports the environmental analysis prepared in accordance with CEQA contained in the 2008 FED. There is no requirement to conduct an economic analysis for an alternatives analysis prepared under ARB's certified regulatory program or CEQA. It should be noted that the ability to achieve technologically feasible and cost-effective reductions is listed under the project objectives. The analysis for each alternative does consider the ability of the alternative to the project objectives, including this one.
- 107-2      The commenter requests that ARB consider an additional alternative, relocation of food processing facilities. The request is based on the commenter's opinion that food processors would not be able to feasibly comply with either a cap-and-trade or carbon tax regulation and would, therefore, need to relocate outside of California (resulting in leakage). The commenter's concern about an economic burden on food processors is noted for decision-makers.
- In response to the request for an additional alternative, the design of the Scoping Plan alternatives seeks to establish a reasonable range of alternatives and is based on different overall approaches to achieve the GHG reduction goal in AB 32. Therefore, they describe various GHG reduction strategies that are broadly applicable across sectors. The alternatives do not focus on a single sector (such as food processing) or a single action (such as facility relocation), because this would be too narrowly defined to achieve the AB 32 GHG reduction goal. Consequently, the requested alternative would not feasibly achieve the project's objectives and need not be added to the Supplement.
- Regarding the commenter's opinion about the potential for leakage of food processing facilities as a result of the cost of carbon from a cap-and-trade or carbon tax approach, the comment provides no substantial evidence regarding the potential for this occurrence. It is also an economic impact concern of an individual regulatory strategy that would be addressed in the rulemaking process for a specific proposed action, rather than in the Proposed Scoping Plan FED Supplement's consideration of alternatives.
- 107-3      The commenter suggests additional factors to be considered for the alternatives analysis. As described in the Supplement, the alternatives analysis was developed in accordance with the requirements of ARB's

certified regulatory program and CEQA. Please refer to response 107-1.  
These additional factors are not directly related to a CEQA analysis.

107-4      The commenter again requests that ARB consider economic factors in the  
Supplement. Please refer to response 107-1.

**L108**

**Julia May, CBE**

Comment Letter 108 is an attachment to Comment Letter 106

**L108 Response: (L106 Attachment – see Attachment C)**

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No responses – Letter 108 is an attachment to comment letter 106, which is  
Attachment C of this document.

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**L109**

**SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY  
COMMENT TO THE CALIFORNIA AIR RESOURCES BOARD ON  
SUPPLEMENT TO THE AB 32 SCOPING PLAN  
FUNCTIONAL EQUIVALENT DOCUMENT**

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PUBLIC POWER AUTHORITY**

Dated: July 28, 2011

**SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY  
COMMENT TO THE CALIFORNIA AIR RESOURCES BOARD ON  
SUPPLEMENT TO THE AB 32 SCOPING PLAN  
FUNCTIONAL EQUIVALENT DOCUMENT**

The Southern California Public Power Authority (“SCPPA”)<sup>1</sup> is pleased to have the opportunity to comment on the Supplement to the AB 32 Scoping Plan Functional Equivalent Document (“Supplement”) released on June 13, 2011, and, particularly, on the document entitled “Status of Scoping Plan Recommended Measures” (“Status Report”) that was released on July 22, 2011.

In oral remarks presented at the July 8, 2011, workshop on the Supplement, SCPPA requested that the Air Resources Board (“ARB”) prepare an update showing the greenhouse gas emission reductions that the ARB expects to obtain from emission reduction measures other than the cap-and-trade program. The Status Report appears to be the update that was requested by SCPPA, and SCPPA very much appreciates the efforts of the ARB staff to prepare the Status Report.

The Status Report explains that the economic downturn plus the emission reductions that will be obtained through two currently effective complementary measures, Pavley I and the 20 percent Renewable Portfolio Standard, result in adjustments that reduce the 596 MMTCO<sub>2</sub>e 2020 baseline that was adopted in the December, 2008 Scoping Plan by 89 MMTCO<sub>2</sub>e to a new 2020 baseline “business as usual” forecast of 507 MMTCO<sub>2</sub>e.

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<sup>1</sup> SCPPA is a joint powers authority. The members are Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles Department of Water and Power, Imperial Irrigation District, Pasadena, Riverside, and Vernon. This comment is sponsored by Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Imperial Irrigation District, Pasadena, and Riverside.



Additionally, the Status Report says that the following emission reductions (expressed in MMTCO<sub>2</sub>e ) will be obtained from complementary measures that apply to emission sources that are capped under the cap-and-trade program:

• Advanced clean cars	3.8
• 33 percent renewable electricity standard	11.4
• Low Carbon Fuel Standard	15.0
• Energy Efficiency	
▪ Energy efficiency and conservation	11.9
▪ CHP	4.8
▪ Solar water heating	0.1
• Regional Transportation/Related Measures	3.0
• Vehicle Efficiency Measures:	
▪ Higher pressure regulation.	0.6
▪ Tire tread program	0.0
▪ Low friction oil	2.8
• Goods Movement:	
▪ Shore power for ocean-going vessels	0.2
• Million solar roofs:	1.1
• Medium/Heavy Duty Vehicles:	
▪ Heavy duty aerodynamics	0.9
▪ Hybridization	0.0
• High-Speed Rail:	1.0
• Industrial Measures (Refinery Measures and Energy Efficiency and Co-Benefit Audits)	<u>0.0</u>
TOTAL:	56.7

109-1  
Cont'd

The Status Report also projects emission reductions that will be obtained through measures that will apply to uncapped sources as follows:

• High Global Warming Potential Gas (“GWP”):	
▪ H-1: motor vehicle, air conditioning	0.2
▪ H-2: SF <sub>6</sub> reductions (non-utility and non-semiconductor)	0.0
▪ H-3: semiconductor manufacturing	0.2
▪ H-4: consumer products	0.2
▪ H-5: high GWP reductions from mobile sources	3.3
▪ H-6:	
○ Refrigerant management program	5.8
○ SF <sub>6</sub> leak reduction	0.1
▪ H-7: mitigation fee on high GWP gases	0.0
• Sustainable Forests	5.0
• Industrial Measures for Sources Not Covered Under Cap-and-Trade	0.0
• Recycling and Waste (landfill methane capture)	<u>1.5</u>
• TOTAL:	16.3

Given that the Status Report projects that 56.7 MMTCO<sub>2</sub>e of emission reductions will be obtained from complementary measures that are to be applied to capped sources and that another 16.3 MMTCO<sub>2</sub>e will be obtained from measures that are applied to uncapped sources, the Status Report projects that a total of 73 MMTCO<sub>2</sub>e will be obtained from measures other than the cap-and-trade program by 2020.

Insofar as the 2020 “business as usual” baseline is now 507 MMTCO<sub>2</sub>e and the AB 32 emissions target is 427 MMTCO<sub>2</sub>e, only 80 MMTCO<sub>2</sub>e emission reductions must be obtained in order to attain the 2020 target. Given the projection that 73 MMTCO<sub>2</sub>e of emission reductions will be obtained through measures other than the cap-and-trade program, it appears that the cap-and-trade program will be responsible for generating only 7 MMTCO<sub>2</sub>e of emission reductions in 2020. Thus, the cap-and-trade program will be called upon to obtain substantially less than the amount of emission reductions that the Supplement estimates will be needed to be obtained from the cap-and-trade program, 18 MMTCO<sub>2</sub>e. Supplement at 12.

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As explained by the ARB, the cap-and-trade program will serve the important function of assuring that California will meet the AB 32 target, 427 MMTCO<sub>2</sub>e, by 2020. However, SCSPPA has consistently supported a robust program of complementary measures for capped sources as well as additional measures for uncapped sources as a primary tool for obtaining the emission reductions that are mandated by AB 32. Among other things, having a robust suite of measures to obtain the preponderance of the emission reductions that are required by AB 32 will be likely to contain the cost of the cap-and-trade program so that the cost does not exceed publicly acceptable levels. SCSPPA heartily commends the ARB for developing the multi-faceted measures that, as shown by the Status Report, are now estimated to generate 91 percent of the emission reductions from the baseline that are required by AB 32, leaving the cap-and-trade program to generate only 9 percent of the reductions.

SCSPPA applauds the ARB's efforts to implement a wide range of emission reduction measures, SCSPPA appreciates the timely release of the Status Report, and SCSPPA is pleased to have the opportunity to submit these comments.

Respectfully submitted,

*/s/ Norman A. Pedersen*

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PUBLIC POWER AUTHORITY**

Dated: July 28, 2011

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## **L109 Response**

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109-1      The commenter reviewed the Status of Scoping Plan Measures document posted on ARB's website and requested clarification on various items.

As you are aware, the 2020 baseline is estimated as 507 MMTCO<sub>2</sub>E and the AB 32 Target is 427 MMTCO<sub>2</sub>E, requiring that ARB identify measures that achieve an estimated 80 MMTCO<sub>2</sub>E of reductions by 2020. ARB has identified measures that are estimated to provide between 58 and 62 MMTCO<sub>2</sub>E by 2020. We have reviewed your calculations and our clarifications are as follows:

- (1) There is a minor math error in the total from covered sources that results in 0.1 MMTCO<sub>2</sub>E greater than actual.
- (2) The 3.3 MMTCO<sub>2</sub>E of reduction previously attributed to the High GWP mobile source measure is uncertain.
- (3) CPUC recently approved a settlement designed to increase the amount of Combined Heat and Power (CHP) used by Independently Owned Utilities (IOUs). However, due to accounting differences between the Proposed Scoping Plan and the settlement, actual reductions in 2020 may differ from 4.8 MMTCO<sub>2</sub>E and are uncertain.
- (4) The Low Friction Oil measure has been implemented by the industry and products are already in use. Reductions resulting from the use of those products are reflected in the baseline. Subtracting the estimated reduction of 2.8 MMTCO<sub>2</sub>E as a measure introduces the potential for doubling counting against the baseline.

The total of the discrepancies described above is 11 MMTCO<sub>2</sub>E, which if subtracted from your total of 73 MMTCO<sub>2</sub>E results in 62 MMTCO<sub>2</sub>E of estimated reductions by 2020, and an estimated shortfall of 18 MMTCO<sub>2</sub>E from the 427 MMTCO<sub>2</sub>E target. For clarity, please note that the Advanced Clean Cars measure is under development but not approved, and as such may be inappropriately counted toward 2020 reductions.

**L110**

AIR RESOURCES BOARD

PUBLIC WORKSHOP

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
1001 I STREET  
BYRON SHER AUDITORIUM, SECOND FLOOR  
SACRAMENTO, CALIFORNIA

FRIDAY, JULY 8, 2011



**ORIGINAL**

REPORTED BY:

DESIREE C. TAWNEY  
CSR No. 12414

ATTENDEES

CALIFORNIA AIR RESOURCES BOARD:

Jeannie Blakeslee - Air Pollution Specialist, Office of  
Legal Affairs  
Edie Chang - Assistant Division Chief, Stationary Source  
Division

STAFF COUNSEL:

Christina Morkner Brown - Office of Legal Affairs

AUDIENCE PARTICIPANTS:

Steve Messner - Environ Corporation  
James Nachbaur - Legislative Analyst's Office  
Will Barrett - American Lung Association of California  
Norman Pedersen - Hanna and Morton, LLP  
David Brentlinger - New Forests  
John Larrea - California League Food Processors  
Reid Stockton - Center For Community Pharmacy & Ecology  
Brenda Chang - ICF International  
Timothy O'Connor - Environmental Defense Fund  
Michael Wang - Western States Petroleum Association  
Julia May - Communities For a Better Environment  
David Oppenheimer  
Andre Templeman - Macquarie Energy  
Mike Sandler  
Nidia Bautista - Coalition For Clean Air

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110-1

1 this room.

2 I want to take this opportunity to introduce our other  
3 presenter, Christina Morkner Brown, who is staff counsel  
4 with the Office of Legal Affairs; and Edie Chang is with  
5 us. She is assistant division chief of the Stationary  
6 Source Division.

7 The purpose of this workshop is to present an overview  
8 of the Supplement released on June 13th that provides an  
9 expanded analysis of the five project alternatives  
10 originally included in the 2008 Scoping Plan FED and for us  
11 to receive comments on the Supplement.

12 Many of you are aware that ARB has a Certified  
13 Regulatory Program under CEQA that allows ARB to prepare  
14 Functionally Equivalent Documents in lieu of negative  
15 declarations or Environmental Impact Reports. We refer to  
16 these as FED's.

17 ARB is undergoing the normal CEQA process that ensures  
18 public input and transparency and this workshop provides  
19 you with an opportunity to provide verbal comments on the  
20 Supplement.

21 Today's presentation discusses key aspects of the  
22 Supplement, the process and the timeline.

23 Christina will provide a brief background on  
24 California's Environmental Quality Act and will provide an  
25 overview of the chronology of events dealing with AB 32

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Cont'd



1 Scoping Plan and its environmental analysis.

2 I will present an overview of the alternatives and the  
3 analyses and Christina with wrap up with an overview of  
4 ARB's next steps. After that, we will open the workshop  
5 for questions and comments at that time.

6 Okay. Christina?

7 CHRISTINA MORKNER BROWN: The California Environmental  
8 Quality Act is the law that applies to most public agency  
9 decisions to carry out or approve projects that could have  
10 adverse effects on the environment.

11 CEQA requires that agencies perform analysis about the  
12 environmental effects of the proposed actions, provide the  
13 public an opportunity to comment, carefully consider all  
14 relevant information and avoid or reduce significant impact  
15 when feasible before they take action to approve a project.

16 ARB is a Certified Regulatory Program under which  
17 prepares environmental analyses in accordance with CEQA.

18 CEQA provides impartial judgement and allows groups,  
19 such as ARB, to prepare its environmental analyses as part  
20 of its staff report or other documents prepared for  
21 regulations, plans and standards.

22 And instead of preparing a negative declaration or  
23 EIR, it is typically prepared under CEQA.

24 In accordance with CEQA and ARB's regulations, the  
25 staff report or other documents must describe anticipated

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Cont'd

1 adverse and beneficial environmental impacts associated  
2 with the proposed action.

3 When adverse impacts are identified, the analysis must  
4 also identify feasible mitigation measures and alternatives  
5 to the proposed project that could reduce identified  
6 impacts.

7 The analysis must be circulated to the public and  
8 other agencies for review and comment for 45 days.

9 This analysis was carried out in 2008 for the Scoping  
10 Plan. AB 32 requires that ARB create a Scoping Plan that  
11 outlines the State's strategy to reduce greenhouse gas  
12 emissions to 1990 levels by 2020.

13 In June 2008 ARB released a draft Supplement Plan for  
14 public review and comments, followed by workshops.

15 Later, in October 2008, a proposed Scheduled Plan was  
16 released for public review and comment. An environmental  
17 analysis of that Scoping Plan was included in Appendix J,  
18 Volume 3, of the Plan and was titled AB 32 Functional  
19 Equivalent Document or FED.

20 The FED analyzed and disclosed the potentially  
21 significant environmental impacts that could result in  
22 implementing the measures considered in the Plan. The FED  
23 also included in the discussion an arranged five  
24 alternatives to the Proposed Scoping Plan. Following a  
25 45-day public review and comment period, the Scoping Plan

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Cont'd

1 and the FED were considered by the Board at a public  
2 hearing in December 2008 and subsequently adopted by the  
3 Board's executive officer in May 2009. Soon after a  
4 lawsuit was filed challenging ARB's adoption of the Scoping  
5 Plan.

6 In March 2011 a trial court issued a decision that  
7 denied the majority of the claims and held that the  
8 environmental analysis of the Plan was adequate under CEQA  
9 but held that one portion of the FED, the analysis of the  
10 alternatives, did not provide enough detail for informed  
11 decision-making.

12 ARB has appealed the ruling. Meanwhile, to resolve  
13 any doubt in the matter and in the interest of informed  
14 decision-making and public participation, ARB is revisiting  
15 the alternative analysis and staff is providing a  
16 Supplement with an expanded and more detailed analysis in  
17 accordance with the Court's direction.

18 This one section of the environmental analysis is the  
19 subject of our discussion today. The Scoping Plan is  
20 referred to in the Supplement as the Proposed Scoping Plan  
21 because the Plan is being fully brought back to the Board  
22 for reconsideration along with the Supplement.

23 The Scoping Plan is not, however, a new or updated  
24 Plan. It contains the same objectives and framework for  
25 greenhouse gas emission reductions as prepared in 2008.

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Cont'd

1           JEANNIE BLAKESLEE: The Supplement provides a revised  
2 environmental analysis that if approved by the Board will  
3 replace the alternative section of the 2008 FED.

4           The five alternatives are the same as those in the  
5 2008 FED, which the Court found to comprise of a reasonable  
6 range of the project alternatives.

7           The purpose of the alternatives analysis is to  
8 evaluate whether any project alternative could reduce or  
9 eliminate the proposed project's significant effects, while  
10 meeting most of the basic project objectives.

11           The five alternatives are No-Project Alternatives and  
12 four action alternatives. The expanded analysis relies on  
13 an updated emissions projection in light of current  
14 economic forecast including the economic downturn since  
15 2008.

16           The analysis in the Supplement is programmatic and  
17 reflects that the project is the broad plan and not the  
18 specific regulation to reduce greenhouse gasses.

19           I would like to take a moment to provide some content  
20 regarding the impact analysis prepared for the Supplement.

21           The State's guidelines provides direction to agencies  
22 with Certified Regulatory Programs and requires the  
23 agencies to identify and analyze the effects of foreseeable  
24 compliance responses as the basis for environmental impact  
25 analysis. The compliance response is an action that if

1 entered is subject to a regulation would take in order to  
2 be in compliance.

3 The CEQA environmental checklist was used as a basis  
4 for determining significance of potential environmental  
5 impacts.

6 Let's move on to the alternatives analysis. The  
7 No-Project Alternative is based on existing conditions and  
8 what would be reasonably expected to occur in the  
9 foreseeable future. It serves as a foundation for  
10 comparison on the environmental impacts associated with  
11 approving the proposed plan to the effects of not approving  
12 the plan.

13 ARB, however, cannot adopt this alternative because  
14 AB 32 requires ARB to prepare and approve the Scoping Plan.  
15 The no-project description is updated to reflect current  
16 information.

17 In 2008, 2020 greenhouse gas emissions in California  
18 were estimated to be 596 million metric tons of CO<sub>2</sub>e using  
19 the 2002 to 2004 emissions data. And based on the 2006 to  
20 2008 emissions data and the 2010 updated economic analysis  
21 that considered the economic downturn and factoring in the  
22 pre-2006 target, adjustments of about 80 million metric  
23 tons are made. This includes the Pavley Standards and the  
24 20 Percent Renewable Portfolio Standard.

25 Table 2.3-1 of the Supplement and Table 1 of the

110-1  
Cont'd

1       handouts provides a summary. The new BAU greenhouse gas  
2       emissions is 507 million metric tons CO<sub>2</sub>e in 2020. This is  
3       still 16 percent above the 2020 target of 527 million  
4       metric tons.

5       This includes these early action measures and measures  
6       that are a separate authority and are already approved by  
7       ARB and are already in effect. This gets us to 449 million  
8       metric tons.

9       The rulemakings pursuant to AB 32 is still in process,  
10      such as the Cap-and-Trade Regulation and the Advanced Clean  
11      Cars, are not taken into account leaving us with a  
12      shortfall of approximately 22 million metric tons.

13      Alternative 2 relies on a Cap-and-Trade Program for  
14      achieving the full 22 million metric ton reduction.

15      The total greenhouse gas emissions decreased in  
16      compliance with a cap that declined over time, while  
17      covered entities are afforded the flexibility to receive  
18      the most cost-effective actions to reduce emissions.

19      This alternative would reduce greenhouse gasses to the  
20      implementation of compliance response that include  
21      upgrading equipment, fuel switching, process improvements,  
22      the reduction in the operations and the implementation of  
23      carbon offset programs. The emissions reduction could be  
24      expected to occur in the most cost-effective manner.

25      The air quality is expected to improve statewide and

110-1  
Cont'd

1 many co-benefits would occur with -- I'm sorry -- with an  
2 effective market grid in the Greenhouse Gas Reduction  
3 Program.

4 These co-benefits include energy conservation and  
5 efficiency, reduce fossil fuel use, reduction of the  
6 regional co-pollutants and job performing economic  
7 opportunities related to the facility modifications and the  
8 development of energy efficiency technologies.

9 Potential impacts associated with the Cap-and-Trade  
10 Alternative includes but are not limited to localized  
11 impact and impacts associated with site preparation and  
12 construction activities.

13 Under Alternative 3, ARB would adopt regulations that  
14 establish source-specific emission limits or performance  
15 standards to achieve the reductions.

16 ARB staff developed a range of direct regulations to  
17 achieve the 22 million metrics tons that include: One, a  
18 requirement that electric utilities displace at least 50  
19 percent of their coal-based generation having generations  
20 that have no higher emissions than the emissions rate set  
21 by CPUC and the CEC for the new long-term energy contracts  
22 pursuant to SB 1368.

23 To provide additional emissions reductions needed to  
24 achieve 22 million metric tons, three industrial categories  
25 have been identified: Large refineries, cement production

110-1  
Cont'd

1 facilities and large oil/gas extraction facilities can be  
2 considered.

3 And the Advanced Clean Car Standards component of the  
4 Alternative 3 is based on the proposed currently -- the  
5 proposal currently being developed by ARB. And this  
6 measure would reduce greenhouse gasses as well as friction  
7 pollutants and toxic air contaminates.

8 The standards would update us on several existing  
9 programs that reduce pollution from vehicles into a single  
10 regulatory framework. This framework includes the Low  
11 Emission Vehicle Program, the Greenhouse Gas Reduction  
12 Program, often called the Pavley Standards.

13 ARB plans to integrate the zero-emission vehicle  
14 requirements into this new effort.

15 Zero-emission vehicles includes the battery, electric,  
16 fuel cell, plug-in hybrid electric vehicles.

17 A clean fuel outlet component would also be considered  
18 for inclusion into this alternative.

19 Alternative 3 could potentially meet fundamental  
20 objectives reaching the 2020 emissions reduction target.  
21 However, there is some risk of leakage to other regulated  
22 states that could undermine the benefits of this  
23 achievement. This alternative would reduce greenhouse gas  
24 emissions with the use of source-specific standards for  
25 electricity generation and the industrial sources of

110-1  
Cont'd



1 refinery, cement production and oil and gas extraction.

2 The compliance responses for the resources would be  
3 similar to the Cap-and-Trade Program according to each  
4 facility's flexibility to meet emissions obligations.

5 Compliance responses for electricity as industrial  
6 sources could include implementing energy efficiency  
7 modifications, making fuel changes and other operational  
8 improvements. The likely response to coal displacement  
9 regulation would be construction of new and expansion of  
10 existing combined-cycle natural gas plants.

11 And the difficulties in getting some new plants  
12 constructed and permitted in California, such construction  
13 may take some considerable time and could be outside of  
14 California.

15 Compliance responses to the Advanced Clean Car Program  
16 would involve improved engine and transmission  
17 technologies, vehicle technologies, some mass reduction,  
18 electrification and accessory technology and electric drive  
19 technologies, including hybrid technology.

20 The improvements in vehicle technology would result in  
21 a greater use of electricity and fuel cell in powered  
22 vehicles. And the construction of the alternative fuel  
23 stations to serve plug-in hybrid and battery, electric  
24 vehicles and fuel cell vehicles would be necessary as well.  
25 Running out of breath there. Within the range of

1 alternatives, a carbon fee represents an approach for  
2 pricing as set by the state. The carbon fee for a state is  
3 an example of a charge levied on economic activity that  
4 causes a cost to be incurred by the public and state  
5 resulting from global warming risk. These costs are  
6 sometimes called "externalities."

7 The carbon fees or tax provides a clear signal of the  
8 price that parties would face with greenhouse gas  
9 emissions. Setting the cost of carbon emissions on covered  
10 energies through a fee or tax does not guarantee a specific  
11 emissions outcome because there is neither a regulated cap  
12 as in cap-and-trade nor a defined performance standard, as  
13 in a direct source-specific regulation.

14 A carbon fee or tax would be defined administratively  
15 by statute and/or the regulation.

16 If a carbon fee or tax was implemented in California,  
17 four key design issues must be addressed. First, the  
18 covered sectors must be identified. And for this  
19 analysis -- for the analysis purpose, we assume that the  
20 sectors potentially subject to the carbon fees or tax would  
21 be those slated to be covered under the proposed  
22 Cap-and-Trade Regulation. It includes electricity,  
23 transportation, fuel, natural gas and large electric  
24 industrial sources that emit 25,000 metric tons or more.

25 The level of the fee would need be to decided. The

110-1  
Cont'd

1 state must determine the carbon fee or tax level and  
2 whether or how to change it over time.

3 And the exact quantity of emissions subject to the fee  
4 or tax and the point of regulation would also have to be  
5 determined.

6 The sector -- the sectors affected by this alternative  
7 would be the same as those included as covered entities in  
8 the proposed Cap-and-Trade Regulation.

9 Compliance responses by affected entities could  
10 include fee or tax payment, fee and tax payment but also  
11 upgrading equipment, switching to lower intensity carbon  
12 fuels, implementing maintenance process changes at existing  
13 facilities.

14 As previously indicated, there would be a potential  
15 for businesses leaving and consequently there may be  
16 impacts associated with siting, construction and operation  
17 of new facilities outside of California.

18 Since some of the compliance responses are similar to  
19 those associated with cap-and-trade, the impacts would be  
20 similar as well.

21 Instead of adopting all of the reduction measures in  
22 the Proposed Scoping Plan for set measures oriented to a  
23 specific primary strategy, ARB could adopt some of the  
24 measures or a different mix of them.

25 Alternative 5 builds on the No-Project Alternative,

1 which is Alternative 1, by adding a direct regulation that  
2 has been defined as technologically feasible and is  
3 expected to be cost-effective, a cap-and-trade approach for  
4 large industrial sources and electricity generation, and  
5 carbon fees on the transportation, commercial and  
6 residential fuel sectors.

7 This alternative combines the elements of alternatives  
8 2, 3, and 4. And the effects are similar to alternatives  
9 2, 3, and 4 and would be -- as would be the potential  
10 environmental impacts.

11 As previously mentioned, the analysis of the  
12 environmental impact of each alternative is based on the  
13 anticipated compliance response by the private/public  
14 entities. Each of the alternatives has environmental  
15 advantages and disadvantages compared to the Proposed  
16 Scoping Plan, which are discussed in detail in the  
17 subsections devoted to each alternative.

18 Generally, Alternative 1 is not allowed because ARB  
19 must adopt a Scoping Plan and would not meet the  
20 objectives.

21 Alternative 2 and 5 would befall compliance response  
22 similar to the Cap-and-Trade Program that would result in  
23 similar impacts as the Plan. And Alternative 3 and 4 also  
24 have impacts similar to the scoping -- Proposed Scoping  
25 Plan but arise from slightly different compliance

110-1  
Cont'd

1 responses. And these alternatives don't include the  
2 impacts rising from the use of offsets. These alternatives  
3 also include a higher risk of leakage.

4 The handout also includes a comparative matrix that  
5 illustrates the Proposed Scoping Plan from the alternatives  
6 and achievement in the AB 32 objectives. It is included in  
7 the Supplement at Table 2.8.1.

8 With the exception of the No-Project Alternative, all  
9 of the other alternatives are designed to cover the 22  
10 million metric ton reduction needed to achieve the AB 32  
11 2020 target.

12 The alternatives 2 and 5 have the highest potential to  
13 meet the AB 32 objectives in the Scoping Plan.

14 The ability to meet the objectives is lower for  
15 alternatives 3 and 4, primarily because the risk of  
16 leakage.

17 Christina?

18 CHRISTINA MORKNER BROWN: As you know, the Supplement  
19 was released for public review and comment for a 45-day  
20 period starting on June 13th.

21 Following this review period, which ends July 28th,  
22 ARB staff will consider comments received, written comments  
23 received and any comments made today. During this period,  
24 staff will prepare a written response to comments raising  
25 significant environmental issues based on the analysis

110-1  
Cont'd

1 contained in the Supplement.

2 The written responses to comments will be posted on  
3 ARB's website prior to the Board hearing presently  
4 scheduled for August 24th, 9:00 a.m. in this auditorium.

5 At the hearing the Board will consider the  
6 environmental document, which includes the AB 32 Scoping  
7 Plan FED, as modified by the Supplement; and the written  
8 response to public comment, which includes both those  
9 prepared or comments received on the Supplement and the  
10 comments that were received back in 2008 and the written  
11 responses that are currently available on-line.

12 After consideration of the environmental document, the  
13 Board may take action to approve the Proposed Scoping Plan.

14 JEANNIE BLAKESLEE: This concludes today's  
15 presentation.

16 Please note that we would be happy meet with any of  
17 you so we can fully understand your concerns. And now I  
18 would like to open this workshop up to you so we can hear  
19 your questions.

20 Now before you get to -- when you get to the  
21 microphone, if you would please identify yourself first.  
22 Let us know who you represent and whether you are  
23 representing a public agency. And I want to thank you all  
24 for coming today this morning.

25 Now we'll open it up to questions.

1 STEVE MESSNER: Steve Messner with Environ  
2 Corporation.

3 On of the purposes of today's discussion revision was  
4 the adjustments made for current conditions. I think it  
5 was one of the bullets in the slides.

6 I had extreme difficulty tracking why adjustments were  
7 made. Some measures were reduced to zero. Some were  
8 reduced. Some were not.

9 Is there a detailed documentation on how those  
10 economic or feasible adjustments were made from prior  
11 approvals?

12 EDIE CHANG: The measures that were the measures when  
13 you look at them, they were adjusted for sort of two main  
14 reasons: One was an economic downturn. Measures that  
15 related to, for example, you would have fewer energy  
16 efficiency benefits. You did not have as much electricity.  
17 You didn't have as much economic growth.

18 The other source that we used was -- for example, for  
19 regulations that were adopted, we looked at the staff  
20 report and said here is the -- here are the times that were  
21 achieved in the rulemaking procedures.

22 STEVE MESSNER: Let me be clearer. Is there  
23 documentation? I mean, there -- we see the result from you  
24 go from 10 to 0. Is there documentation on the measures  
25 why that specific adjustment was made? In other words, was

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1       it a recession adjustment that was made? And for how  
2       much recession adjustment was made? And was it, you  
3       know -- pardon me -- an implementation adjustment that was  
4       made? How much of an adjustment was made for each measure?

5           JEANNIE BLAKESLEE: This -- you bring up some  
6       important points at this time.

7           Your questions would require more thought. And are  
8       you going to be submitting written comments to this effect?

9           STEVE MESSNER: I already did.

10          JEANNIE BLAKESLEE: Great. Thank you for that because  
11       at a workshop and speaking off the cuff would be -- we  
12       would like to be very thoughtful in our response to that.

13          You bring up a very good point and thank you.

14          JAMES NACHBAUR: I'm James Nachbaur, Legislative  
15       Analyst.

16          Two questions. First, I guess for the No-Project  
17       Alternative is the baseline you used --

18          JEANNIE BLAKESLEE: Can you speak into the microphone?  
19       Please speak into the microphone and identify yourself.

20          JAMES NACHBAUR: Yes. James Nachbaur with the  
21       Legislative Analyst'S Office.

22          I had two questions. For the No-Project Alternative,  
23       does that have the same baseline as the other measures  
24       analyses, especially the other measures assumed to be in  
25       effect like Low Carbon Fuel Standard? For example, things

110-2  
Cont'd

110-3



1     like changes in the vehicle fleet, do the baseline for both  
2     of these -- are those consistent?

3             And then the second question, you said in the slides  
4     that the effect of the carbon tax or fee or cap-and-trade  
5     would be similar in many ways. In Table 2 they seem very  
6     different. It seems in part because in the Cap-and-Trade  
7     Regulations you're making a lot of the decisions to reduce  
8     leakage and risk, for example. Couldn't leakage and risk  
9     also be addressed under direct regulation or carbon tax?

10            JEANNIE BLAKESLEE: This is one of the questions that  
11     we are going to be looking at in our response to comments.

12            Have you submitted comments?

13            JAMES NACHBAUR: No.

14            JEANNIE BLAKESLEE: Are you going to?

15            JAMES NACHBAUR: No.

16            JEANNIE BLAKESLEE: Well, just for information, there  
17     will be a transcript made available. This is part of  
18     public record. We will be responding to this question.

19            Thank you for that.

20            WILL BARRETT: Good morning. My name is Will Barrett  
21     with the American Lung Association of California.

22            A little closer? So we're strongly in support of the  
23     scope and in support of the Plan.

24            I believe there are certain ways to evaluate the group  
25     on the measures within the Plan. Does the climate goal

110-3  
Cont'd

110-4

1 improve public health and decrease the air pollution and  
2 affect the climate changes particularly in our most  
3 vulnerable communities?

4 The recommendation we would have for strengthening the  
5 Supplement would be in the description of the Cap-and-Trade  
6 Program to include in your commitment for a periodic review  
7 and update, and hopefully an assessment -- emissions  
8 assessment. That was a bit of an eyesore.

9 The ongoing updated assessment of criteria pollutant  
10 emissions at -- and real data would help us to more fully  
11 understand how the program is actually impacting local  
12 communities and tapping into the local impacts that are  
13 more included in the initial analysis.

14 We support the scope and the Plan and look forward to  
15 working with you all. Continue to improve the Plan itself  
16 and measures. And the best goal is to improve public  
17 health.

18 And we do applaud the recent announcement and applaud  
19 the recent measures. Good example of the way the programs  
20 could be improved.

21 We'll be providing written comments as we go forward.  
22 Thank you for indulging.

23 JEANNIE BLAKESLEE: Could I have your name again,  
24 please?

25 WILL BARRETT: Hop-along. It's Will Barrett, American

110-4  
Cont'd

1 Lung Association.

2 CHRISTINA MORKNER BROWN: I can briefly say that just  
3 so it is clear that the Scoping Plan looks at measures in a  
4 broad way; that each measure that would actually be picked  
5 up and goes through its own regulatory process and its own  
6 environmental review process and public process as well.

7 There is ongoing rulemaking and development of all of  
8 the various measures.

9 So that your comment sounded more specific to the  
10 ongoing cap-and-trade rulemaking.

11 NORMAN PEDERSEN: Good morning, Jeannie. Norman  
12 Pedersen for Southern California Public Power Authority.  
13 Good to see you.

14 I was hoping to get just a little clarification on how  
15 some of the tables worked. For example, you start out with  
16 Table 1.2-1, which is basically taken from the 2008 Scoping  
17 Plan, showing what we would get from the complimentary  
18 measures.

19 Then you presented Table 1.2-3 as a revised 2020  
20 baseline of 507 million metrics tons. And then you show  
21 the reductions from complimentary measures as being 58  
22 million tons. Quite a drop from 112 million tons we had in  
23 the 2008 Scoping Plan.

24 I was wondering if you can walk us from where we were  
25 in 2008 to where we are with the five -- with the 58

110-4  
Cont'd

110-5

1 million tons.

2 I'm assuming part of the explanation is that some of  
3 the 112 million tons are no longer included in the  
4 reduction from measures line because you've gotten to the  
5 507 million by assuming Pavley will be achieved and  
6 assuming 20 percent will be achieved. I don't know if I'm  
7 correct in making that assumption.

8 Can you provide something of a walk-thru from the  
9 table on complimentary measures that we had from the 2008  
10 Scoping Plan, Table 1.2-1 to where we are with Table 1.2-3  
11 showing where we are today?

12 UNIDENTIFIED SPEAKER: What page is that?

13 NORMAN PEDERSEN: 12. Table 1.2-3 is on Page 12.  
14 Table from the 2008 Scoping Plan is on Page 9.

15 EDIE CHANG: I think, you know, for some of us I think  
16 I'll defer to Jeannie's response to the gentleman from  
17 Environ. But, generally, I did want to -- you did mention  
18 that as we talk about the baselines, there are things that  
19 did change between 2008 and when we did this Supplement.  
20 And one of them is with the economic downturn. We saw a  
21 reduction in the BAU emissions estimate for 2020.

22 The other piece of it that accounts for a fairly  
23 substantial portion of it is what you've mentioned. In the  
24 Scoping Plan, we didn't consider the first phase of the  
25 Pavley Regulations and the 20 percent per RPS in the

1 baseline.

2 And when you look at the 507 number that we were  
3 calling the baseline in the Supplement and that we used as  
4 the baseline in Cap-and-Trade Regulation, we included  
5 Pavley and the 20 percent RPS in that. That accounts  
6 for -- trying to do the math in my head -- something like  
7 35 million metric tons of reductions that went from not in  
8 the baseline into the baseline. That is a big chunk of  
9 what that is.

10 NORMAN PEDERSEN: Do you have an idea of about what  
11 other complimentary measures might have been outside of the  
12 baseline in 2008 that have now moved into the baseline?

13 EDIE CHANG: Those were the two.

14 NORMAN PEDERSEN: Okay. So we still have a little bit  
15 of gap.

16 EDIE CHANG: Right.

17 NORMAN PEDERSEN: Just one other quick question. I am  
18 gathering we don't have the technical staff who put  
19 together the numbers here.

20 On the Table 1.2-2, I couldn't quite get the numbers  
21 to add up. For example, I looked at electricity. I see a  
22 total for imported electricity from about 98.3  
23 million tons. That does not quite match up with other  
24 numbers on, you know, projecting the BAU 2020 forecast  
25 electricity. Then I notice up in the uncapped sector,

1 seems like you have electricity tons.

2 Do you have any insight as to what is going on with  
3 Table 1.2-2 and why we don't have the numbers quite  
4 matching? It seems either the 2008 forecast or updated  
5 forecast -- I might be --

6 JEANNIE BLAKESLEE: It looks like we need to do a  
7 little more work on clarifying how we got to baseline. You  
8 bring up really good points. I know you well enough to  
9 know that you've probably submitted some comments or you're  
10 about to. This is of real value. So we're getting a  
11 broader picture about what people might be confused about.  
12 Thank you.

13 And, of course, we would -- I reiterate we would be  
14 really happy to meet with everybody or anybody that wants  
15 to speak with us --

16 NORMAN PEDERSEN: That might be --

17 JEANNIE BLAKESLEE: -- for additional clarification.

18 NORMAN PEDERSEN: Thanks a lot.

19 DAVID BRENTLINGER: Good morning. David Brentlinger.  
20 I'm with New Forests. We are a -- we're a company -- we're  
21 a mission driven -- did you hear my name? We're a mission  
22 driven company that's dedicated to using environmental  
23 solutions for environmental problems. And I really wanted  
24 to be here to voice my support for the cap-and-trade  
25 approach outlined in the scope and proposal and the options

110-5  
Cont'd

110-6

1 here.

2 We have been a supporter of that. We continue to do  
3 so. And one of the benefits of that that is worth  
4 mentioning is our own experience, which is in taking a  
5 market approach to carbon emissions. We hire people to  
6 approach this problem. We've done so. We're a national  
7 company here. We could have located anywhere in the  
8 country. We chose to locate ourselves in San Francisco  
9 because of the cap-and-trade legislation in California.

10 We hire staff. We -- the benefit of this alternative  
11 is the fact that it does provide a market approach to  
12 solving environmental issues. In the course of this, we  
13 will raise -- we have raised funds to attack carbon  
14 emissions. This will go and has gone towards hiring  
15 attorneys, foresters, paying for carbon inventories.

16 These are benefits, I think, to California in  
17 approaching the problem in a way that isn't a burden to the  
18 state and can bring in an intellectual cap. It will be to  
19 solving the problem as well as funding, which is not tax  
20 based.

21 So I encourage you to consider that added advantage to  
22 Alternative 2 in the cap-and-trade system, which it brings  
23 a lot more resources to bare to solve the problem and we're  
24 happy to be a part of that.

25 Thank you.

110-6  
Cont'd

110-6  
Cont'd

1 JEANNIE BLAKESLEE: Thank you.

2 MICHELLE PASSERO: Hi. Michelle Passero with The  
3 Nature Conservancy.

4 First, we are supportive of the Scoping Plan. We  
5 think that the current is a sound one for trying to reduce  
6 emissions in California most efficiently and effectively.

7 I had a question on the Supplement. It is -- there  
8 has been some discussion on the treatment of the forest  
9 biomass for energy within the Cap-and-Trade Program. And  
10 it seems like this Supplement might be an opportunity to  
11 bring a little more discussion around the potential impacts  
12 made, positive benefits of the use of forest biomass or  
13 renewable energy and distribution potentially associated  
14 with that from the forest land base.

15 And given some of the discussions we had with ARB  
16 staff around this issue -- and we've had very constructive  
17 ones -- we had that discussion with respect to the  
18 Supplement. And we need to have sort of a little more  
19 information on that potential issue here in the Supplement.  
20 I don't know. Maybe you've had that discussion and made a  
21 decision on that but it would just be good to know.

22 JEANNIE BLAKESLEE: I want to know, you're asking for  
23 a little more discussion within the -- within the construct  
24 of the Cap-and-Trade Alternative to include a bit more  
25 discussion regarding biomass?

110-7



1 MICHELLE PASSERO: Yeah. I think that would be a  
2 "yes." Yes.

3 JEANNIE BLAKESLEE: Okay. I want to make sure I've  
4 captured that.

5 MICHELLE PASSERO: I would be happy to, you know,  
6 provide more information and discussion, if you would like.

7 JEANNIE BLAKESLEE: Thank you very much. I appreciate  
8 that.

9 JOHN LARREA: Hello. John Larrea with the California  
10 League Food Processors.

11 I guess, you know, the Court decision required -- they  
12 said your environmental analysis was sufficient but the  
13 alternatives analysis was not.

14 I know that, based upon the fact you are a state  
15 entity, that you can do a kind of truncated analysis here.  
16 You don't have -- it does not require a full EIR.

17 I was hoping -- at least among our members, we would  
18 like a little more in depth on economic impacts associated  
19 with the alternatives themselves.

20 It is very difficult for us to judge based upon what  
21 we see here, you know, whether or not the alternatives  
22 represent what types of choices, for us, based upon not  
23 only our markets but also our operating procedures,  
24 especially those represented in the valley.

25 So a little more -- you know, I know it is not

110-7  
Cont'd

110-8

1 required but I think in terms of this and especially in  
2 light of the recession, it would really be helpful for all  
3 of those of us who are not those over a hundred million  
4 tons emitters but those that are going to be functioning  
5 and trying to (a) prevent leakage from taking away our  
6 business or from trying to move out of California; that  
7 more economic analysis would help us make that decision as  
8 to which alternative would be best.

9 JEANNIE BLAKESLEE: Those are valuable points. CEQA  
10 does not require economic analysis.

11 However, I can certainly appreciate how economic  
12 effects can be an indirect environmental impact. I think  
13 that is what you're getting at.

14 Is that true?

15 JOHN LARREA: Yes. And we will be putting in  
16 comments, too.

17 JEANNIE BLAKESLEE: That will be very valuable. Thank  
18 you.

19 REID STOCKTON: Hello. My name is Reid Stockton. I'm  
20 with the Center For Community Pharmacy and Ecology. I will  
21 be submitting written comments. I'll relieve you in  
22 advance of the burden of responding today.

23 I did want to get this in front of you now; though I  
24 have a few recommendations that I would like to ask ARB to  
25 consider. In general, I believe that the Supplement

110-8  
Cont'd

110-9

1       overstates a bit the ability of cap-and-trade to meet the  
2       objectives of AB 32 and understates the environmental  
3       impacts of Alternative 2, the Cap-and-Trade Alternative.

4             It does both of those essentially by not giving  
5       adequate weight to the -- to the mandate included in AB 32  
6       to avoid disproportionate impacts of communities of color  
7       and low-impact communities to ensure that GHG reductions  
8       compliment existing air quality regulations and to reduce  
9       toxic air contaminates.

10            In addition, the range of alternatives considered, I  
11       find it to be a bit lacking in terms of both range and  
12       depth -- breadth and depth. For example, one of the  
13       obvious things that I think should get expanded  
14       consideration is the possibility of restricting trading to  
15       covered entities that do not do business in communities  
16       that are already over burdened with toxic air contaminates.

17            Just in terms of the context for these comments, there  
18       are several things we already know. We know GHG emissions  
19       generally come bundled with other toxic air contaminates.  
20       That is something ARB itself noted in its previous  
21       responses in the Scoping Plan.

22            We also know that there are existing communities that  
23       are already over burdened with toxic air contaminates and  
24       the consequent health impacts. And we know that AB 32  
25       directs ARB to consider those facts. And what we think we

110-9  
Cont'd

1 know is that all CO<sub>2</sub>e is interchangeable. That is really  
2 the underlying assumption of all cap-and-trade programs.  
3 If you make a reduction in one place, you know, there is a  
4 reduction in another place. The truth though is there is  
5 growing evidence that is not, in fact, the case. Professor  
6 Mark Jacobson of Stanford Civil Engineering Department  
7 found that -- and I'm quoting here -- "reducing  
8 globally-emitted CO<sub>2</sub> will reduce local air pollution  
9 mortality, even if CO<sub>2</sub> in adjacent regions is not  
10 controlled. This result contradicts the basis for air  
11 pollution regulations worldwide, none of which considers  
12 controlling local CO<sub>2</sub> based on its local health impacts.  
13 It also suggests that the implementation of the  
14 cap-and-trade policy should consider the location of the  
15 CO<sub>2</sub> emissions as the underlying assumption of the policy is  
16 incorrect."

17 So what all of this boils down to, I think, is that it  
18 is important to take advantage of the opportunity ARB has  
19 right now. In order to do that, I have a couple of few  
20 recommendations that I would like to make.

21 First, I believe ARB ought to recognize the principles  
22 that all CO<sub>2</sub>e is not equal. The nature and allocation of  
23 emissions has to be considered in the creation of a  
24 greenhouse gas reduction program.

25 Second, ARB should prioritize CO<sub>2</sub> reductions in

110-9  
Cont'd

1 communities that are already heavily impacted by toxic air  
2 contaminates.

3 Third, I believe ARB should reconsider the  
4 recommendation pursuing the Cap-and-Trade Program in light  
5 of the preceding principles and priority.

6 And prior to reaching a decision, I want to reconsider  
7 a GHG reduction program. ARB should hold hearings to  
8 evaluate that recommendation in communities that are  
9 already heavily impacted by toxic air contaminates.

10 Just in conclusion, I would like to comment that it is  
11 a bit disappointing that ARB has chosen to merely expand  
12 the discussion of the alternatives that were already  
13 considered.

14 There is an opportunity here to re-examine the  
15 available alternatives to take seriously the EJ concerns,  
16 the Environmental Justice concerns that are highlighted in  
17 the lawsuit, which prompted the production of the  
18 Supplement.

19 Let's be frank here for a second. The AB 32 mandated  
20 the creation of Environmental Justice Advisory Committee  
21 and 7 of the 11 members of that committee were parties to  
22 the lawsuit that were brought. I think that speaks to the  
23 kind of relationship that ARB has with that Environmental  
24 Justice Advisory Committee.

25 There is an opportunity here to repair the

110-9  
Cont'd

1 relationship with communities of color and low-income  
2 communities and I think ARB needs to take advantage of that  
3 opportunity.

4 Thank you.

5 JEANNIE BLAKESLEE: Thank you.

6 BRENDA CHANG: Hi. I'm Brenda Chang. I'm with ICF  
7 International and I am a team specialist. I work a lot on  
8 climate action plans. This is pretty relevant to what  
9 we're doing, especially since this has implications on what  
10 we need to change in terms of how we help our clients  
11 reduce or meet their AB 32 goals.

12 First of all, I think we've talked a little bit about  
13 the measures and whether or not there is documentation on  
14 the calculations. I think that is really important. And  
15 the transparency of the calculations is really important to  
16 us, too, in how we can help our clients to show them how  
17 their measures are -- are aligned with ARB's methodology.

18 So in terms of that, I'm trying to make a  
19 recommendation on hoping that the calculations will show  
20 the effectiveness -- the change of the effectiveness of the  
21 measures as they apply to the BAU emissions and changes in  
22 the baseline or other assumptions. And also I was  
23 wondering what the estimated timeframe is in which we might  
24 expect the documentation? Would it be like within a year  
25 or two to three years or when the Board finally approves

110-9  
Cont'd

110-10

1 the document -- the revised Supplement, I guess?

2 JEANNIE BLAKESLEE: Brenda, you bring up some really  
3 good points. We will be clarifying our -- the way we got  
4 to where we got to. I'm sorry about that.

5 But I encourage you to submit written comments because  
6 your comments are multi-level.

7 It sounds like the methodology that was used can be  
8 used for people who are preparing their climate action  
9 plans. There may be some guidance we can provide. So this  
10 isn't -- this wouldn't be necessarily a bad thing. It can  
11 be a useful tool is kind of what I'm hearing. Am I  
12 correct?

13 BRENDA CHANG: Uh-huh.

14 JEANNIE BLAKESLEE: So we'll probably -- you know,  
15 we'll be happy to meet with you to get some more clarity on  
16 this. We'll look forward to receiving your written  
17 comments as well.

18 EDIE CHANG: Let me clarify the methodology for how we  
19 developed the Scoping Plan estimates. It is contained in  
20 an appendix in the Scoping Plan. I don't remember the  
21 name.

22 BRENDA CHANG: J or something?

23 EDIE CHANG: Volume 3. It has a significant amount of  
24 detail in how we calculated the benefits of the measures in  
25 the Scoping Plan. For every regulation we've adopted,

1       there is a discussion in the document about how we've  
2       calculated the benefits. So that is -- that stuff is  
3       already all out there. I think what we've really been  
4       talking about is sort of the adjustment of you have this  
5       method in the Scoping Plan. There is new information  
6       because of the economic downturn. There is new information  
7       because there was a regulation adopted. It got "x" many  
8       times. We pulled it out of there.

9       I want to clarify in terms of, you know, folks  
10      understanding sort of being able to use it in their climate  
11      action plan and methodology, that information is out there  
12      already and has been documented.

13      BRENDA CHANG: Thanks. And timing?

14      EDIE CHANG: It sort of depends on -- you know, some  
15      of the information you're asking for is already out there.

16      BRENDA CHANG: I know. I'm saying like those  
17      adjustments that are not published, whether they will be  
18      available and when?

19      EDIE CHANG: We'll take a look at that.

20      BRENDA CHANG: Okay.

21      TIMOTHY O'CONNOR: Hi. Good morning. My name is Tim  
22      O'Connor. I work with Environmental Defense Fund. I  
23      wanted to make two points today.

24      One is that obviously the Scoping Plan is -- it is  
25      the high level plan for how to reduce emissions in

110-10  
Cont'd

110-11



1 California. It identified a number of measures in there,  
2 many of which have already been implemented. And ARB is  
3 doing a great job walking us through the individual  
4 measures in actually reducing emissions in California. It  
5 has really been important to continue on in that process.

6 I think as a programmatic EIR, one of the benefits of  
7 redoing some analysis like this is that it looks at how,  
8 even with an update in the emissions of California or the  
9 emission reduction, we need to achieve to get to 1990. It  
10 is going to be a mix of measures, which is going to be the  
11 best approach to reducing emissions. Some of those  
12 measures, direct emission control, some of them financial  
13 incentives, some working with local governments. One of  
14 them, which EDF feels is important, is the Cap-and-Trade  
15 Regulation.

16 By working together with all of those regulations, we  
17 find that it would be the most economically effective as  
18 well as the most environmentally effective opportunity to  
19 get to the 1990 goals. We think the range of analysis that  
20 goes into the alternatives which you put forward really  
21 document that.

22 And we're going to really support, of course,  
23 re-adoption of the Scoping Plan as written. And I see that  
24 in this analysis it says that the Proposed Scoping Plan is  
25 substantially similar or even identical to the prior

110-11  
Cont'd

1 Scoping Plan, which is adopted; and that is something we're  
2 going to support. That does not mean every regulation ARB  
3 puts out there can just be written or done in a way that  
4 isn't protective or does not respond to the individual  
5 considerations of the sources or of the public health  
6 surrounding those communities.

7 So it is going to be really important for ARB to  
8 develop the regulations as they move forward with the  
9 Advanced Clean Car Regulation or Cap-and-Trade Regulation  
10 to be protective of communities and really responsive to  
11 the issues that deal with the individual aspects of trading  
12 or whatever it may be.

13 We really look forward to working with ARB and seeing  
14 the FED that comes out of the individual regulations and  
15 how, in particular, in a Cap-and-Trade Regulation ARB can  
16 be protective of communities. That is one of the reasons  
17 we do support a regulation like that.

18 We think there are things ARB can do and things ARB  
19 has proposed to do already in those documents that are  
20 going to be protective of the communities and able to  
21 reduce emissions in California throughout California and  
22 get us to the 1990 goals. I think we need to be working  
23 together and figure out opportunities to develop that and  
24 other regulations to be the most responsive to communities;  
25 but that is something we really look forward to and,

1 obviously, you have a big challenge ahead of you between  
2 now and October and now and over the course of the next  
3 decade to make sure that is going to happen. We'll be  
4 looking forward to that.

5 I wanted to say thank you also for taking the time as  
6 required by the Court but to really go into a thoroughness  
7 of detail required to really show a mix of measures that  
8 incorporates all of the things that ARB has already talked  
9 about and is going to get us to 1990.

10 So thank you.

11 MICHAEL WANG: Hi. Mike Wang with the Western States  
12 Petroleum Association.

13 We wanted to say it is very clear the Supplement is a  
14 comprehensive document. We wish we had a little more time  
15 to review it but nonetheless we stand before you. We  
16 recognize that ARB addressed a lot of the issues that have  
17 been identified as being needing further details.

18 We're going to concentrate our comments for today and  
19 our written comments on things that are specific issues or  
20 concerns to our industry where we have specific expertise.

21 We are going to defer comments on the studies of land  
22 use and things like that to those who are specialists in  
23 the field.

24 After reviewing the Supplement, our position remains  
25 unchanged. We think that well-designed market-based

110-11  
Cont'd

110-12

1 systems are the most cost-effective way to reduce global  
2 greenhouse gas emissions. We see a Cap-and-Trade Program  
3 as one such market-based system.

4 We know that the Supplement has identified a  
5 Cap-and-Trade Program as an option that seems to be most  
6 viable in short-term. Given the challenges facing ARB and  
7 the state, we agree with that assessment.

8 We will continue to engage with ARB in efforts to  
9 initiate a program that is cost-effective and  
10 environmentally sound.

11 We continue to believe -- and I think you've seen that  
12 even in your document -- that command and control  
13 regulations are not an appropriate way to achieve goals of  
14 AB 32 because of their cost inefficiencies.

15 California acting alone using a command and control  
16 program does nothing to address the need for significant  
17 global GHG reductions.

18 Furthermore, command and control regulations don't  
19 allow California to link with other programs. Linkage has  
20 been a key program element that was a fundamental  
21 underpinning of AB 32.

22 We do see some opportunities for Alternative Number 5,  
23 as there may be some means to productively combine the  
24 flexibility with constraints.

25 So in short, we believe a Cap-and-Trade Program must

110-12  
Cont'd

1 not include fuels under the cap, recognize trade exposure  
2 to ensure free allowance for trade exposed industry,  
3 include linkage to other programs, include access to  
4 minimize leakage, and have adequate program review  
5 including criteria to assess the efficient function of the  
6 market and actions that could be taken if disruptions in  
7 the market occur as expanded.

8 We'll submit comments.

9 JEANNIE BLAKESLEE: Anybody else?

10 JULIA MAY: Hi. I'm Julia May for Communities For a  
11 Better Environment. I'm the -- the CBE's senior scientist.

12 I've got my laptop here. I wanted to read you a  
13 couple quotes. I wanted to make a couple statements  
14 responding to what some of the people said earlier. It is  
15 that -- that we can somehow deal with the Environmental  
16 Justice issue later. And it is not responsive to the  
17 communities of color to say we're going to adopt  
18 cap-and-trade and go ahead with this proposal and then  
19 later on check back in on the emissions. That is not  
20 responsive.

21 The EJ issues -- we appreciate that you're holding  
22 this public process but so far the EJ issues have been  
23 treated as if they were a marginal special interest problem  
24 and not a serious health problem; when, in fact, the  
25 majority of emissions covered by cap-and-trade are located

110-12  
Cont'd

110-13

1 in communities of color that bare severe burdens. For  
2 example, Wilmington, California has about a third of the  
3 entire state's oil refining capacity. So this is not a  
4 marginal site issue. This is the heart of the industrial  
5 corridor of California. We have to address it. Not only  
6 does it mean we solve the greenhouse problem but we would  
7 also solve the toxic and smog problem. This is really the  
8 heart of the issues for all California to reduce greenhouse  
9 gas and clean up smog and clean up toxics.

10 I have to say that the questions that people have put  
11 about the lack of documentation in the FED -- we have to  
12 agree with that. We thought that you would provide more  
13 detail today.

14 Again, it is not sufficient to say we should look back  
15 at the 2008 document for the details of the appendix. We  
16 need the technical details. The EJ community has submitted  
17 hundreds of pages of technical documents and really led the  
18 effort to propose specific economically feasible  
19 technological solutions that are direct regulations that  
20 will work to clean up the pollution in these communities in  
21 California.

22 And relying on a four-year-old appendix and then  
23 changing the calculations now, it just does not come up to  
24 the standard that the community needs. People have done  
25 their homework and tried really hard to take part in the

110-13  
Cont'd

1 public process.

2 We also need ARB to seriously respond and provide us  
3 with the technical details.

4 I want to -- you know, I gave the example of  
5 Wilmington. I want to say I think you've realized in the  
6 case of Richmond California where Chevron is located,  
7 Chevron has been attempting to switch to a heavier crude  
8 feedstock, which is much more energy intensive. It has  
9 been proven that California's oil refinery industry is  
10 switching to a heavier crude feedstock. It uses a lot more  
11 energy to refine. It also means there is much more  
12 concentration of hazardous materials in the refineries as a  
13 result. So both as a matter of the higher carbon of the  
14 crude feedstock in addition the higher sulphur content.  
15 This is not being addressed by any of the Scoping Plan.

16 The LCFS does not include emissions directly from the  
17 oil refinery. Check with your staff. They've confirmed  
18 that with us.

19 In addition, the cap-and-trade proposal which ARB has  
20 clearly stated in other forms that you intend to go ahead  
21 with the regulation and that you're continuing to develop  
22 them right now, it is -- that does not require any  
23 reduction at all from oil refineries. I'm also using  
24 oil refineries as an example of all of the other  
25 industrial problems that communities of color face in

110-13  
Cont'd

1 California. That is the largest one.

2 And it is really unfair and impractical to have zero  
3 reductions for the largest industrial sector in the state  
4 that has not only these huge greenhouse emissions but also  
5 benzine toxic sulfur emissions.

6 We're missing the opportunity to clean up these  
7 problems. Big opportunity. But we're also going to make  
8 the problem worse through cap-and-trade.

9 This is not just a theoretical problem. We've looked  
10 at the evidence from Europe. And also Columbia University  
11 did a study of cap-and-trade programs. In every single one  
12 they've studied, including the Acid Rain Program, it  
13 suffered from over-allocation at least in the early years,  
14 if not fatally flawed -- if not causing the programs to be  
15 fatally flawed for all years because of over-allocation.

16 If you have too many cheap credits, there is no  
17 incentive for the polluters to reduce. That has proven to  
18 be the case in all of the ones they've studied.

19 In addition to the International Energy Agency in  
20 Europe looked at these programs and studied them and said  
21 that they were, in general, not ambitious enough. They  
22 suffered from banking in early years. That meant you  
23 didn't get the reduction in later years. The companies got  
24 windfall profits. Credits were too cheap. And they also  
25 said it was not necessarily in the economic interest of the

110-13  
Cont'd



1 people because of the public because -- let me see if I can  
2 find a quote for you -- because they did not prevent price  
3 increases to consumers. And they also put companies that  
4 were doing better at a disadvantage because they had to  
5 compete with companies who could buy cheap credits and not  
6 reduce their pollution.

7 There is a lot of evidence that cap-and-trade is not  
8 working. It's not a theoretical issue. It has been shown  
9 repeatedly.

10 We also know by common sense cap-and-trade will not  
11 solve the problems directly in our communities.

12 We have proposed many specific solutions that work.  
13 An example, oil refinery boilers and heaters. Many  
14 ancient, very large units at oil refineries that power this  
15 industry are being allowed to voluntarily reduce their  
16 emissions instead of being required to reduce them  
17 directly, even though it is well-known and well-established  
18 they could come up to modern standards for efficient  
19 boilers and heaters.

20 Your own documents show this would actually save them  
21 money and -- while reducing emissions because the fuel  
22 costs are high. They're going to do it anyway eventually  
23 when it is convenient for them because it saves them  
24 money; but, instead, they're going to be allowed to use  
25 those pollution credits to offset other increases in

1 emissions.

2 We know that these sources are already causing a big  
3 health toll in California communities of color. They're  
4 causing smog regionally. They're a huge greenhouse gas  
5 source. You guys have the experience to clean it up. You  
6 have the technical expertise in-house. Right now it does  
7 not look like your scoping document is seriously  
8 considering doing this. We really hope we're wrong about  
9 that.

10 And I just would end with -- there is a lot I can say  
11 about this but we want to see the documentation from you.

12 There have been so many questions across the board  
13 from everybody here about the technical issues, the  
14 baselines you're using, the changes in the numbers since  
15 2008. And we want you to seriously look at the  
16 economically feasible solutions that will comply with AB 32  
17 and will really address the health issues that people  
18 suffer from severely. This is the best solution for  
19 everybody in California economically and health-wise.

20 Thank you.

21 DAVID OPPENHEIMER: My name is David Oppenheimer. I'm  
22 unaffiliated but I'm coming from about 18 years of  
23 emissions trading experience locally, national and  
24 internationally.

25 And I want to exhort ARB towards simple and

110-13  
Cont'd

110-14

1 transparent trading programs. Focus on reductions in the  
2 programs and absolutely, please, address the concerns that  
3 Julia has just raised, Mr. Stockton, Mr. Larrea in  
4 appropriate venues. Answer the questions but make trading  
5 simple because otherwise it is a disaster.

6 ANDRE TEMPLEMAN: Hi. Andre Templeman for Macquarie  
7 Energy. I'm here just as an observer today.

8 We did want to thank ARB for all of the work they have  
9 been doing. We are cognitive of the fact this is a very  
10 complex program.

11 Two comments we wanted to make was that in our  
12 experience in different international markets we do believe  
13 there are solutions for a lot of the problems that have  
14 been brought up today or a lot of the concerns brought up  
15 today within the cap-and-trade market mechanism, as was  
16 just stated. You know, an important factor to consider is  
17 liquidity efficiency and fundability so that the trading  
18 actually happens in an efficient, economical manner.

19 We would invite anybody who has got questions about  
20 ways the market can do that to come to us and we are always  
21 open to talk about that.

22 The other point we want to make is key and something  
23 that people are not always cognizant about is the market  
24 itself has already started trading these products 18 to 24  
25 months ago. Most of the economic decisions that need to be

110-14  
Cont'd

110-15

1 made have a 24 to 36-month life period. I think one of the  
2 things we advocate is not to let the perfect be the enemy  
3 of the good. Every delay that happens for this market does  
4 have an impact on the ability of the market to offer  
5 solutions out there. And that there is -- you know, it is  
6 already trading and the market is already there. So to  
7 assume it isn't there because it has not started yet would  
8 be a fallacy.

9 THE REPORTER: Can I get your name again, sir?

10 ANDRE TEMPLEMAN: Andre Templeman, Macquarie Energy.

11 MIKE SANDLER: Good morning. My name is Mike Sandler.

12 I have worked for many years in climate protection in  
13 Sonoma County in a variety of organizations. I'm here as  
14 an individual representing myself today.

15 I appreciate the opportunity to comment today and I  
16 think that revisiting the Scoping Plan continues to be  
17 multi-year that CARB has initiated several years ago and  
18 offered many opportunities for public comment, which I  
19 tried to participate in in regards to market mechanisms,  
20 cap-and-trade and some design elements that I want to refer  
21 to quickly.

22 The carbon size is the goal of the program and the  
23 cap-and-trade is the method to achieve that. The design  
24 elements of the cap-and-trade will determine the  
25 effectiveness at reducing emissions and the distribution of

110-15  
Cont'd

110-16

1 the environmental and economic impacts and benefits.

2 For example, a price war on the cap-and-trade system  
3 will make cap-and-trade behave a lot like a fee. I think  
4 you've mentioned that in your presentation.

5 The program will be unsuccessful if it does not  
6 persist. Your goal is not to implement a cap-and-trade  
7 system for two or three years and have it go away. It is  
8 going to need popular support from the people of  
9 California.

10 I'll relate a brief anecdote about the regional  
11 greenhouse gas initiative in the northeastern states. They  
12 auctioned permits, which was a step forward from the  
13 previous cap-and-trade programs and used the majority of  
14 revenues for energy efficiency in related programs. But  
15 there was a lack of transparency to the average consumer  
16 who didn't see the direct benefit to themselves. This  
17 allowed the state to raid the funds to plug budget  
18 deficits.

19 Later, when the governor of New Jersey -- the new  
20 governor -- withdrew from the program, there was no voter  
21 constituency mobilized to defend the program.

22 I raise that because I believe that dividends are an  
23 important design element for the cap-and-trade system. The  
24 concept is often called cap-end dividend. It would be a  
25 way to bridge the legal and political divides between CARB and

110-16  
Cont'd

1 some of the plaintiffs in the lawsuit and between the  
2 previous governor's vision and hopefully the current  
3 governor's goals. The dividends can be part of both the  
4 cap system or a fee, and it can apply to both the  
5 electricity sector and the transportation sector.

6 The state convened the experts in the Economic  
7 Allocations Advisory Committee, EAAC. Their report  
8 recommended the largest share of allowance by the return to  
9 California households.

10 We believe -- I believe the dividends should be equal  
11 for all people. This goes back to the concept of the  
12 ownership of the shared commons; and that larger users of  
13 electricity of transportation fuels do not own more of the  
14 commons. They should compensate others who share in the  
15 ownership of the commons here.

16 I'll just quote briefly. A professor, James Boyce,  
17 who is a member of the EAAC committee, he wrote in a blog  
18 recently: "Pollution burdens should be disputed fairly, as  
19 advocated by the Environmental Justice movement, rather  
20 than concentrated in particular communities. And polluters  
21 should pay for their use of the limited waste-absorptive  
22 capacity of our air and water. In keeping with the  
23 principle that the environment belongs in common and equal  
24 measure to us all, the money the polluters pay should be  
25 distributed fairly to the public, as we're the ultimate

110-16  
Cont'd

1 owners of the air and water." That is the end of the  
2 quote.

3 Those policies adopt -- if they're adopted here, can  
4 have international application. You've probably followed,  
5 as I have, with frustration the lack of progress the UN  
6 conferences and conventions. But the poorest people in  
7 Africa and elsewhere may not have access to cars or  
8 electricity but they do have a right to a portion of the  
9 limited global emissions allowed under a global cap. The  
10 idea to distribute shares or revenues from payments from  
11 upstream emitters to all individuals globally, California  
12 can start us down this path. Everyone gets the same  
13 dividends or same shares. People get paid. And as they  
14 receive checks in the mail or on their debit card, they  
15 gain an understanding we're all involved in climate  
16 protection together.

17 California and CARB can provide the template for  
18 national and international climate policy that provides  
19 equal dividends or shares to all Californians.

20 Thank you.

21 JEANNIE BLAKESLEE: Anybody else?

22 NIDIA BAUTISTA: Good morning. Nidia Bautista for  
23 Coalition For Clean Air. In addition to the request for  
24 the economic analysis, I was also wondering when it -- if  
25 we would be able to receive an updated table in light of

110-16  
Cont'd

110-17

1 the fact you have a new analysis on the emissions  
2 reduction? Do you anticipate? Because business-as-usual  
3 scenarios are updated.

4 I also was hoping you would be providing us with  
5 updated tables detailing each of the reductions, each of  
6 the measures in the original Scoping Plan and what the  
7 anticipated scoping change would be in light of the change.

8 I recommend that it's outside the FED but very much  
9 related to the Scoping Plan to adopt. So do we know when  
10 and if we'll be receiving that?

11 JEANNIE BLAKESLEE: We'll be responding to comments  
12 and making any necessary changes in the final document and  
13 that document will be posted on the web prior to the Board  
14 hearing.

15 NIDIA BAUTISTA: Thank you.

16 JEANNIE BLAKESLEE: If there is no one else, we  
17 can adjourn this workshop. And I thank you all for  
18 coming. And please submit your comments.

19 Thank you so much.

20 (The public workshop concluded at 12:00 p.m.)

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110-17  
Cont'd



REPORTER'S CERTIFICATE

--oOo--

STATE OF CALIFORNIA )  
 ) ss.  
COUNTY OF PLACER )

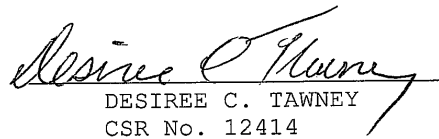
I, DESIREE C. TAWNEY, a Certified Shorthand  
Reporter in the State of California, sworn and  
disinterested person, certify:

That the foregoing public workshop was taken  
before me at the time and place therein set forth;

That the foregoing public workshop was recorded  
stenographically by me and was thereafter transcribed into  
typewriting;

That the foregoing public workshop is a verbatim  
recording of the testimony of the public and others,  
said transcript being a true copy of my stenographic notes.

IN WITNESS WHEREOF, I subscribe my name this 20th  
day of July, 2011.

  
DESIREE C. TAWNEY  
CSR No. 12414

### **L110 Response**

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- 110-1      The comment contains ARB's presentation. No response required.
- 110-2      The commenter expresses concerns with the adjustments made to the measure reductions. Please refer to responses 2-1 through 2-4.
- 110-3      The commenter expresses concern related to the LCFS and suggests carbon tax. Please refer to responses 15-1 and 47-2.
- 110-4      The commenter questions how the measures are viewed. Please refer to response 2-1 through 2-4.
- 110-5      The commenter questions how numbers were derived in various tables. Please refer to response 2-1 through 2-4 and 75-1 through 75-11.
- 110-6      The commenter expresses support for a cap-and-trade regulation. Comment noted.
- 110-7      The commenter suggests additional discussion of biomass. Please refer to response 19-1.
- 110-8      The commenter stated he was concerned about the economic impacts associated with business leakage out of California and the indirect environmental impacts associated with the potential for such leakage. The commenter is referred to response to comments 36-1, 46-5, 55-5, 69-2, 70-1 and 2, 75-11, 80-1, 102-2, 106-2 and 16, and 107.
- 110-9      The commenter expresses environmental justice concerns and recommends looking at the alternatives with these issues in mind. Please refer to responses 1-1, 4-3, 4-4, and 37-1 through 37-9.
- 110-10     The commenter expresses concern with the methodologies for quantifying measures. Please refer to response 2-1 through 2-4 and 75-1 through 75-11.
- 110-11     The commenter expresses support for Scoping Plan. Comment noted.
- 110-12     The commenter expresses support for a cap-and-trade regulation. Comment noted.
- 110-13     The commenter submitted letter containing comments raised at the workshop. Please refer to responses for comment letter 106.

- 110-14      The commenter suggests that ARB focus on simple methods. Comment noted.
- 110-15      The commenter presents information about markets and the economy; and expresses thanks to ARB. Comment noted.
- 110-16      The commenter expresses concerns regarding design elements and suggests fee (tax) and dividend. Please refer to response 1-1, 4-1, and 4-2.
- 110-17      The commenter questions how numbers were derived in various tables. Please refer to response 2-1 through 2-4 and 75-1 through 75-11.

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## **ATTACHMENT A**

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### **L89 Attachments**

(<http://www.arb.ca.gov/lists/ceqa-sp11/119-commentsandexhibits.pdf>)



## **ATTACHMENT B**

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### **L91 Attachments**

(<http://www.arb.ca.gov/lists/ceqa-sp11/123-10-174.pdf>)





## **ATTACHMENT C**

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### **L106 Attachments (L108)**

([http://www.arb.ca.gov/lists/ceqa-sp11/143-ceqa\\_comment\\_complete.pdf](http://www.arb.ca.gov/lists/ceqa-sp11/143-ceqa_comment_complete.pdf))

