MEETING

STATE OF CALIFORNIA

AIR RESOURCES BOARD

JOE SERNA, JR. BUILDING

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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SACRAMENTO, CALIFORNIA

THURSDAY, SEPTEMBER 20, 2012

9:00 A.M.

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Mr. Hector De La Torre

Mr. Ronald Loveridge

Mrs. Barbara Riordan

Supervisor Roberts

Dr. Alex Sherriffs

Professor Daniel Sperling

Supervisor Ken Yeager

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Mr. Tom Cackette, Chief Deputy Executive Officer

Mr. Richard Corey, Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Ms. Lynn Terry, Deputy Executive Officer

Ms. Analisa Bevan, Chief, Sustainable Transportation Technology Branch, MSCD

Mr. David Edwards, Manager, Climate Change Reporting Section, PTSD

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Rick Alvez

Mr. Craig Anderson, Solar Turbines

Ms. Jasmin Ansar, Union of Concerned Scientists

Mr. Sean Jason Baggett, Academia Resource Services

Mr. Randy Balik, Beacon Energy Services

Mr. Will Barrett, American Lung Association

Mr. Nicholas Basiltreri, University of California

Ms. Lori Bateman

Mr. Andrew Barrera, LA Metropolitan Hispanic Chamber of Commerce

Ms. Lisa Bowman, Phillips 66 USW

Mr. James Brady, 100 Black Men

Mr. Tim Bushnell

Mr. Julian Canete, California Hispanic Chamber of Commerce

Mr. Frank Caponi, LA County Sanitation District

Mr. Tim Carmichael

Mr. Henry Casas, Soledad Enrichment Action

Mr. Chris Chandler, Phillips 66 USW

Ms. Brenda Coleman, California Chamber of Commerce

Mr. Will Colon, KM Industrial

Mr. Jesse Cuevas, Assemblymember Perea

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Jose Duenas, Alameda County Hispanic Chamber of Commerce

Ms. Catherine Dunwoody, Executive Director, California Fuel Cell Partnership

Mr. Eric Eisenhammer, Coalition of Energy Users

Ms. Kristi Foy, City of Long Beach

Mr. Jim Frassett

Mr. Bill Gamba, Phillips 66 USW

Ms. Cassie Gilson, Air Liquide

Ms. Kassandra Gough, Calpine

Mr. Larry Goulder

Ms. Morgan Hagerty, CE2 Carbon Capital

Mr. Tim Haines, State Water Contractors

Mr. Jeff Hall, Phillips 66 USW

Mr. Frank Harris, Southern California Edison

Mr. Dan Hoffman, Wilmington Chamber

Ms. Lisa Hoyos, Blue Green Alliance

Mr. Jason Ikerd, Qualcomm

Mr. Alex Jackson, NRDC

Mr. Tom Jacob, Chemical Industry Council

Mr. Dan Jacobson, Environment California

Mr. Michael Kafka, Arizona Public Services Company

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Mark Krausse, PG&E

Mr. Weston LaBarr, Long Beach Chamber of Commerce

Mr. Nick Lapis, Californians Against Waste

Mr. Edwin Lombard

Ms. Marlia Maples, TJM Distribution, Inc.

Mr. Paul Mason, Pacific Forest Trust

Ms. Nicole Mazur, VICA

Mr. Charles McIntyre, West Coast Protective League

Ms. Erica Morehouse, Environmental Defense Fund

Ms. Belinda Morris, American Carbon Registry

Mr. Steve Mota, Phillips 66 USW

Mr. Phillip Newell, Gardian Industries, Corp.

Mr. Craig Parker, CalEnergy Operating Corporation

Ms. Michelle Passero, The Nature Conservancy

Mr. Ken Payne, Sacramento County Taxpayers League

Mr. Norman Pedersen, Southern California Public Power Authority

Mr. Pat Perez, California Energy Commission

Ms. Kathryn Phillips, Sierra Club Califnoria

Mr. Bruce Ray, Johns Manville

Ms. Cathy Reheis Boyd, WSPA

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Leonard Robinson, California Black Chamber of Commerce

Mr. Mike Robson, Glass Packaging Institute

Ms. Dorothy Rothrock, CMTA

Mr. Joshua Stark, Transform

Ms. Beth Vaughan, California Cogeneration Council

Mr. Erick Verduzco-Vega, South Bay Latino Chamber of Commerce

Mr. Peter Weiner, Paul Hastings, LLP

Ms. Diane Whittenberg, Executive Director, Plug-In Electric Vehicle Collaborative

Ms. Monica Wilson, GAIA

Mr. Matt Winefiled, Alta Environmental

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PROCEEDINGS

CHAIRPERSON NICHOLS: Good morning, ladies and gentlemen. I counted in the back, and I know we have a quorum. And it will be a couple of people who are still watching in the back room, but we're going to get started because we have a full agenda today.

I want to welcome you all to the September 20, 2012, public meeting of the Air Resources Board.

And we will begin our meeting with the Pledge of Allegiance to the flag.

(Thereupon the Pledge of Allegiance was Recited in unison.)

CHAIRPERSON NICHOLS: The Clerk will please call the roll.

BOARD CLERK MORENCY: Dr. Balmes?

Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERK MORENCY: Ms. D'Adamo?

Mr. De La Torre?

Mayor Loveridge?

Mrs. Riordan?

BOARD MEMBER RIORDAN: Here.

BOARD CLERK MORENCY: Supervisor Roberts?

Dr. Sherriffs?

BOARD MEMBER SHERRIFFS: Here.

BOARD CLERK MORENCY: Professor Sperling?

BOARD MEMBER SPERLING: Here.

BOARD CLERK MORENCY: Supervisor Yeager?

BOARD MEMBER YEAGER: Here.

BOARD CLERK MORENCY: Chairman Nichols?

CHAIRPERSON NICHOLS: Here.

BOARD CLERK MORENCY: Madam Chairman, we have a quorum.

CHAIRPERSON NICHOLS: Thank you. Just a couple of announcements before we get started.

First of all, if you didn't see it posted on the website or get the news in some other way, we have had a change in our agenda order. We're going to be beginning with our regulatory agenda item, which is Number 2. Then we're going to hear Agenda Item Number 3, which is the report on zero emission vehicles. And then we're going to move to the largest -- the item that I know is going to attract the largest number of comments, which is listed in the original agenda as number one, which is our update on AB 32.

Anybody who wishes to testify and has not signed up online should fill out a request to speak card. These are available at the back of the lobby outside the boardroom. And we really appreciate it if you can turn it in as soon as possible because that way we can put a list together and see where we are.

The lists look like that. They'll be posted so that if you need to get up, you can see there's several other people in front of you, you know you're safe. But you also know if your turn is coming and when it is, we really appreciate it if you are there and ready to go so we don't have to keep shuffling the order.

If you have signed up online, you don't have to fill out another card. But you do need to check in with the Clerk of the Board.

And as is usual with these meetings, we do impose a three-minute time limit on speakers. And you can say a lot if you don't spend time reintroducing yourself. You don't have to do that. But just get straight to your main point. And if you have written testimony, it will be given to the Clerk, and the Board members will get copies of it. So we will all have a chance to know what you had to say.

The other thing I need to point out is that there are emergency exits at the rear of the room and on either side of the podium. If an alarm rings, and it has happened, as a fire drill at least, we're required to evacuate the building immediately and to go downstairs and out of the building and assemble in the park until the all-clear signal is given.

I think that's it as far as official announcements is concerned.

If I'm right of about that, we can move directly to the first item on the agenda, which is proposed amendments to the greenhouse gas mandatory reporting regulation. These amendments are done primarily to continue the process of trying to harmonize our program as closely as possible with U.S. EPA's reporting requirements so as to minimize any duplication that businesses would be subject to. It's also something that I think is of great interest in terms of how to regulations are going to be enforced as well.

I do want to make sure that the people who are here to comments on other aspects other than just reporting understand that this is just a regulatory item and focused on the reporting piece. So if you're here to discuss anything else in connection with AB 32, you're free to take a break, because that item won't come up until 11:00. Okay.

Mr. Goldstene, would you please introduce this item.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

ARB's greenhouse gas reporting regulation was amended by the Board in 2010 to harmonize with the US

EPA's reporting rule. These amendments became effective on January 1st of this year. After the Board acted to make the ARB regulations consistent with the federal regulation, U.S. EPA made changes to its regulations that effects some calculation methods.

Today's proposed amendments will largely harmonize with the U.S. EPA's with the current rule.

David Edward, who's our manager from the Climate Change Reporting Section, will provide the staff presentation.

(Thereupon an overhead presentation was presented as follows.)

CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: Good morning, Chairman Nichols and members of the Board.

This Board Item is to discuss staff's proposed amendments to ARB's regulation for the mandatory reporting of greenhouse gas emissions, as well as amendments to the commonly-used definitions across mandatory reporting, the AB 32 cost of implementation fee regulation, and the cap and trade regulation.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: Today, we are proposing relatively minor but necessary amendments to the mandatory reporting regulation.

These updates will further harmonize with U.S.

EPA's greenhouse gas reporting goal. Amendments will also conform with definitions with the cap and trade regulation and AB 32 fee regulation so that terminology used is consistent.

In addition, other requirement clarifications were made to support AB 32 programs. Other changes include requirements for additional products and process data reporting in some sectors, which are necessary for the Cap and Trade Program.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: Let me quickly give you some background on the mandatory reporting regulation.

Mandatory reporting is a direct result of AB 32 mandates, which became effective in January 2007. The mandatory reporting regulation was first approved by this Board in December 2007. Annual reporting began in January 2009.

Amendments approved by the Board in 2010 were meant to harmonize with U.S. EPA's first reporting rule and support the data needs of the Cap and Trade Program. We now have emissions data for the years 2008, '09, '10, and 2011.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS:

Facilities whose combustion emissions are greater than 10,000 metric tons of carbon dioxide equivalent per year are subject to mandatory reporting.

Additionally, suppliers of fuels with emissions over 10,000 metric tons and all electricity importers must report under the requirements of this regulation. In the case of electricity importers, there is no reporting thresholds. They all must report.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: In order to ensure consistent reporting, entities submit all GHG emissions data and product data through the Cal EGGRT system. This online GHG reporting tool was designed to be consistent with the U.S. EPA's reporting tool to minimize the burden to reporters, in learning a new reporting system.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: We are proposing harmonizing amendments that apply to the petroleum and natural gas system sector. For clarity purposes, we have directly included U.S. EPA language into the state rule. These are fundamentally the same requirements that were previously incorporated by reference. This allows ARB to maintain consistent reporting while updating calculation methods and emission factors.

To maintain the rigor of data for the Cap and Trade Program, the use of best available methods for emissions calculations has been clarified. We also maintained the facility boundary definition for on-shore petroleum and natural gas production, while U.S. EPA modified their definition towards a less inclusive facility boundary.

Also in this update is the inclusion of language on general applicability of the regulation and reportable fuel types, again directly from U.S. EPA's rule.

Stakeholder feedback urged this update to minimize flipping back and forth between two regulations while maintaining the most up-to-date language and harmonizing to the extent feasible.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: These clarifications to the regulation are technical, yet remain vital to the implementation of the regulation as a whole.

The existing reporting regulation requires third-party verification for facilities above 25,000 metric tons of GHG emissions. The U.S. EPA rule requires a subset of sectors to report their emissions, regardless of their emissions level.

In the 2010 mandatory reporting regulatory amendments, we required facilities below 25,000 metric tons in this subset to undergo verification. We propose to remove the verification requirement for those reporters under the 25,000 metric ton threshold consistent with treatment of other facilities below 25,000 metric tons. This represents a cost savings for the approximately 40 businesses affected by this provision.

Staff added the option of performing annual field accuracy assessments for meters, in lieu of triennial calibration. This is a great solution to allow businesses to maintain and demonstrate meter accuracy, while keeping costs down.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: This slide proposes amendments to support the Cap and Trade Program. We have added clarity to the product data reporting requirements for refineries and for other facilities reporting in the petroleum and natural gas systems sector.

Additionally, verification requirements for product data have been simplified to become more consistent with emissions verification. Previously, product data verification occurred at the individual product level as opposed to the aggregated sum of the products from the facility.

Abbreviated reporters, those in the 10,000 to 25,000 metric ton range are now required to report process emission. This change affects approximately three to five facilities statewide. The data is needed to help monitor leakage in these sectors.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: An asset controlling supplier, or ACS, is a marketer of electricity from multiple sources it owns, operates, or for which it serves as the exclusive marketer. In the current regulation, an ACS may register to obtain an average emission factor for their entire system. This allows purchases from these entities to use the system-specific ACS emission factor.

In the proposed amendments, we have added a step-by-step process to become an ACS, including reporting and verification requirements and the methods by which emission factors will be calculated by ARB on a yearly basis.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: Based on stakeholder feedback, it is our intention to develop 15-day changes. Staff has worked extensively with reporting entities during this update process. The intended changes are largely due to their feedback and requests for further clarification.

There have been multiple comments on the definitions related to imported electricity. Staff is considering clarifications to certain definitions to ensure that all reporting entities can clearly interpret their reporting requirements.

In the petroleum and natural gas systems sector, we will clarify reporting requirements for crude oil condensate and produced water to avoid potential double counting of emissions.

Lastly, additional references in the regulation will be corrected in order to avoid confusion, and other changes may be proposed as needed.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: To review, these are the changes in today's proposed amendments. The technical updates will improve the implementation of this regulation and support of the Cap and Trade Program, and other programs which this data supports. Overall, amendments represent a cost savings to a number of reporters.

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CLIMATE CHANGE REPORTING SECTION MANAGER EDWARDS: Staff recommends approval of the proposed regulation and conforming definition changes to the AB 32 cost of implementation fee regulation and the cap and trade regulation.

Thank you for your time today. I'd be happy to answer any questions you may have.

CHAIRPERSON NICHOLS: Seeing no immediate questions from the Board, why don't we turn to the speakers. I can't read that. It's way too faint for me eyes. I don't know if there is any questions we can darken up the -- thank you.

I'll just begin reading the list. So our first witness is Cathy Reheis-Boyd followed by Craig Parker.

MS. REHEIS-BOYD: Good morning. My name is Cathy Reheis-Boyd. I'm President of the Western States Petroleum Association.

I want to thank you for the opportunity to comment on this item. Our companies, as you know, have been very involved in this from the inception on the MMR issue. We've worked very closely with your staff on a lot of complex issues. This is obviously a continuing process. We started early. We'll be working on it through 2013.

There are lots of issues still unresolved. We submitted more formal comments to you today electronically. And this gets to meshing the Cap and

Trade Program with the MMR reporting requirements.

We worked very well with Richard Bode and Edie Chang on this over the past multiple months. It's been a productive dialogue and we've focused in on the flexibility needed to our companies to make sure we have field accuracy and calibration assessments that work for us.

A lot to do to still harmonize those. We have issues around accuracy and data reporting that are in our written comments. We look forward to the 15-day packet. And I thank you for your time on this item. I will be testifying on the third item where I will have a few more serious concerns.

CHAIRPERSON NICHOLS: Cathy, while you're up there, I'll start this question with you.

I got a letter last night which was submitted to the Board from CCEEB, which laid out a number of issues that they were hoping would lead to guidance from the Board. They're, I think, looking for us to issue a formal kind of enforcement guidance type document. Is that something that you're endorsing as well? I just am trying to think ahead to what we will be doing next on this issue.

MS. REHEIS-BOYD: Yes. I think we're working with CCEEB on the enforcement guidance document and we would look forward to engaging in that discussion going forward.

CHAIRPERSON NICHOLS: Okay. Thank you.

Craig Parker and then Frank Harris.

MR. PARKER: Good morning, Chairman Nichols and the Board.

My name is Craig Parker. I'm Director of Environmental Services at CalEnergy Operating Corporation, 7030 Gentry Road in Calipatria California. Thank you for the opportunity to speak with you regarding the CalEnergy comments that we submitted yesterday on the mandatory reporting of greenhouse gas emissions AB 32.

CalEnergy owns and operates four geothermal facilities, producing approximately 340 megawatts of electricity in the Imperial Valley of California. CalEnergy geo thermal facilities top the Salton Sea known geothermal resource area. This resource is known for having extremely productive wells, producing high temperature, high pressure, high salinity, brine and the wells routinely produce over a million pounds of brine an hour. The reservoir temperature can exceed 600 degrees Fahrenheit. The salinity is 220,000 parts per million, which is -- of total dissolved solids, which is seven times that of sea water.

Geothermal resources are considered to be one of the largest liquid dominated reservoirs in the world, with approximately 2,000 megawatts of potential capacity. Over the past 40 years, CalEnergy and its predecessors have concluded that the most effective and environmentally friendly -- that is, extremely low water usage -- way to harness this energy is using the geothermal flash technology. However, due to the high temperatures and two-phase flow of the brine and steam out of the wells, it's very difficult to accurately measure and report greenhouse gases.

CalEnergy supports the goals of AB 32 and renewable portfolio standard to reduce greenhouse gas emissions and increase renewable energy production. CalEnergy supports the goal of aligning and harmonizing California greenhouse gas with the U.S. EPA regulations and the Western Climate Initiative reporting structure.

CalEnergy geothermal production is exempted from greenhouse gas reporting under the U.S. EPA greenhouse gas regulations. However, the ARB regulations require geothermal energy to report greenhouse gas emissions. Greenhouse gas emissions from geothermal are exempt from the cap and trade regulations.

CalEnergy believes the current independent verification increases the cost for geothermal energy production without a corresponding benefit. That is, previous ARB regulations required independent verification of geothermal gas emissions every three years.

The initial cost for that verification to CalEnergy was over $44,000 for our four facilities. The ARB regulations were changed and now require annual independent verification. There is two levels of verification. And in 2011, our verification costs exceeded $25,000.

CalEnergy respectfully requests requirement for independent verification in the current proposed regulations be eliminated for geothermal energy production without an obligation under cap and trade.

CHAIRPERSON NICHOLS: Thank you. I'm glad you finished. Thank you.

Mr. Harris and then Tim Haines.

MR. HARRIS: Good morning, Madam Chair, members of the Board.

My name is Frank Harris. I'm with Southern California Edison. I just have a quick comment to express some concern over the reporting regulation updates.

One of the key concerns that Edison has here is whether or not all imported electricity will be accounted for in the Cap and Trade Program. We're concerned some out-of-state sellers who submit bids and deliver energy into the ISOs out of state delivery notes may not report data for all the electricity they sell that way.

If these out-of-state sellers are allowed or somehow permitted to avoid that reporting and the State's compliance obligation of course would have pretty devastating effects on the environmental integrity of the program, but also on the wholesale electricity markets as a whole.

As a result, we believe this issue needs to be addressed absolutely as soon as possible, certainly no later than the first of January 2013. And it's critical that ARB independently collect the sufficient information to make sure that all imported electricity and the associated emissions are reported and accounted for.

And so following up on your question to Cathy, in that way we would support along with CCEEB -- and we're working with CCEEB as you might imagine -- their call for some guidance language on how ARB is going to collect this data in the event that the mandatory reporting regulation may not prove sufficient. And then, further, going a step further, how ARB plans to enforce the rule with regard to what the concern that I've expressed here.

It's really paramount that ARB demonstrates in its enforcement practice here just in the event an out-of-state seller may choose to try to avoid this compliance obligation.

So we stand ready to work with staff. They've been great in working, communicating with us on this issue. And I guess my main call here is that this actually we feel is a very urgent issue and should be addressed before the start of the compliance obligation in January.

CHAIRPERSON NICHOLS: Thank you.

I think we would all agree that this is a critical issue, and we have to get it right. It was only recently surfaced as something where there might be a lack of clarity in the regulation. I'll ask staff about this. We agree with you this needs to be addressed.

Mr. HARRIS: Thank you very much

CHAIRPERSON NICHOLS: Tim Haines and then Norman Pedersen.

MR. HAINES: Good morning, Chair Nichols, members of the Board.

My name is Tim Haines. I'm with the State Water Contractors. We're an association of water agencies that receive water from the State Water Project. We distribute it to 25 million businesses and families throughout the state of California.

The water comes from the State Water Project. And in order to be able to move the water, there is a lot of pumping that's involved. The pumps consume a great deal of energy. And as a consequence, the State Water Project is regulated under cap and trade.

We want to express our appreciation to the Board for trying to work hard along with us in order to be able to understand the unique circumstances that are encountered by the State Water Project under the cap and trade regulations.

We've appreciated being able to meet with members of the Board, members of the staff in order to be able to help you understand those circumstances. And we look forward to a continued dialogue in order to be able to address our concerns.

Thank you.

CHAIRPERSON NICHOLS: Thank you. Thanks for coming.

Norm, and then Michael Kafka.

MR. PEDERSEN: Good morning. I'm Norman Pedersen for the Southern California Public Power Authority, or SCPPA.

SCPPA very much appreciates the staff's continuing effort to streamline the mandatory reporting regulation. The amendment that you have before you today incorporates a number of changes that SCPPA recommended before the institution of the rulemaking proceeding. The amendment also contains a number of changes that SCPPA recommended during the informal process that staff conducted before releasing the amendment for 45-day comment. Some of the amendments will directly reduce the cost of compliance with the reporting regulation.

This is particularly true of the removal of verification requirements for facilities that emit over 25,000 metric tons per year. And this provision, by the way, will directly effect five SCPPA members. Thus, we support the amendments and urge that you adopt them today.

However, there are some further revisions that SCPPA believes would be helpful. First, we would appreciate clarification that the provisions about reporting renewable energy credits are not intended to prevent an importer of electricity from claiming an RPS adjustment before retiring the associated credits.

Second, we would appreciate clarification to assure the revocation of an asset controlling supplier status would not have a retroactive effect on the emissions calculations of an entity that purchased from the asset controlling supplier.

Third, we would appreciate some clarification and expansion of several definitions as we have recommended in our 45-day written comments.

With these clarifying revisions that we hope to see in 15-day changes, SCPPA urges adoption of the amendment that is before you today. And thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Michael Kafka, followed by Mark Krauss and Joshua Star.

MR. KAFKA: Thank you, Chairman Nichols and Board.

My name is Michael Kafka. I'm here from Arizona Public Service Company, although the majority of our output is used to serve base load within the state of Arizona, excess power is at times sold. So we are certainly implicated by the rules, and we've been following them closely.

We have a couple of comments. And again we appreciate the Board's and Chairman Nichols willingness to listen to those comments.

First of all, with respect to netting, Section 95852(b)(6) contemplates a credit to the obligation if transactions occur within the same hour, meaning imports and then exports into the KYSO and out exports out of the KYSO occur within the same hour.

And the rational that was given in the 2011 Final Statement of Reasons of California's Cap and Trade Program, one of the rationals is that it's similar to wheeling and there is a recognition of this. And we believe that given that rational and given the fact that we oftentimes generally do not know when power goes into the KYSO where it's going, and we certainly don't know when we -- for example, we exported out of the KYSO into Ehrenberg, Arizona from below there, we don't know from where or where that was generated.

We believe annual netting would be appropriate in this case and that the temporal proximity, meaning hourly or weekly or annually, is not relevant to the wheeling issue. And again, we would like to propose an annual netting time frame actually within the same calendar year time frame.

Second, emissions reporting status, when an out-of-state entity such as ours reviews the regulations, it's very difficult to determine whether we're a generation-providing entity or whether we can just use the default rate because most of our power going into the -- all of the power going into the KYSO excess power of the bulk power pool, we're not sure from where that would generate it. And again, we don't know what of that power is actually going to serve what load.

And we find it difficult to know whether we may just use a default rate and having this power being produced from unspecified sources or whether that would be considered inappropriate on a later day. Because my understanding is that staff has eight years to look at emission reports and then make a determination.

My time is up.

CHAIRPERSON NICHOLS: Thank you. You have submitted written testimony.

MR. KAFKA: We have. And it's similar to what I just spoke on. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mr. Krausse.

MR. KRAUSSE: Good morning, Madam Chairman, Board members.

Mark Krausse with Pacific Gas and Electric.

PG&E has filed comments on the mandatory reporting rule amendments, and it was a useful process. We filed those written comments. We met with staff, had a very productive meeting and were able to resolve all those. I would recommend that process. Staff is very cooperative.

Some of these are pretty weedy issues natural gas blow down, pneumatic devices. Your staff worked very hard to understand businesses that frankly I don't understand as part of our business. We really appreciate that.

The only other comment is that we would support guidelines in the enforcement area. When one looks at the Health and Safety Code provision for enforcement, you can very quickly get to a very high numbers. I think it would be helpful to have guidelines in that area and have reduced blood pressure.

CHAIRPERSON NICHOLS: Good. Thank you.

Joshua Stark.

Mr. Stark is our final witness. Oh, wrong item. Very good. Okay.

Was there anyone else who wanted to testify on this particular item? It is, indeed, technical and also as you can hear from the witnesses important to get it right.

Staff, do you have any concluding comments? I have a couple of questions for you. But that will close the public testimony part of the hearing.

EXECUTIVE OFFICER GOLDSTENE: We can make comments on a few of the items just to make sure the Board members understand how we're dealing with it.

CHAIRPERSON NICHOLS: The one I'm concerned about is why we insist on the reporting of the geothermal emissions if EPA doesn't.

And also I guess on this issue that was mentioned by Mr. Peterson about the rec credits. That stuff is really complicated, I know. If you can help to clarify it, it would be helpful.

EXECUTIVE OFFICER GOLDSTENE: Maybe Richard can respond to that.

HEALTH AND EXPOSURE ASSESSMENT BRANCH CHIEF BODE: I'm Richard Bode.

So the first question you had had to do with geothermal. So in the mandatory reporting requires geothermal as well as the biomass plants, if they're over 25,000 metric tons of CO2, to be treated -- actually have you verify it and much less intensive verification for the biomass. And that's also to guarantee that the emissions conform to the cap and trade requirements be exempted from obligations. We do require the reporting, actually, the 10,000 level. And that's also because we want to have a complete characterization of electricity generation in California.

CHAIRPERSON NICHOLS: Just to understand if emissions are being pushed from one type of plant to another, what that really means for greenhouse gas emissions.

HEALTH AND EXPOSURE ASSESSMENT BRANCH CHIEF BODE: If they have difficulty with their measures and their methodologies, we would be more than happy to work with them. And I believe their comments kind of reflected that input.

CHAIRPERSON NICHOLS: Okay. That's helpful. And then the other issue I guess was this netting business for the recs that are imported. Can you address that one?

HEALTH AND EXPOSURE ASSESSMENT BRANCH CHIEF BODE: So I think that has to do -- I think the comment came from Mr. Pedersen had to do with whether they were allowed to retire -- had to retire the recs when they did their RPS adjustments and adjustment in mandatory reporting. And, of course, what happened this year was the Energy Commission basically put a postponement on it's requirement. They have to retire them this year. We agree with this comment. We're implementing the regulation this year as well. We put guidance out as well.

CHAIRPERSON NICHOLS: Other Board members have any questions on this item?

Barbara.

BOARD MEMBER RIORDAN: Madam Chairman, let me just ask -- you had mentioned it and I was going to mention it as well. The fact that CCEEB provided -- I don't know whether staff has had a chance to look at it and how might we move forward with this particular item. I realize it came to us rather late and so --

EXECUTIVE OFFICER GOLDSTENE: This has been an issue we've been working with CCEEB on for the past couple years. We think that -- and particularly what they shared yesterday -- I think they have a right to be asking for the clarification. But we think we have reassured them and others, but I'll let Jason address that.

MR. GRAY: Hi. I'm Jason Gray with the Legal Office.

We worked with CCEEB for quite a while on this specific issue, and we met with them recently. And I think their comment letter reflects that and explained in our Final Statement of Reasons we actually respond to all the comments that come to us. And many of those comments during the last round of amendments were related to enforcement questions.

So we walked through those comments with them and agreed that we would distill those more into a smaller document in our Final Statement of Reasons and work with them as their comments suggest. So we'll be working with them, and I think we can help address the issues.

CHAIRPERSON NICHOLS: This has been a theme of I think every meeting I've had with CCEEB since we first began working on this issue, because on behalf of a very broad array of their members, this is one issue they're all focused on. And we have made progress, but they do want more formal guidance than I think the staff is ready to turn their attention to it as soon as we get this phase behind us.

Other comments? If not, I would ask for a motion and a second on this item.

BOARD MEMBER D'ADAMO: Move adoption.

BOARD MEMBER YEAGER: Second

CHAIRPERSON NICHOLS: All in favor please say aye.

(Ayes)

CHAIRPERSON NICHOLS: Opposed?

Abstentions?

All right. Thank you. This concludes our first agenda item. And we will move quickly to a fun -- I think fun update on what's going on in the world of zero-emission vehicles advancement technology vehicles.

Let me just say we have representatives here from the California Energy Commission, as well as ARB staff, the California Fuel Cell Partnership, and the Plug-In Electric Vehicle Collaborative. And the focus of this is not on the vehicles, but on the infrastructure that is needed to support a new generation of vehicles.

As we've seen with the finalization of the low-emission vehicle regulations last month, by the Office of Administrative Law, it's now time to take a look at what implementation really looks like, especially the plug-in hybrids, battery electrics, and fuel cells. Infrastructure for refueling these vehicles is going to be critical to their proliferation, which of course we have an interest in and to the customer experience and so therefore doable success for the market.

In addition to having a strong regulatory pathway for achieving reductions from light-duty vehicles, we also are blessed with public/private partnerships that are going to be critical, I think, to the success of these advanced vehicles through real commercialization. So two of these organizations which ARB has had a role in helping to create are the California Fuel Cell Partnership and the Plug-In Electric Vehicle Collaborative. We are members of these organizations and very please to support their work. But what makes them unique I believe anywhere and particularly effective is that these are voluntary associations that represent a panoply of different groups that represent a particular technology the manufacturers of the vehicles and fuels.

So it's a remarkable story. And I think it's going to be interesting for all of us to hear what's on tap and what's planned for the future. And at that point, since everybody seems to be in place, we'll turn its over to the staff.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

Today, Ms. Analisa Bevan of our Mobile Source Control Division will provide a status update on the zero-emission vehicle regulation, implementation efforts, next steps, and open issues. Following Ms. Bevan's presentation, we'll hear from our two partnership organizations regarding the collaborative efforts we have underway to support commercialization of ZEVs.

We'll start with Ms. Catherine Dunwoody, Executive Director of the California Fuel Cell Partnership, who will walk us through the organization's recent development of a road map for fuel cell vehicle commercialization.

And then hear from Ms. Diane Wittenberg, Executive Director for the Plug-In Electric Vehicle Collaborative, who will provide us with an update on making California communities plug-in electric vehicle ready.

And then finally Mr. Pat Perez from the Energy Commission will address the role the Commission has been playing in helping to fund infrastructure deployment.

Ms. Bevan.

(Thereupon an overhead presentation was presented as follows.)

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Good morning, Chairman Nichols, members of the Board.

Thank you for this opportunity to provide you with an update on activities related to zero-emission vehicle infrastructure and an opportunity to invite our partner members, membership organizations, the Fuel Cell Partnership, and the Plug-In Electric Vehicle Collaborative, as well as our sister agency, the California Energy Commission, to give you an update on these items.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: To give you an overview about what I'll talking about this morning, I'll give you a fast update on the status of the zero-emission vehicle regulation, a snapshot of where we are with other activities supporting ZEV commercialization, particularly the clean vehicle rebate program, what we're looking for in infrastructure, and why this is such an issue, as well as highlight the zero-emission vehicle Executive Order and Action Plan signed by our Governor in March and then move into the partner presentations.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: You'll probably remember this slide that shows us our future of where we're going with the volume of zero-emission vehicles under the ZEV regulation.

The regulation amendments, as you will remember, were adopted in January 2012. They were finalized by the Office of Administrative Law August 7th, just last month. And they became immediately effective.

And I just got back from Washington at our zero-emission vehicle EPA waiver hearing, the advanced clean car waiver hearing yesterday. We're asking for approval of that waiver by the end of the year. So we're moving very quickly on being able to implement this program in California.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: As we showed in January, there are a lot of ZEVs coming the market or already here that will apply to the ZEV mandate.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: And I'll turn now to what we're looking for to ensure their successful market launch.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: First, a snapshot of where we are with the Clean Vehicle Rebate Program.

In addition, probably one of the first challenges to seeing a successful market for zero-emission vehicles is addressed in the up-front cost. And our Clean Vehicle

Rebate Program funded by AB 118 provides $2,500 for the purchase battery electric or fuel cell cars and $1,500 for the purchase of a plug-in hybrid.

Over 9,000 vehicles have received rebates so far, 5800 BEVs and fuel cells and 3200 plug-in hybrids. Nearly $25 million has been allocated to this program to date, and we have one-and-a-half years left in allocations for AB 118.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Apart from the first cost, probably the second most significant challenge to commercializing ZEVs is infrastructure. Consumers need to know that infrastructure is accessible, affordable, easy to establish. It's reliable. And it has an environmental benefit to use that fuel in that vehicle in order to make a decision to make a purchase of a ZEV.

Today's presentations will talk about how partners are working on addressing these infrastructure considerations for plug vehicles and hydrogen fuel cells.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Before we go into our guest presentations though, I want to highlight another exciting development for zero-emission vehicle development and utilization in

California. That was the Governor's signing of Executive Order B-16-2012 on March 23rd of this year. It supports the rapid commercialization of ZEVs with the goal of seeing 1.5 million zero-emission vehicles on the road by 2025.

And an interim step is having enough infrastructure to a support one million ZEVs by 2020.

Additionally, it requires that the State be a significant player in this by purchasing 10 percent of new cars meeting zero-emission vehicle requirements by 2015 and 25 percent by 2020.

We've been working with the Governor's office, with the State Agency Task Force to develop an Action Plan on how to implement this Executive Order. Within that Action Plan, we have four broad areas that we're looking at coming up with action items on, including meeting infrastructure community readiness needs, consumer awareness, transforming fleets, not just the state fleet, by private fleets as well, and ensuring economic development and investment in zero-emission technologies.

Next Friday, we'll be hosting here at Cal/EPA a stakeholder summit to work with our stakeholders and unveil that Action Plan and get feedback and basically present this living document we will work from to fully implement the Governor's Executive Order.

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SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: So now -- I'm confused this morning about which order we were going in.

So this morning, we'll hear from two of our public/private partnerships and one sister agency on efforts to address the infrastructure considerations in California. We'll start with a presentation from Diane Wittenberg, the Plug-In Electric Vehicle Collaborative, and then move to Catherine Dunwoody with the Fuel Cell Partnership. And finally a presentation from Pat Perez of the California Energy Commission on their funding of infrastructure.

Diane.

MS. WITTENBERG: Thank you. Good morning, Chairman Nichols and members of the Board.

It's a great pleasure to be here, by the way. I was involved in electric vehicles in the '90s when CARB had the two percent rule in place. And when that doesn't fully work out, you came back with something bigger, better, and stronger. I felt that was very impressive at the time and still very impressed, pleased to be part of the PEV future.

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MS. WITTENBERG: So the membership of the PEV

Collaborative goes across State government, auto makers, utilities, charger providers. And the leadership of the State agencies, and most especially CARB, has really been key to putting a collaborative together. So I want to put credit where credit is due. And especially Chairman Nichols' personal leadership driven by this whole idea that the private sector must partner with the public sector to drive electric transportation future.

CARB has contributed staff and resources to us. And I especially want to thank Joshua Cunningham, who is an employee of CARB and also an employee on loan to the PEW Collaborative for this presentation today.

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MS. WITTENBERG: In the past year-and-a-half, we worked on a set of documents that may be in front of you or certainly will be presented to you.

CHAIRPERSON NICHOLS: I think we're coming.

MS. WITTENBERG: Here they come. I hope you have a big briefcase.

And these documents were put together -- we worked to get a million dollar grant with others from the DOE last year on PEV infrastructure readiness for communities in California. We have many workshops. We put together these check lists and guidance documents and readiness guidelines. And the Collaborative has moved on from local government readiness for infrastructure to really focusing on MUD, multi-unit dwelling infrastructure, and workplace infrastructure, all sorts of focus. So that's what we'll be talking about today.

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MS. WITTENBERG: I'm going to give you three quick fact slides before we go into a couple of policy considerations.

This is the curve of PEV sales in the US. California leadership is very much focused on here. Fifty percent of all PEVs were sold in California by the end of last year. We've now fallen 40 percent of all the PEVs, because as other states open up and become markets.

The curve here, the red line is faster than when hybrids were introduced ten years ago, which is very encouraging. As fuel cell vehicles are introduced, that curve could get even steeper, which I think is even more encouraging.

What you don't see on this chart, but which is true, is that over time the plug-in vehicles, like the plug-in Prius and the Volt, have a much bigger market percentage than the pure BEV. That's something to keep in mind as we think about infrastructure because it effects thinking about infrastructure. And of course, we don't know if that's the mix that will continue or not, and I'll refer to that several times.

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MS. WITTENBERG: There are three levels of charging infrastructure.

Level one, the normal plug-in that you may be three or four miles an hour if you plug your car into that in terms of recharging.

About half of the Volts that are in the marketplace just get by on level one charges.

Level two charging, which requires the box you see the charge point example there. It's a dual charger. Gives you about 20 miles per hour of charging. And about 75 percent of the Leafs use the level two charger. About 50 percent of the Volts use the level two charger at home.

Fast charger, we have a few in the state. And we're not quite sure who is going to use them the most.

Battery switch, there is an experiment with taxis going on in San Francisco that's about to start up. And I think there will be new news about that coming up soon. So the auto makers are thinking that's another way to let people charge faster is battery switch. So I would say keep an eye on that.

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MS. WITTENBERG: This looks religious because it is a pyramid and an article of faith in the EV community that home charging is most important, workplace charging second most, fast charging, third most important.

You may see this same chart in front of you for the next ten years. And you might see it only ten years from now and people will laugh at it, like, this is what we used to think.

But, in fact, I think an important key to infrastructure is about 70 percent of Californians live in multi-unit dwellings. And they may, as the market develops, charge, say, just at the workplace and with fast charging. We just don't know. That's really the theme of my presentation, what the behavior of the owners will be. So, therefore, it won't be efficient, but it will be right in the long run.

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MS. WITTENBERG: So here are the unresolved market issues. When I say unresolved, I mean, they're nascent. It isn't because there's regulation to decide them, but because the buyers haven't decided yet.

The real key issue though on infrastructure that I want to make a real point with you all is the fact that electricity is so ubiquitous that it's clean, it's getting cleaner, is really the most important element of PEV infrastructure. The fact of our level one or level two, are you at home or at the workplace, is all secondary to the fact the electricity is everywhere. So it's a very useful choice for all these car buyers. Given that electricity is everywhere, how do you get that electricity into the cars?

On a public charging business models, if you talk to the chains, the Targets, the Safeways, and they're looking at putting a charger in their parking lot, the questions they ask themselves are basically -- they start by saying we know that 85 percent of PEV owners, once they have a PEV, it's their primary car. It will show up in our parking lot. So if we put a charger in, will that bring us more customers? Or will we make money by putting charging in and charging people to use it? Or will we look like idiots because they're going to gather dust and embarrass us for embracing a technology that is not a long-term technology. So those are the issues that are working out in the public work space.

In terms of workplace charging, everyone agrees that workplace charging is a range extender. You drive ten miles to work. You get an extra ten miles at work, and you effectively have a longer range in your car. So it's really the most important thing that people are focusing on now that they've settled home charging in a way they hadn't two years ago.

What's the best balance between charge levels?

Well, that has to do with what our the cars going to look like in ten years? Will we go to mostly pure BEVs or mostly be with plug-in electric vehicles? That will effect the mix of charging.

And then the problem about a DC charge standard. The Leafs that came out have a fast charge standard. You don't want to strand the early adopters, yet the other automakers are tending to a different charge standard. So I think something that will come up before you in the future is how do you most effectively protect the early adopters without wasting public money on charging that isn't going to be used as much as as another standard. So the whole social cost issue.

And then the whole issue of off-peak charging is one that will come up before you and people will talk about it. Right now, we know that two-thirds of charging is done at home. It's not all off-peak, but it's at home. Do we encourage more being at home? Do we encourage more being off peak? Or do we not care because you figure you pay for it at market prices. And so if people are willing to pay for it, they can use it at least for the first million cars that come in, wherever they find it.

And will B2G turn this whole thing around? Will ten years from now the practice always be plugged in because whenever the system can, it will fill your battery or take out from it. And it will really stabilize and levelize the electric system.

And then the most current issue I think is this interoperability among chargers. You know, there is a variety of systems for public charging. You get a card. You subscribe to one of them. And it's hard to use another one. That's not that many public chargers out there. It's kind of a pain to have different systems for public charging and have to have variety of subscriptions. And it's too bad since much of that came from public moneys to start with.

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MS. WITTENBERG: And home charging trends, I think the most important thing is that the cost of the charging equipment has really come down. Two years ago, a home charging unit was about $2,000. Last year, we could get a good home charging unit for about $1,000. And now they're talking about $500 pricing coming out soon.

The hardest part for home charging, as I said before, if you live in an apartment because the managers say well, yes, somebody here has an electric car, but we're in an apartment, they might move on. What will we do with the charger. Or in the case of condos, we all know how difficult it is to get anything through an HOA, including your Christmas tree lights. It's just very time consuming.

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MS. WITTENBERG: Workplace charging again is the second most important location after the home. It's very useful. South Coast Air Quality Management District, for example, has workplace charging as a useful compliance mechanism as part of its transportation management compliance rule 2022. And that's been encouraging a lot of workplace charging.

In the Bay Area, AQMD did a survey of about 600 workplaces, and 70 percent of them said that they would like to install more or their first workplace charging. And the three barriers that they faced -- and this shows they know a little bit about what they're talking about. The first one was the cost of installation. The second was the cost of the equipment, and that's the right order, in terms of how expensive things are. And the third one is they're afraid no one will use it. They're really at that inflection point.

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MS. WITTENBERG: These are very conservative numbers of how many chargers have been installed. NRG is about to have -- through a settlement with the PUC to install 10,000 really commercial and workplace chargers. They're going do focus on hospitals, universities, multi-unit dwellings, and they're going to install the make-readys in groups of ten or more. So whenever they go and install, you'll have an opportunity to charge ten cars at once.

And in their DC fast charging, I think it's notable that they are really addressing safety issues. Where should they put the DC fast charging so that when you're sitting there with your car linked to a big heavy 480 volt cord, you don't feel quite as vulnerable as you might. So they're making sure there's lots of lighting, lots of security cameras. They're assessing sites with Pinkerton to make sure there is no place people can lurk by. And that makes me feel confident.

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MS. WITTENBERG: A lot of analysis on where charging should go. And I think it's interesting, U.C. Davis is analyzing it in terms of where you put it depends on how much you can increase range.

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MS. WITTENBERG: Talked about that. In terms of the government's role, I think that you all have done an excellent job in the government's role on infrastructure. There's still some work to do on fuels. Through the PUC, it's so clear that everyone knows how much a gallon of gasoline costs and how much it takes to fill their tank, but they can't say the same about electricity.

Some metering rules will substantially lower the cost of infrastructure. But our rules on the low carbon fuel standard credits will also be important in terms of charging infrastructure, as will the ISO rules on B2G planning. All the work we've done on local government planning in the last year, we finish it up with a survey saying will you be ready by the end of 2012. Will you have your zoning rules for infrastructure, for PEVs in place, your parking rules, your building codes, your permitting set up. And 65 percent of the community said no.

So we have to continue working on local government planning for infrastructure, especially according to the Governor's Executive Order which wants it all done shortly.

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MS. WITTENBERG: To summarize, electric fuel is still affordable and available, but because of market uncertainty we don't know yet what the ideal charging infrastructure design is.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you, Diana. We'll just finish the presentations and then engage in discussions.

So Catherine, welcome.

MS. DUNWOODY: Thank you very much, Chairman Nichols and members of the Board, for the opportunity to present to you today from the California Fuel Cell Partnership our progress in deploying hydrogen infrastructure in vehicles in the state.

I want to thank the Board for your longstanding support of the organization through leadership and all the resources that you've put into this effort. It's been very much appreciated.

So today, I'm going to talk to you about our progress in implementing hydrogen and fuel cell vehicles in California. I'd like to draw your attention to a document hopefully you received, our latest publication, California road map, for bringing commercial volumes of fuel cell vehicles to the state. I'll be focusing on that work in my presentation.

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MS. WITTENBERG: First, I want to remind everyone here that a fuel cell vehicle, in fact, is an electric vehicle. These vehicles, instead of plugging in to recharge, they refill with hydrogen fuel.

But all the other components of the vehicle are very comparable to the vehicles that use plug-in technology. Whether they're at full battery electric vehicle or plug-in hybrid vehicle, many of the components are the same, the electric drive systems, the motors and the controllers.

Some of the differences with this type of electric vehicle is the range that can be achieved between 250 and 400 miles of range, the fast refueling time with hydrogen. And you'll notice a lot of these vehicles are larger platforms. It really enables the auto makers to extend the electric drive technology to a broader range of their portfolio vehicles.

CHAIRPERSON NICHOLS: Every time I see this photo, it makes me want to take a nap. There's something about that couch up there on top of the car.

MS. DUNWOODY: The point is here that this is a no compromise vehicle. You can see everything that you would do with your regular vehicle. I don't know how many people would put a sofa on top of their car, but it can be done.

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MS. DUNWOODY: So through research and development and technology validation, the U.S. Department of Energy's hydrogen and fuel cells program has demonstrated significant progress towards goals. These goals were established in partnership with industry to determine market readiness.

The top chart shows the results of cost analyses conducted annually by the Department of Energy, indicating steady progress towards the 2017 target of $30 per kilowatt.

And what I'd like to point out is that target was established in partnership with auto makers in order to demonstrate that fuel cells can be cost competitive with internal combustion engines.

The bottom chart shows how projected costs vary with manufacturing volume. The DOE's technology validation program has also demonstrated real world driving durability of 75,000 miles in actual cars on the road, and the lab results have indicated this can be doubled to 150,000 miles.

Also, real world driving range has been validated by DOE at between 250 and over 400 miles, depending on the make and model of the vehicle.

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MS. DUNWOODY: Department of Energy has also set a hydrogen threshold cost of two to four dollars per gallon of gasoline equivalent. I need to explain here a kilogram of hydrogen has about the same energy at content as a gallon of gasoline. And what the Department of Energy did was chose this threshold of cost to represent the cost at which hydrogen fuel cell electric vehicles can be cost competitive on a cost per mile basis, and total cost of ownership with gasoline hybrid electric vehicles in 2020.

The Department of Energy has determined that hydrogen from natural gas can meet this threshold volume cost today when produced at volume. In 2009, an independent DOE panel estimated the cost of hydrogen from on-site electrolysis to be about double this or five to $6.00 per gasoline gallon equivalent. The DOE has a very active R&D and validation program to bring these costs down.

Hydrogen fuel cell vehicles give customers over twice the fuel economy of a combustion engine. And as I mentioned, since the kilogram of hydrogen has about the same energy content as a gallon of gas, a fuel cell vehicle drivers who pays eight to $10 per kilogram of hydrogen is paying about the same per mile cost for fuel as the gasoline driver paying $4 per gallon today.

Measuring progress to these and other milestones, a number of auto makers have signaled their intent to launch fuel cell electric vehicles into the commercial market.

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MS. DUNWOODY: And that's good for California because, as we know, along with battery electric vehicles, fuel cell electric vehicles will have one of the lowest GHG options in the transportation. And this is data from the Department of Energy as well.

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MS. DUNWOODY: This is on a well to wheels basis.

So today, in California, there are over 200 fuel cell electric vehicles operating on the road, and they're used by regular customers who use them for business and personal travel every day. They fuel at eight public hydrogen stations, and we have more in planning and construction. We're on track to have about 20 hydrogen stations by the end of next year.

The fuel cell electric buses are being used in regular transit service, and auto makers have made it very clear that California is their first U.S. market for fuel cell electric vehicles. It's one of a handful of early markets worldwide.

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MS. DUNWOODY: Every year, the California Air Resources Board, the Energy Commission, and the California Fuel Cell Partnership survey the auto makers to determine their plans for bringing fuel cell electric vehicles to California. These results indicate that auto makers plan to significantly increase their production between 2015 and 2017. That's consistent with public media announcements that have been made by several auto makers about their intent to launch commercial production.

This jump in volume helps them achieve economies of scale as quickly as possible, and it helps justify the significant investments that they're going to need to make to support the new technology in the marketplace, for example, training their dealers and service providers and providing customer support. So we've got a lot of vehicles coming. How are we getting ready for this market launch.

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MS. DUNWOODY: Well, a couple of years ago, in 2009, the California Fuel Cell Partnership published an Action Plan that identified the early markets or the clusters where auto makers expect to find their first customers for fuel cell electric vehicles. Eight public hydrogen stations are located in these markets today where customers are driving vehicles today. And these stations provide hydrogen produced in several different ways. For example, produced from electrolysis using solar power at the Emeryville station, on-site reforming of natural gas at the Newport Beach station, from a pipeline at the Torrance station, and from wastewater digester gas at the Fountain Valley station. We have many more hydrogen stations --

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MS. DUNWOODY: -- in various stakes of commissioning, construction, or planning. As I mentioned, we expect about 20 stations will be operating in California by the end of 2013.

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MS. DUNWOODY: So over twelve years of deploying vehicles in stations, we've learned a few things about how and when people want to fuel.

First, we know that people will not buy or lease cars until they see that stations are available. This should end the chicken and egg conversation. We know stations have to come forward.

Thanks to work by U.C. Davis, as well as the auto makers' own market information, we know that people tend to fill their cars near home and work. That's not enough. They also want to know they can get fuels in the places they like to visit -- destinations as we've come to call them. They know the station must be customer-friendly. We've got to be well-lit, open 24 hours a day, if possible, under a canopy, easy to operate and safe.

Thanks to modeling from U.C. Irvine, we know that six minutes is about the maximum time that people will travel to a station in order to consider it to be convenient within their cluster.

And all this combined research gives us a really good idea of where stations need to be launch the commercial market.

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MS. DUNWOODY: So to determine the number and location of stations in the clusters, the national research centers, one of our members, analyzed the clusters with their Street model. Street is a model that considers variables, including auto maker market data, travel time, travel route, existing gas station, and vehicle ownership density to determine the optimal locations for stations within a particular cluster.

And also connector and destination stations are an important part of the early commercial market. Before replacing a gasoline vehicle with a fuel cell electric vehicle, the first customers will really want to know they'll be able to get fuel when and where they need it.

So based on the clusters identified by the auto makers, U.C. Irvine identified 45 stations that would be needed in those clusters to give customers a convenient access to fuel. And we also identified the 23 connector and destination stations that based on people's travel patterns from those clusters and the OEM's marketing information, they determine they need to travel for weekends and other types of travel that they like to do.

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MS. DUNWOODY: So this is the map that we arrived at. It's in our document, the California road map. And it shows the optimal areas for the initial hydrogen station network in California. You'll see we've got a focus in Northern California, both the southern south Bay Area and Silicon Valley as well as the east bay. And in the Los Angeles area, three general areas: Orange County, the Torrance, beaches communities, and West L.A. and Santa Monica.

And if you remember previous presentations I've given you on our Action Plan, these will look very familiar to you. These are the same cluster locations that have been identified for the past couple years as the early markets for the auto makers for fuel cell vehicles. But what we've done with the road map is expand this out to fully explore how many stations are needed to get to that full commercial launch.

This network that's been identified will provide the first 20,000 fuel cell vehicle customers in the six urban areas, with two to three stations each. And it will also adds, of course, those connector station. And those connectors can seed the next clusters of new markets. It also provides stations in population destination locations like Lake Tahoe and Santa Barbara.

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MS. DUNWOODY: So thanks to the State of California's funding, both originally from the Air Resource Board and now continuing through the California Energy Commission, as well as local governments support from the South Coast and other local agencies, 37 of the needed stations are in some stage of operation, development, or are expected to be funded with already allocated funding. So this leaves a deficit of 31 stations that still need to be funded in order to reach the goal by January 2016.

A group of California Fuel Cell Partnership members are working to establish a hydrogen infrastructure trust that will provide additional funding to achieve two goals. First, to ensure that we can build out an entire network, as well as keep stations open as the vehicle volumes grow.

So each new station that comes along may take some business away from an existing station in the short term. And as vehicles grow, it will take some time to build the through-put at each station so operators can realize a profit from selling hydrogen. We don't want operators to get discouraged. So it's really important there is some operating and maintenance costs built into this network of some support.

So we analyzed the cost to do this and determined additional incentives of $65 million are needed beyond what's already been allocated. And that analysis was done in conjunction with Energy Independence Now, one of our members, and as well as experts in the fuel marketing and retailing business.

We looked at cost from a business's perspective and analyzed how station owners make investments and operate their equipment today. We looked at their cash flow potential from a hydrogen station to determine what kind of incentives would be needed to encourage them to invest in hydrogen. That's how we arrived at this result.

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MS. DUNWOODY: So 68 stations in California will provide the coverage needed to launch a new vehicle market. It's very important that this number is not defined by the total capacity of fuel needed to fuel the vehicles on the road. Some stations will be used more than others, but they're all needed to give customers confidence in the fueling network.

Knowing that those stations are coming, the 68 stations provide the auto makers the confidence to launch volume production of vehicles. It gives the customers the confidence to purchase those vehicles, and it gives other businesses, the station providers, equipment suppliers, fuel providers, the confidence to invest in this technology so the market can begin to grow based on normal business planning and investment mechanisms.

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MS. DUNWOODY: So in conclusion, to implement the road map that we've established, the partnership members are working to gain commitment for that funding and to develop the framework to support the 68 station network.

This network is needed to achieve Governor Brown's Executive Order milestone of making California communities ZEV-ready, including fuel cell vehicle ready by 2015.

And our organization's work is in line with the ZEV Action Plan. We're working closely with the State agencies to implement that plan.

We're also working with communities, businesses, and the public to get them ready for hydrogen stations and fuel cell electric vehicles. As just an example of the kind of work we do, we've been training first responders since day one when we brought hydrogen vehicles to the state. And last year alone, we trained over 800 first responders and permitting officials in California communities and will continue to do that.

We're also focused on implementing stations in a timely manner, ensuring they perform to consumer and auto makers expectations and helping businesses get on a path to making hydrogen a profitable enterprise that will one day no longer require government support.

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MS. DUNWOODY: So with that, I'd like to thank you for your time. And be glad to answer questions after we are done with the presentations.

CHAIRPERSON NICHOLS: Thank you. I think we'll finish up with our Energy Commission presentation and then sort of go to more general discussion. They do all work together.

Welcome.

MR. PEREZ: Good morning, Chair and honorable Board members. My name is Pat Perez. I'm the Deputy Director for the Energy Commission's Fuels and Transportation Division. And want to let you know I'm very excited to be up here at the dias today with my partners Catherine, Diane, and Analisa, an excellent team to be working with over the years. And we have benefited tremendously from their input, guidance, and support as we move forward with developing the infrastructure necessary to accommodate the expanded number of vehicle choices that are coming out over the next several years.

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MR. PEREZ: One of the things I just kind of wanted to quickly summarize, sometimes we forget why we're even doing this work. And one of the things under the AB 118 program is we are working with you to transform California's transportation energy market and reduce California's dependance on petroleum, while also reducing greenhouse gas emissions and criteria pollutants as we move forward in supporting the State's climate change policies, but also creating jobs and attracting private investment, which are critical components of that program that we're managing over at the Energy Commission.

We're halfway through this program. Nearly a million dollars of public investment that is leveraging tremendous private capital to California.

And as I noted, we have very excited to be supporting the large and rapid deployment of ZEVs throughout our state, not only over the next 20 years, but beyond that. And I now look forward to sharing with you some of the investments we've made to date and more importantly where we're going with this critical seed funding.

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MR. PEREZ: This chart kind of outlines for you over the fiscal years just the broad cross section of significant public investments made to date with respect to electric vehicle and hydrogen fuel cell vehicles and the manufacturing facilities here in California to build the components for these vehicles and the infrastructure to support the rapid deployment of these vehicles.

And we were also -- California was the recipient of significant American Recovery and Reinvestment Act dollars for both vehicles and infrastructure. And we put that money to good use throughout California with projects such as Ecotality, South Coast Air Quality Management District, as well as SMUD here in Sacramento to make critical investments, which also leveraged more than two times the amount of public dollars that were put into these projects.

So this just kind of gives you kind of a quick overview of those investments since fiscal year 08-10 right up to present. And as you can see, they're pretty substantial public investments. But what is not showing here are the significant private dollars that this funding has attracted.

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MR. PEREZ: The next slide -- and Catherine has done a great job of covering the hydrogen infrastructure. But through our funding, we provided 18.7 million for twelve hydrogen stations throughout the state ranging from stations with Linde and Air Products to the Airport Commission's project down in San Francisco, AC Transit.

We have 11 stations with Linde Air Products and AC Transit moving forward.

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MR. PEREZ: We also have a draft hydrogen solicitation, which was recently posted competitive solicitation to get some of the best proposals we can possibly entertain before the Energy Commission. And the closing deadline for that draft solicitation ended earlier this vehicle. We have received a large number of comments on that. And my staff and I are currently sorting through those comments before we release the final hydrogen solicitation, which will include up to $29.7 million, which will support another 15 to 20 stations.

So what we decided to do is issue a draft solicitation to get more public input before we send out the final, and we hope to send that out here shortly. So we are very excited about that as we move forward.

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MR. PEREZ: With respect to PEV infrastructure, what we have here are the executed agreements that we have in place totaling nearly $16 million. And as you can see from the slide, roughly 3,000 charging points have been installed to date, with another 2000 planned. This is strictly with the AB 118 funding. As Diane illustrated in her presentation, some of those numbers are higher and different. And that's because she's including other non-AB 118 projects in the total.

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MR. PEREZ: And then on August 16th, the Energy Commission made a series of additional awards for PEV infrastructure ranging from fast charge, residential workplace, and fleet. And this table shows another $4.6 million of investments has recently been made. We will be working with our recipients to finalize those agreements over the next several months and look forward to seeing that infrastructure constructed quickly to accommodate the many vehicles that are coming on line.

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MR. PEREZ: Also wanted to share with you some of the other ZEV-related investments that we're making throughout California. As Diane mentioned earlier about the regional readiness plans and how critical and important those are, we are providing $200,000 grants to regional governments throughout California to assist them with developing strategic plans, assisting them with this new charging infrastructure, and establishing best practices to assess and evaluate how we can expedite permitting at the local level and greater acceptance for electric vehicle infrastructure to accommodate our expanding fleets of electric vehicles.

And the other thing that we've been -- we're looking at all sectors here, including some of the pre-commercial medium and heavy-duty bus and truck demonstrations. We've committed $10 million there, covering a range of battery electric medium-duty trucks, electric shuttle buses, battery electric transit buses, drayage trucks so critical for our ports, fuel cell buses.

And the one big component that I think is going to pay dividends for the State for many years is the manufacturing component as we attract companies to California to build the components. These provide great jobs throughout the state in some of our areas that are suffering high unemployment right now. And we're very excited about this component of the AB 118 program where we have a great deal of interest. So see a lot of retention of jobs as well as the creation of additional jobs supporting our movement towards more hydrogen fuel as well as electric vehicles throughout the state.

And then finally with some of the other activities here, as I noted, the hydrogen infrastructure solicitation, we're taking the comments right now to issue that shortly. Hope to get that out soon as we evaluate and incorporate the great comments that we've received to date.

And then also we'll be issuing a plug-in electric vehicle infrastructure solicitation. We are also expanding our regional planning grants that go beyond electric vehicles throughout the state to benefit some of the other alternative fueled vehicles. And we've also established in conjunction with our AB 118 Advisory Group and from input that we've heard from stakeholders and particularly local governments the establishment of centers for alternative fuels and advanced vehicle technologies, we feel is very important.

And finally, medium- and heavy-duty vehicle technology demonstrations, setting aside more money there that will benefit hydrogen as well as electrical vehicles and other alternative fuel vehicles.

So with that, that concludes my remarks. Thank you for your patience.

CHAIRPERSON NICHOLS: Thank you very much. And thanks for your partnership, the Energy Commission's partnership in these issues. Between 118 leadership and our programs, we've been able to accomplish a lot matching up these very different kind of authorities that we have.

But I think it's obvious from these presentations that there is a lot of work that remains to be done to really create the kind of infrastructure that's going to be needed. And they're interesting and important questions that have to be asked and answered by governments at the local and state level about how best to do it. So I think it would be good to have a little bit of conversation about that.

I see one hand up here right now. So Mayor Loveridge.

BOARD MEMBER LOVERIDGE: Agree with Mary Nichols context, but four questions.

I noticed on the slide seven when we are talking about State purchasing a certain number of vehicles and looks like we declared victory at the numbers. And the city of Riverside has said for non-public safety vehicles 100 percent alternative fuels is our goal. But it seems to me that 10 percent, 25 percent are given -- are aspirations to the State, I see those as low numbers. I guess you celebrated them, but why aren't they higher?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Let me take a shot at this. Tom Cackette.

One of the reasons the total vehicles the State buys have a great variety. We don't have battery electric vehicles, for example, in the larger share of battery electric options here. So in terms of electric drive vehicles, they're mainly in the passenger car area. If you're buying vehicles to go around and read meters or to do local types of things, there's better supply than there is if you have to buy trucks and SUV. The hydrogen vehicles in that category are not yet available. That's one of the reasons the targets are somewhat lower.

BOARD MEMBER LOVERIDGE: Tom, so related to that, conversation really been in the private marketplace. There is a lot of public -- a lot of vehicles in cities and counties and special districts, whole variety of not individual consumers. What we doing about that? It's a pretty big marketplace. What are we doing about the -- for lack of a better word -- the public fleets?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: Well, one -- I mean, first of all, the vehicles are being provided commercially, in the case of electric vehicles, by the auto manufacturers. And I think they'll sell to anybody who wants to buy them.

BOARD MEMBER LOVERIDGE: I understand that.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: So if a city wants to buy 100 percent of a certain type of vehicle use, they can do that now.

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: I think I can add to that, too. This is Analisa Bevan.

When the State establishes contracts for the purchase of a vehicle, they create a bid list that can be used by State and county -- local and county jurisdictions. So once we go out for a competitive bid to establish a contract list of electric vehicles, plug-in hybrids, fuel cells, that pre-negotiated purchase price or lease price is available to the locals.

That's part of the Department of General Services plan to implement this electric -- ZEV purchase requirement is to establish those bid lists.

BOARD MEMBER LOVERIDGE: One other obvious observation there is clearly a coastal strategy for hydrogen. But there is people that live in the inland areas. As you look up and down the valley in the inland areas, there haven't much seeming interest in the charts. Can you comment on -- seems to me EV is not simply for the IS/ES. It should be increasingly judged as something that as available in the general consumer.

MS. DUNWOODY: This is Catherine Dunwoody.

I'd like to point out the maps you see in this are regarding market launch. The auto makers have identified where they think they'll find the first customers to launch this new technology. Clearly, very quickly after the 2015 to 2017 time frame, there will be broad deployment.

In fact, I often hear the auto makers say at a certain point they really -- it kind of gets away from them. Like, they can't necessarily plan any more exactly where they're going to be selling the cars from. They can get demand from all over. Very quickly after we establish this early network, the market will be able to grow more organically from there in the areas that demand those vehicles.

CHAIRPERSON NICHOLS: Go ahead.

BOARD MEMBER LOVERIDGE: A quick question. In terms of the market, in terms of the projections you had for the sale of EVs, are we on target with the projections that were made initially?

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Relative to the zero-emission vehicle regulation, we're well ahead of those projections for this time frame.

CHAIRPERSON NICHOLS: That doesn't mean the sales are what they were projected as early on. There's been a lot of stories indicating this year the sales have not been as high as they'd been originally hoped for or projected.

DeeDee and then Ron.

BOARD MEMBER D'ADAMO: Just wanted to follow up on a couple of points made by Mayor Loveridge.

With respect to the deployment of stations, it would be my hope that not just looking at placing them in the Inland Empire region in the valley in order to gain access in those areas, but also especially in the Valley to connect north to south. With all the truck and vehicle traffic we have going through the valley, it sure would be nice to find a couple key points where we can do fast charge.

And then with respect to local governments, I think that, if I understand, some of the grants from the Energy Commission are to provide assistance to local governments in terms of coming up with a strategy.

I'll just say that, in my own experience, I've noticed that where there seems to be an interest, local governments really could use the technical assistance in terms of how to put together a program and wondering also if there is anything that we can do through CSAC, League of Cities, your leadership to try to get similar resolutions adopted -- I don't know by individual cities -- but maybe something system-wide like U.C. Sac or the League.

BOARD MEMBER LOVERIDGE: Could I just pick up that?

I think connecting with cities and counties would be a good thing. We're working very hard as our own city to be EV friendly. We actually have a $2500 incentive, you buy a plug-in or EV. Worked very hard on the permitting process. We have consultants helping out. We have show and tell efforts. We're giving special incentives for apartment owners to put in -- I mean, cities are doing what we can.

And I think cities and counties can be partners in this. And just to pick up, you haven't mentioned us. We heard about the State, but cities and counties are out there, too.

MS. WITTENBERG: This is Diane Wittenberg from the Plug-In Vehicle Collaborative.

I thought when I talked about local governments I had talked enough about our collaboration with the cities and regions, because it's quite effective, especially through the Clean Cities Coalitions, of which there are 16 in the state.

The 200 fast chargers that NRG has committed to through its PUC settlement, which will be largely throughout PG&E and Edison and SDG&E territories are largely a freeway corridor strategy. So it should be throughout the state, although I would certainly encourage you to talk directly to NRG to encourage them to place them as widely as possible.

And we are working with the resolution. SCAG just asked us, the collaborative, to put together a resolution that they are helping disseminate throughout the South Coast and about being PEV ready with the local government. And we'd like to extend that to communities throughout the state. So I think that was a cautionary note for us, and you'll be hearing from me more.

CHAIRPERSON NICHOLS: Pat, did you want to spend?

MR. PEREZ: Thank you, Madam.

I wanted to just kind of point out these regional planning grants that we provided to assist regional governments, pleased to say that we've covered most of the state now. I believe we're up to ten agreements. That includes the San Joaquin Valley, the Imperial Valley.

And among those agreements, quite a few counties and cities are a part of those. It's quite an array of participants. Even though those maps didn't show a lot of that infrastructure in those regions, we're working very closely. And we will provide technical assistance. We're actually going to be updating our website on the AB 118 program to provide better practices and more information for local governments.

CHAIRPERSON NICHOLS: I might also speak on behalf of an agency that isn't represented here. But I know that the Governor's Office of Planning and Research, which works primarily with the land use agencies, has done at least one conference and is looking at ways that they can help disseminate some of the kind of technical support that the mayor is talking about.

Frankly, I don't think the State ever has done as good a job as it could at working with local governments. I mean, we talk about it. And we have various things that we do, but I'm not sure that we reach as far or as effectively as we could. And I think we could use some help in figuring out what would be the most effective ways to actually be of assistance to the entities that probably do have a lot more direct opportunities to effect where infrastructure goes and how quickly it gets deployed and how cost effectively it's done when the state itself does actually.

Other comments down here?

Yes, Ms. Berg.

BOARD MEMBER BERG: Thank you so much for the time and the effort that you came to give us this update.

I really have a keen interest in the electrical, because I'm a Leaf owner, and it has become my primary car. So it's been really interesting and actually somewhat fun trying to figure out how to keep pushing that range.

But one of the things that I've learned over a year I've been driving the car is that there is I think lessons learned with the infrastructure and the type of infrastructure. And I was hoping maybe you could speak a little bit about what we're learning and how we might be spending our dollars differently in order to accommodate really the patterns and the uses of what we find.

For example, it's really interesting to me when you go to the airports and see the 220 chargers. There probably isn't a car that's there for less than eight hours, if they fly out in the morning and come back. And those that come and charge while they're waiting for somebody, Wouldn't be putting in chargers for that subset group. And yet, we keep seeing more 220 chargers rather than 110. And I'm interested in what your thoughts are.

MS. WITTENBERG: I think that's -- you put your finger on a major lesson that's been learned in the last year or so. Specifically, the airport people are saying what are we putting 220 in for? Why not 110? I think they're moving that way, at least their discussions.

Certainly for workplace charging, that's been a new way of the workplace discussion. Well, they don't need that much charging if it's topping off and we can accommodate a lot more cars. It's starting to move more into a volume discussion, which you lower costs more. It's not just a pilot of one or two 220 chargers. I would say that the 110 charging discussion is growing every day.

BOARD MEMBER BERG: And Pat, maybe you could comment on how do we then look at these lessons learned and then allocate the money in a way to make sure that we're spending it for the most bang for the buck.

DR. VELASCO: Thank you for that question.

And certainly I was involved in part of that initial infrastructure back in the '90s. I think looking back on the past experiences and one of the key lessons learned is is that you have to have a strong public private/partnership. And you really have to have skin in the game. You can't just be slowly public dollars on this investment. And that is one of the reasons why in many of the competitive solicitations we have at the Energy Commission today we have a 30 to 50 percent matching share. That's less likely that a private company is going to walk away from a joint partnership when they have significant capital invested in these projects. I think that's one of the big lessons learned.

And certainly I think we've all gotten better. We have new tools that are available that did not exist back in the early '90s, the great work being done at U.C. Irvine, as well as U.C. Davis with Mr. Sperling's institute and the others. We've come a long way, our knowledge base. There are stronger partnerships in place today that didn't necessarily exist in the past. Got environmental organizations, the workforce, labor, parties all at the table, which I don't recall that being the case back in the early '90s. I think we benefit from that dialogue and bringing in many more diverse stakeholders to the table.

BOARD MEMBER BERG: My last question -- oh, do you have something?

CHAIRPERSON NICHOLS: No. No. No. I was just going to say we're beginning to get more people coming in because we had indicated 11:00 was about the time we're going to start the next item. We don't have to do it right then, but --

BOARD MEMBER BERG: I'll ask one last quick question.

Another observation that I have is that with our growing infrastructure -- and we don't have enough -- and the fact that there is the very successful sales of the plug-in, it will be interesting. And I don't know how you address this, Diane, but it's really frustrating as a pure EV driver when you come in and you know that you need that plug in order to make it to the next location and there's cars that are -- being used by cars that have ten miles of electricity.

And so it's really going to be interesting to see how the behavior and what becomes acceptable when you have limited charging and a car is apparently finished charging and moving these plugs around. And I don't know what your organization is doing to kind of promote some kind of customer behaviors, acceptable customer behaviors.

CHAIRPERSON NICHOLS: Is it acceptable to pull out somebody's plug and put it in your own vehicle?

BOARD MEMBER BERG: I've actually left notes on people's cars -- it's interesting -- with my e-mail address saying, "How do you feel about this?" I've never had anybody e-mail me yet. But I'm really interested in kind of the etiquette if you will. What is the etiquette of EV driving?

So with that, Madam Chairman, thank you.

CHAIRPERSON NICHOLS: Do you have a response on that?

MS. WITTENBERG: There's three points to make. I mean, one is signage issue. Last year in the Legislature and continuing in the whole community is the question is it EV parking or EV charging? What is that space for?

And then secondly, the way you configure the parking, because even if it's polite to unplug somebody and plug yourself in, it's not always possible. In other words, you don't have an octopus type charging setup or a place where you can physically be next to the plug. That needs to be addressed as new chargers are put in.

And the third place is in the absence of official action like this, EV drivers are pretty good. CARB being a very good example that all the EV drivers who park across the street, they have an e-mail list serve. They e-mail one another. "Hey, I didn't get in to get a charge. They were all filled. Is anybody leaving about 11:30?" These informal at workplaces networks of just being polite to one another and sharing has really sprung up quite a bit. It's not good enough, but it's a nice start.

CHAIRPERSON NICHOLS: Mr. De La Torre, you had your hand up.

BOARD MEMBER DE LA TORRE: I went to visit the Fuel Cell Partnership a couple months back. And one of the conversations that we had was that there has been -- it gets back to this local government issue -- a very inconsistent experience in terms of permitting/licensing and the facilities in some of these place. Places that you would think would be more sophisticated are not. And places that you would think would be a little suspicious of something as different as hydrogen fueling are good about going through that permitting process.

So the conversation that we had was about setting up best practices in the area of the local land use rules for that town, such that we can speed up the locating of these various fueling stations. Has there been any progress on those best practices that could be made available to the League of California Cities and others? And then also the prospective owners of these facilities so they can go and say, look, this is what it looks like when it's done right and quick. So that it isn't just dragging through bureaucracy at the local level.

MS. DUNWOODY: I'm glad to respond to that.

There is quite a bit of work with best practices with permitting through the Department of Energy. And we've partnered with them on those codes and standards and explaining them to local officials through permitting workshops that we participate in with them.

But you're right; it is really variable from locale to locale. What we found is that the most important step is to be in the community early to talk with the local officials and key champions within the community, because we often find that just ensuring that people understand the technology and understand the benefits of it will help them speed the process. And it is really a community by community effort. The majority of our outreach activities focus on those early market communities. And so we are getting progress in that area.

BOARD MEMBER DE LA TORRE: Because it is not a statewide issue, just judging by the maps, you can really target it at the Council of Governments level for the Bay Area, for southern California, and go to them and see if they would be your Clearinghouse for these regs for the land use ordinances, whatever they need, and see if they could be the ones who make it available to their members and try to get them all at once, instead of this piecemeal approach.

I think there is a way of speeding it up and making it more prevalent out there so that when someone does come along, the regs are already there for them to get there up, somebody up and running.

MS. DUNWOODY: Absolutely.

CHAIRPERSON NICHOLS: Well, there is a lot of interest on this item on the part of our Board as you can tell. I've been advised I've been spending too much time looking in that direction and not looking in this direction. So I'd like to call on Supervisor Roberts, who represents an area that is at the forefront of electric vehicle infrastructure.

BOARD MEMBER ROBERTS: You know, this is so important in San Diego we named our football team after this.

I think we're putting our finger on something that is a major problem that hasn't been acknowledged, and that's the time it takes to recharge a car.

There is an article in the Wall Street Journal today that talks about precisely this. In California, we put out the very, very few of the quick charge units and relying more on the slow charge units. And I know to try to manage that, especially if you're an employer, you have to move cars -- one parking space can't -- every parking space is not going to have a charger. And there may not be a charger so that everybody who has an electric car is going to have a parking space with the charger. The key is going to be to move these around.

And it seems to me a lot of that relies on much faster charging times that are supported by the infrastructure we're putting in. If the gas stations were dependent on us driving and spending two hours to fill up our tanks, I think the business model would change pretty quickly.

And yet, we're investing in a lot of infrastructure here that seems to me to be almost obsolete. And it's part of the problem, how do you move cars? You know, if you have to leave it there -- I mean, we try to figure out how are we going to manage even our own parking structure so we can impose rules, so to speak, on employees. How are you going to manage turning those spaces around so that others can get use out of what is relatively expensive equipment that you put in.

So I'm not sure what the answer to that is. But clearly more of the quick charge units that we seem to have very, very few of in California and compared to the number of other units. Even compared to other places, which surprised me. I'm just relying on what I read in the Wall Street Journal this morning.

The other thing that was not clear to me -- I'm not sure what happens in 2017. All of a sudden, these flat sales start to accelerate in your first early chart that you showed.

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: That's reflective of our expectations of the requirement -- zero-emission vehicle requirement. When we came back to the Board in January, our regulation had taken you to those flat levels in 2017. And what we did in January was start ramping up the requirements from 2017 to 2025.

BOARD MEMBER ROBERTS: Don't you think the sales should be increasing between now and then?

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: We do. And those sale are generating credits, which the manufacturing are banking. And that will soften their -- and give them flexibility in leading into that rapid requirement increase in 2018.

BOARD MEMBER ROBERTS: Okay. So you you're not really expecting it's going to stay flat?

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: No. Those don't represent sales expectations so much as they represent the requirement

Expectation.

BOARD MEMBER ROBERTS: These charts are requirements?

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Yes. They're the minimum floor, is one way to look at it.

BOARD MEMBER ROBERTS: Okay. I'm misinterpreting your chart. I thought these were projections. These are requirements.

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Yes.

CHAIRPERSON NICHOLS: Okay.

BOARD MEMBER ROBERTS: They're not even sales.

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Yeah --

BOARD MEMBER ROBERTS: Somebody has to build these and hopefully somebody is going to come.

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Yeah.

CHAIRPERSON NICHOLS: Supervisor Yeager and then Dr. Sherriffs.

BOARD MEMBER YEAGER: Yes, very briefly back to local government. I do appreciate the material that you gave us what the collaborative is doing. And there is the toolkit for community plug-in electric vehicle readiness and giving a full review of the standards and codes and all that.

But my question was: Do we know of municipalities that are requiring these plug-in stations with new development? It seems like that would be the time to catch it. Certainly, in the Bay Area, we're lucky that housing starts are beginning again and more construction. So I'm just hoping that this would be the perfect opportunity rather than going back and having incentives for retrofits to put it in as a requirement with construction.

MS. WITTENBERG: There has been talk of that at many local communities. I don't know if anybody has --

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: There are several communities that do require at least the installation of raceway or conduit for electric vehicle charging. Davis is one of them. I know that because I live there.

BOARD MEMBER YEAGER: It seems --

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: There are for home.

BOARD MEMBER YEAGER: It just seems like that's a direction to head because it's certainly a lot easier to put it in when you're constructing rather than retrofitting.

MS. WITTENBERG: My staff has says L.A. County also has that as a requirement.

BOARD MEMBER YEAGER: I'm going to try to get Santa Clara County to be one of them on your list.

With the plug-ins at supermarkets and stores, I guess part of it that gets complicated, you would have the handicap parking and then the plug-in. And then your customers are further and further away. And it could be a little bit of an annoyance to see these empty parking spots and you have to walk. I think it's something else that a store has to consider. And maybe there is a way to have them as part of it. And as there's greater use, then you can merge them into the charging stations.

Then my last question is -- I had gone out and toured the Emeryville hydroplant and facility. It's so safe and wonderful. And nothing could ever possibly happen. And then, of course, there was the leak and fire and the whole area evacuated and nobody could fuel up.

I'm wondering about safety. And if there is a concern of someone that either they don't want them in the neighborhood or dealing with first responders because I just felt sorry for all the people who needed to fuel up that day and, yet, you couldn't get miles to it because of the accident that happened.

MS. DUNWOODY: I'm going to briefly comment. And

Analisa may want to add because she's more closely involved in that.

I think it points to a learning of needing to have the community well educated and prepared for this. Despite all of our extensive efforts on training first responders, if the people who actually show up at an incident happen to be the one that wasn't trained, then, of course, that can be a concern.

But in that incident, what I would say is we've learned quite a bit from that. And I know Linde and AC Transit have been working very hard together to get that station back open and working with the local communities to make that happen. I think Analisa has more to say on that.

SUSTAINABLE TRANSPORTATION TECHNOLOGY BRANCH CHIEF BEVAN: Sure. We worked very closely with AC Transit, Linde, and our partners on that incident. And we learned -- and all of the partners have learned some very key items, as Catherine pointed out, making sure that every emergency responder is trained and up to date on procedures in that incident. The command officer was not trained. So his reaction was very conservative, but not necessarily what a trained incident commander would have done.

AC Transit learned a lot about their

communications protocols from that day, that can apply not just to a hydrogen station, but any sort of incidental incident which might take place with one of their transit bus yards. And they're implementing changes to their emergency communication process as a result.

The station -- it's important to note -- responded technically exactly as it should have. The emergency release valve failed. There was a release of hydrogen, which ignited. But there were no injuries, no property damage, apart from some bubbling paint on an overhang that was too close to the exhaust pipe. And everything else about the station was isolated and remains safe through the entire incident. So apart from changes to the communications protocols, everything operated as it would have and nobody was in danger.

BOARD MEMBER YEAGER: Thank you.

CHAIRPERSON NICHOLS: Diane, yeah.

MS. WITTENBERG: Thank you. I was just going to respond to your parking in a public parking lot.

Plug-in America, which is the biggest consumer-based EV drivers group, they say their position is they would prefer to have these parking lot chargers further out, because they get, as they say, highest internal combustion engine cars park in the more preferable parking spaces. They said, "We would rather have them further out in the field so we actually can charge when we get there." So there is conflicting ideas.

And in terms of fast charging -- Supervisor Roberts isn't here -- only some Leafs have fast charge capability. And most of the other cars are not capable of fast charging yet, which is another reason that the fast charge installations have gone more slowly because the standards aren't finalized.

CHAIRPERSON NICHOLS: Okay. Dr. Sherriffs, another EV driver.

BOARD MEMBER SHERRIFFS: Another happy all-electric driver.

A slightly different question. It seems clear that the future of transportation is multiple fuels, different fuels. And I'm wondering what discussions there may have been, whether there is interest in people who have gas stations becoming once again service stations, providing this multiplicity of fuels and what discussions there have been and interest in that.

MS. DUNWOODY: I'll start off by stating that the stations that are being deployed today that are in the process of commissioning and planning and being funded today are located for the most part at regular retail fueling stations. So we are seeing a significant interest from the owners and operators of those stations to add new fuels, because they see that over time their business will be declining for gasoline due the rising fuel economy and people driving economic vehicles. And they're interested in new products that will bring people to the station, bring people to the mini-mart and the car washes and also of course the maintain our fuel sales.

MS. WITTENBERG: And there's been some interest from gas station owners in putting in fast charge for electricity as well.

CHAIRPERSON NICHOLS: I might give a shout out to one company that I know moved to do to California to do multiple fuel that's taken over old gas stations and refurbished them. They still serve gasoline, but also serve other fuels as well. They're serving biofuels and whatever there's a market for basically in collocations. And just trying to make them as attractive as possible and to give customers as much information as possible.

I attended an opening of one of their stations along with an Energy Commissioner down in Orange County, a company -- I've forgotten the name -- Propel. There may be others trying to follow that same approach as well.

I'm going to give Dr. Sperling, our resident U.C. Davis prof here, the last word on this topic. Since he basically makes his living working in this field, he's going to give some closing comments.

BOARD MEMBER SPERLING: So just a few thoughts, kind of pulling this together.

I think what we've heard here, this is a tremendously complex process, transitioning to new technologies and new fuels, includes governments, companies, universities, consumers, governments at different levels. I mean, we even get into etiquette here, so that tells you how complex we're getting with this process.

But you know, I think what we've heard here is that tremendous effort at working together. The PEV Collaborative and the California Fuel Cell Partnership, they're international leaders in bringing the different parties together and thinking through these issues and coming up with resolutions and ideas and getting people to talk to each other and organizations to work together. So I think, you know, we really need to appreciate and compliment them for that leadership.

And it does point out -- I would point out that most of the money for this to happen is going to be private. It's industry business. It's not government. So while government plays an important role in helping kick-start the process, but it's really industry. So we need to keep that in mind when we think about R&D, investment in facilities, and so on.

And the closing thought is that California really is leading. And I think that's going to bring a lot of angst, but also going to bring a lot of benefits to California, economic benefits, as well as environmental benefits. And I think we're making good progress.

It's not going to be easy. We've heard -- everyone has ideas of how to make this work better, and that's great. And that's how it is moving forward.

So thanks to -- and having the Energy Commission here represent the State agencies are working together, the PUC as well, not here but has played key role in this. And local governments are playing an increasingly important role. So it's really a great story, but it's just the beginning of the story.

CHAIRPERSON NICHOLS: Thanks.

Before we take a five-minute break, I want to say two things.

First of all, we do allow public comment on items even when we're not taking action on them, as the next item will indicate. And there is one person who indicated he wanted to speak on this item. So Tim Carmichael, give us the plug for natural gas vehicles.

MR. CARMICHAEL: Thank you very much.

I think this is excellent that the Board is getting briefings like this.

I would just also note that there is a lot going on in the natural gas transportation world. And I think it would be good for the Board to get a similar briefing what's going on there. And I would encourage you to try to schedule something like that in the near term.

CHAIRPERSON NICHOLS: Thanks, Tim.

We do intend to do more of this. This is a first step though I think in bringing everybody up to speed on in what's going on in two partnerships that we're active members of.

So with that, we're going to take a five-minute break just for stretches and other personal comfort items. And we will return at 11:15.

My plan is that the staff will move briskly through the presentation update. We'll begin public testimony and get as far as we can before a lunch break. We will take a lunch break somewhere in the 12:30 to 1:00 time frame. It will be brief because the Board doesn't have an executive session. But we do like to give people an opportunity to have a little food and water in the middle of the day. And then we'll be back and we'll carry on through the afternoon with hearing from people who have come to talk to us.

So with that, we'll adjourn and we'll be back starting at 12:15. Thanks.

(Whereupon a recess was taken.)

CHAIRPERSON NICHOLS: We're now going to turn to the AB 32 update. This is an opportunity for the Board to be briefed on the status of cap and trade regulation that was adopted back in 2009. We've had updates in the past, but this one is moving us further along in the direction of the full implementation.

After the staff finishes their presentation, we will begin public testimony. I see that we have, at this point, 66 witnesses who have signed up to speak. I'm going to ask everybody who is around and thinks they might want to speak and hasn't signed up to sign up before noon just so we can have some idea of how long we're going to need to be here. But we've set aside at least four hours for this. So I expect we'll be able to hear from most, if not all, of you.

As I said at the beginning, three minutes per speaker. We're going to be posting the list. So I think those of you who were here earlier have seen how that works, and it works pretty efficiently.

Before the Board adjourns today, I expect that we will be considering and voting on some kind of a resolution that gives further direction to the staff on various items that are included in the presentation today. But as I indicated, there are no items to be voted on in terms of actual changes to the regulations.

I want to take a couple of minutes, though. I don't always do this, but I think in light of the public interest in this particular item, it's worth taking a little bit of time to kind of set the context for what we're doing here.

So just to take us all back here, AB 32 was passed in 2006 and signed by Governor Schwarzenegger. The Board adopted a Scoping Plan, which included a reference a market program in 2008. And leading up to that point, the Board had adopted a number of early action measures. Since that time, as I think everybody knows, we have begun to implement every single one of the measures that were called on in the Scoping Plan. And we are clearly on track to meet the goal, which was to get to 1990 emissions by 2020 as a legal target, and then the goal of getting to a reduction of about 80 percent over business as usual by 2050.

Among the measures that the Board has adopted and implementing, as you heard earlier today, the Advanced Clean Cars Program, which has now been enacted by a slightly different form by the Obama administration, the low-carbon fuel standard, the requirement for electric utilities to obtain 33 percent of their electricity from renewable energy sources, such as wind, solar and geothermal, the requirement for the largest industry to audit their emissions, a mandatory recycling requirement for large commercial facilities, and an array of specific measures targeting some of the chemicals with high global warming potential.

We've also adopted a cap -- declining cap on emissions from the largest industrial sources that will go into effect this January, which is to be followed by a further cap on emissions from fuels such as gasoline and natural gas in 2015.

While absolutely nothing about this program has been uncontroversial, there was an initiative that would have suspended the program that was on the ballot in 2010. And I think everybody knows that although the recession at that point was in its depths, the measure was rejected overwhelmingly by the voters.

And since that time, we have continued to work with those that have sponsored that initiative as well as others to try to bring them into a place where they could be in compliance with AB 32. This has been complicated by the fact that we hear repeatedly from the industrial sector that, while they support AB 32, there has not been a single measure that we've come up with so far at least that they have been in favor of.

It reminds me of what we hear at Board meetings when we're looking at rules for cleaning up air pollution. It's sort of the same deal. Everybody is against air pollution, but they just don't happen to like the particular regulation that effects them. And I think that's where we are now at this point with respect to global warming.

Certainly, the Cap and Trade Program is the most novel and the most controversial piece of our whole AB 32 program. And we've been hearing a lot in the last few weeks, in particular, in newspaper ads and articles and so forth that industry is opposed to the program or if they're not opposed to the program, at least they're opposed to having an auction where anybody would have to buy allowances.

Now, one of the things that I think is important to be clear about is that other than electric utilities who are subject to a different regulatory scheme, there is no requirement that any business participate in the auction. The companies that are subject to the rule will get allowances that cover about 90 percent of the greenhouse gases that they are currently emitting for the first years of the program. As time goes on and the cap declines, those who have cleaned up their emissions are going to have extra allowances they can sell. And others who need allowances to cover their operations will have to buy or purchase offsets either from companies that are inside the cap and have extras or from those who are outside the cap who have been able to create offsets by permanently reducing their emissions.

So we're going to hear a lot I think about why we don't need an auction, but it's somewhat surprising that at this point it's coming not from those who opposed it in the first place because they wanted regulation as opposed to a market that would have ordered every facility to emit an exactly -- told them exactly what their target was and specified how to do it. But it's coming from actually the same businesses. And in the beginning we're arguing for the largest possible market and now have decided that they're just not in favor of a market after all.

I just want to say that over the past five years, the Air Resources Board has met with, listened to, worked with, shaped our program in response to what we've heard from representatives of every single economic sector. And the approach that we came up with, which was to freely allocate 90 percent of the total amount of allowance that were going to be needed as a way of helping with the transition, was something that was created as a way of smoothing and easing the transition into this market.

The original proposal, as many people who remember, was actually for something closer to a

100 percent auction as a way to quickly start a market and establish the price of carbon.

I do want to say that I think that some form of an auction has been shown to be the most efficient and equitable way to create public information about what the actual value of a ton of carbon is and to create an incentive for those who can reduce it more cheaply than whatever the allowance price is, to invest it in technologies that will help them create more allowances that they can then sell into the system.

The system rewards those who are the most efficient, but it allows those who can't or don't want to reduce their emissions to keep on operating and to pass the cost of the allowances along to their customers.

But knowing the price of carbon allows every facility to make strategic business decisions. As I said, the idea that there would be an auction has been in place since the very beginning of AB 32. And the particular commitment to a ten percent auction has been in place since this rule was adopted in 2009 when we listened to the concerns of the business community and advice of the Governor and others that we should not go too rapidly to anything larger than a ten percent auction, but that at that level there would be small enough impact on the economy and consumers that it was worth it in order to get a meaningful market to emerge.

So that's what we've been working on for the past three years. We're coming up to the point where the very first auction is going to happen. And I think that people need to understand that a change to that basic policy decision would send its own signal of instability and uncertainty, not only to the markets, but also to the many companies who have invested here or moved here, as we were discussing earlier, in reliance on the opportunities that they saw in AB 32.

There is also a lot of arguments against providing 100 percent of the allowances for free, as the Europeans found out when they started their emissions trading system. It become a windfall for those companies who get them and don't need them.

There is also a question of fairness. AB 32 was designed to reduce California's greenhouse gas emissions in a manner that paves the way for a cleaner and more sustainable economy and also to provide benefits to those communities that are already suffering from air pollution. Easing this transition is one thing, but leaving the entire industrial sector outside the arena where every other member of our economy, every other member of our society from the forest products industry to municipal sewage treatment plants is investing and taking steps to reduce their emissions is not a viable option.

I think we've gone a long way toward making these regulations as simple and palatable as possible. But we're going to keep on working to improve them to make sure they're as efficient and fair and cost effective as possible. And we will keep on listening. And we will keep on working right up to the first auction. And after that, we'll take the information that we learn and incorporate that going forward as well.

But I think, at this point, we really do need the people in the industrial sector to join utilities and many others who have found a way to not only make this work for them, but to join us in helping to make this program work.

So with that, I'm going to turn it over to Mr. Goldstene to make the staff presentation.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

As you know, we've been working to ensure that the Cap and Trade Program gets up and running smoothly. The staff presentation today will consist of two parts and show that we're on track for the November auction.

First, staff will provide an update on progress in areas that the Board requested we follow up on at our October 2011 hearing. That discussion will include staff recommendations for fine-tuning the program next year.

Second, staff will provide an update on the status of the allowance tracking system and auction platform. This will include our efforts to work closely with stakeholders to ensure they are trained and familiarized with both systems in advance of the first auction. We also will be giving an update on market monitoring and the compliance offset program.

I'll introduce Mary Jane Combs and Ashley Dunn from our climate team who will provide the presentation. Ashley and Mary Jane.

(Thereupon an overhead presentation was presented as follows.)

AIR RESOURCES SUPERVISOR COOMBS: Thank you, Mr. Goldstene.

Good morning, Chairman Nichols and members of the Board.

This presentation will provide an update on the California cap on greenhouse gas emissions and market-based compliance mechanisms regulation, commonly referred to as the cap and trade regulation.

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AIR RESOURCES SUPERVISOR COOMBS: Today, we will provide an update of work to date on the Cap and Trade Program, followed by an update on the program status, which will include staff proposals to fine tune the regulation. After providing this program update, we will review our implementation activities.

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AIR RESOURCES SUPERVISOR COOMBS: The Cap and Trade regulation was originally adopted by the Board in October 2011. In Resolution 11-32, the Board directed staff to work with stakeholders to investigate issues and to consider potential improvements to the regulation. Since that time, staff has continued to work with stakeholders to address numerous issues. The first part of this presentation will focus on continuing work.

Clean-up amendments were adopted by the Board in June and took effect at the beginning of September. Also, in June, staff brought to the Board a preliminary proposal for linkage with Quebec. We will update the Board on our plan for linkage later in this presentation.

Starting on January 1st of this coming year, covered entities will be responsible for the greenhouse gases they emit. The second section of this presentation will discuss implementation of activities that will occur between now and this milestone.

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AIR RESOURCES SUPERVISOR COOMBS: Over the past several years, staff has worked with stakeholders, partner agencies, and advisory committees to ensure that the Cap and Trade regulation achieves our emissions reduction goals and treats all entities fairly. There are only a handful of remaining issues. And staff proposes relatively small adjustments to be considered in a regulatory process next year. We will start this section of the presentation by providing a progress report on areas the Board has asked us to follow up on. In some cases, staff is proposing specific actions and we are seeking Board direction on these proposals.

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AIR RESOURCES SUPERVISOR COOMBS: The Cap and Trade Program is designed to achieve lowest cost greenhouse gas emissions reductions. The program gives industry the flexibility to trade allowance with others or take steps to cost effectively reduce emissions at their own facilities.

The way we allocate allowances does not directly effect emissions reductions as total emissions are limited by the cap. However, the choice of how we distribute allowances can effect costs and industry competitiveness in important ways.

Initially, ARB has chosen to rely primarily on a method of free allocation that provides transition assistance to industry and prevents leakage. In addition, less than ten percent of the allowances will be auctioned at the outset. The auction facilitates price discovery and provides a signal of the actual abatement costs of firms. Auctions allow for transparency in the distribution of allowance value and protect customers from windfall profits that may occur if firms receive free allowances while fully passing through abatement costs in the form of higher prices. Auction proceeds can also be used to reduce the overall cost of AB 32.

The specific allocation mix aims to minimize the costs of emissions reductions while protecting California industry and minimizing leakage.

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AIR RESOURCES SUPERVISOR COOMBS: The Cap and Trade regulation's industry allocation is designed to reward early action to reduce greenhouse gas emissions and to ensure that California's industrial sectors maintain competitiveness.

The primary determinant for the amount of allocation that an entity receives are the sectors assistance factor, which includes both transition assistance and leakage prevention components and efficiency benchmarks.

ARB is working with experts to continue to evaluate leakage risk before allocation occurs for the second compliance period.

ARB is also working with experts to develop new and refine existing product benchmarks. It's important to note that assistance factors, which include both a leakage prevention and transition assistance component, are set at 100 percent for all sectors in the first compliance period.

We have discussed with stakeholders the idea of increasing transition assistance to sectors deemed medium and low risk of leakage. If an increase in assistant factors for these sectors is deemed appropriate, we would do so well in advance of the start of the second compliance period.

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AIR RESOURCES SUPERVISOR COOMBS: Some stakeholders have provided feedback that uncertainty about the resource shuffling provisions in the regulation has the potential to negatively affect energy markets and the reliability of electricity supply. In response to these concerns, ARB will not enforce the resource shuffling attestation requirement during the first 18 months of the program.

ARB staff and the Emissions Market Assessment Committee, or EMAC, are considering how to provide additional certainty in how we address electricity leakage risk.

The EMAC, which is made up of economists from California universities, will discuss resource shuffling and possible ideas for providing additional market certainty at a public meeting to be held next Monday, September 24th. Staff proposes to return to the Board in October with a recommendation for how we could provide greater certainty to electricity markets.

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AIR RESOURCES SUPERVISOR COOMBS: The Cap and Trade Program is designed to reward entities that have taken voluntary early actions to reduce greenhouse gas emissions. California's public and private universities have been leaders in such early actions. To ensure a smooth transition into the Cap and Trade Program, staff proposes to provide transition assistance to universities in a manner similar to the approach we have taken in the industrial sector.

University allocation would be based on electricity and thermal energy production, both of which would be benchmarked. Allocation would decline in proportion to the cap, similar to all other allocation schemes in the regulation. This change would require a regulatory amendment next year, which would be in effect before the start of the second compliance period.

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AIR RESOURCES SUPERVISOR COOMBS: Since 2010, ARB has been working with covered entities that cannot pass through program costs due to a lack of cost receive recovery mechanism and pre-AB 32 contracts. Though many parties have reached agreement about greenhouse gas cost responsibility, there are approximately 17 covered entities with pre-AB 32 contracts that have no such cost recovery mechanism. For these entities, staff proposes to allocate allowances based on production benchmarks.

Only entities that signed contracts prior to January 1st, 2007, and whose legacy contracts were not significantly amended after this date would be eligible for allocation. Allocation would only be for that portion of the legacy contracts without cost recovery. Allocation would end when the existing legacy contract ends or is significantly amended.

This proposal would require a regulatory amendment in 2013. Some of these legacy contracts fall under the jurisdiction of the California Public Utilities Commission. We will work with the PUC to ensure consistency in how legacy contracts are addressed.

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AIR RESOURCES SUPERVISOR COOMBS: ARB will ensure that proper incentives are in place for combined heat and power. Approximately ten facilities would fall below the

25,000 metric ton emissions threshold in the Cap and Trade regulation but for their installation of the efficient CHP systems. These CHP systems produce electricity and provide thermal energy to replace boiler output. Although overall efficiency has significantly increased, the emissions from CHP electricity production pushed these facilities over the emissions threshold for inclusion in the program.

Staff proposes that emissions from thermal energy produced by these facilities during the first compliance period would not have a compliance obligation. This would exempt these but for facilities from the Cap and Trade regulation. Because these steam emissions were included in the calculation of the cap, ARB would retire allowances in order to preserve the cap's environmental integrity. This staff proposal would require a regulatory amendment in 2013.

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AIR RESOURCES SUPERVISOR COOMBS: In Resolution 11-32, the Board directed staff to work with Cal Recycle to determine the most appropriate treatment of municipal waste under AB 32. This evaluation is ongoing. In the interim, staff proposes exempting the covered emissions of three existing municipal waste to energy facilities. Because these emissions were included in the calculation of the cap, ARB would retire allowances in order to preserve the caps' environmental integrity. This proposal would require a regulatory amendment in 2013.

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AIR RESOURCES SUPERVISOR COOMBS: ARB continues to work with other jurisdictions in the Western Climate Initiative for future linkage with California's Cap and Trade Program to expand both emissions reductions and markets for California's businesses. California continues to work with Quebec to harmonize our two Cap and Trade Programs.

ARB released a staff proposal for linkage in May 2012. Because budget trailer bill language was enacted that required the Governor to make findings before linkage can take place, the Board did not act on the proposed regulation. Quebec is proceeding with their linkage regulation, which we expect to be finalized later this fall.

ARB staff is preparing a request for findings which will be transmitted to the Governor's office this fall. Staff plans to report back to the Board after receiving the Governor's findings.

Now I will turn the presentation over to the Ashley Dunn.

AIR POLLUTION SPECIALIST DUNN: Thank you, Mary

Jane.

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AIR POLLUTION SPECIALIST DUNN: I'm going to discuss the implementation of the Cap and Trade regulation.

The systems ARB is putting in place to effectively administer and monitor the Cap and Trade Program include:

The compliance instrument tracking system service, or CITS. This system tracks all compliance instruments from issuance to retirement.

The auction platform. ARB has contracted for auction services with Market North America, Inc., to conduct all auctions and reserve sales.

The system for management of compliance offsets, including offset registration and the accreditation of verification bodies and verifiers.

The systems for market monitoring. ARB has contracted with Monitoring Analytics for market monitoring services.

I will also discuss the other implementation activities, including the allowance allocation process and the potential uses of auction proceeds.

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AIR POLLUTION SPECIALIST DUNN: The CITS will be used the track all compliance instruments, allowances, and offsets from issuance to retirement. Because CITS tracks all transactions, including purchases at auction, all auction participants must be registered in the CITS before they can participate in an auction.

For entities wishing to participate in the November auction, this means completing the user registration and account application process, including ARB approval in the CITS, prior to the October 15th close of the auction application period.

Likewise, all entities and individuals that want to buy and sell compliance instruments in the secondary market must register and have an account in the CITS to have a place to put their allowances and offsets.

All account holders in the CITS must complete a "Know Your Customer" check in the user registration process. The Know Your Customer, or KYC, process is used to identify CITS users which protects the system and helps prevent system manipulation and fraud. To date, 600 users have registered in the CITS. ARB has 475 user registrations in-house currently that have been provided and also provided the required KYC documentation to ARB. And about 450 of these have been approved.

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AIR POLLUTION SPECIALIST DUNN: The CITS

registration module was released on July 9th. The CITS registration module includes all components required to manage an account up to the point of the account holding compliance instruments.

The second CITS release, which includes the training module is scheduled to be available in October 2012. The trading module includes all components required to manage compliance instruments for participants buying and selling compliance instruments.

The trading module will allow ARB to create and distribute allowances and offsets and will allow participants to transfer the allowances.

Prior to each new release of the CITS, the application and the computer systems hosting the application are tested for security by a third-party testing service. This testing process is occurring now in anticipation of Release 2.

ARB will provide training on Release 2 functionality in the CITS after the second release.

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AIR POLLUTION SPECIALIST DUNN: The Cap and Trade regulation calls for quarterly auctions. ARB has contracted for auction services, including developing the auction platform. The auction platform is an online service that centralized application submittal for auction of reserve sales, bid submittal, determining the auction settlement price, and providing auction and reserve sale results. The auction platform also includes training materials to ensure participants understand the auction process prior to participating in this auction.

The auction platform help desk service are available from the auction administrator. The auction platform also includes tools to assist in market monitoring. These tools enable ARB and the market monitor to flag bids if there is a concern regarding manipulative or anti-competitive behavior or a bidding error.

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AIR POLLUTION SPECIALIST DUNN: ARB held a practice auction on August 30th to give stakeholders a chance to try out the auction platform and allow ARB to test systems. The practice auction was designed primarily to introduce entities to the auction and financial services processes and procedures and provide training on auction mechanics in preparation for the November auction.

One-hundred-twenty-one qualified bidders applied for and were approved to participate in the practice auction. One-hundred-twelve of these qualified bidders bid in the practice auction, submitting almost 2,000 bids, including bids for the current, 2013 vintage, and advanced 2015 vintage auctions.

The practice auction gave ARB and the contractors a chance to test the auction, financial services, and market monitoring systems and procedures prior to the November auction. No money or allowances changed hands during the practice auction.

The participant feedback on the practice auction was generally very favorable. There was some feedback that made clear where additional outreach and education would be needed for the November 2012 auction.

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AIR POLLUTION SPECIALIST DUNN: On September 14th, ARB released the auction notice for the November 14, 2012, auction. ARB will be auctioning at least 21.8 million vintage 2013 allowances and 39.45 vintage 2015 allowances.

The number of vintage 2013 or current auction allowances is a minimum number and may increase as a result of additional consignment of allowances. This auction application process and the auction platform must be completed no later than October 15th in order to participate in the November auction.

ARB and the auction administrator, along with the financial services administrator and the market monitor, will conduct a bidders' conference and two training webinars to ensure that potential participants understand auction instructions, requirements, and how to use the auction platform.

The auction takes place November 14th, and results will be posted after the Executive Officer certifies the auction. Results are posted and participant's individual results are available through the auction platform. The notification of auction results begins the financial settlement process.

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AIR POLLUTION SPECIALIST DUNN: ARB's Compliance Offset Program requires third-party verification of reported GHG reductions and removal enhancements prior to issuing offset credits.

ARB will accredit verifiers who have met the minimum experience requirements, taken ARB training, and passed an exit exam.

ARB conducted four rounds of training this summer and is in the process of reviewing the exams prior to issuing Executive Orders to accredit the verifiers. It is anticipated that the Executive Orders will be released this fall.

ARB will also leverage the existing infrastructure and administrative capabilities of the approved offset project registries to implement the Compliance Offset Program. Registries that meet minimum qualifications for their business operations and staff training can be approved by the Executive Officer.

Registry staff completed required ARB-approved training this summer, and ARB is in the process of reviewing their exams. It is anticipated that registries that have satisfied all requirements will be approved this fall.

Once the steps are completed, ARB can begin receiving and approving offset credits. ARB is currently completing program, verifier, and registry guidance documents, as well as project-specific guidance in the form of frequently asked questions for release this fall.

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AIR POLLUTION SPECIALIST DUNN: ARB has contracted with an independent market monitor, Monitoring Analytics, to monitor the structure, conduct, and performance of the Cap and Trade Program. The market monitor has worked with ARB on the auction design and the auction platform.

Prior to the auctions, the market monitor will review the participant registrations. During an auction, the market monitor will review bidding activity and work with ARB to identify any bidding trends of concern that may indicate manipulative or anti-competitive bidding behavior.

After the auction, the market monitor will review and report to ARB on auction results.

The market monitor will also review activity in the secondary markets. ARB will be advised on longer-term analysis by the Emissions Market Assessment Committee, EMAC, which includes economists from California Universities. EMAC's first meeting on September 24th will include discussion of linkage, resource shuffling, and information sharing.

ARB continues to have ongoing discussions to encourage cooperation with the CFTC and FERC, and the Federal Department of Justice in monitoring and enforcement against abuse in allowance of offset markets and related energy markets.

In addition, the Market Simulation Group, which held a stakeholder meeting in June, is under contract with ARB to conduct simulations that will stress test the regulation.

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AIR POLLUTION SPECIALIST DUNN: The allowance allocation process is ongoing in parallel with tracking system and monitoring activities. The quantities of allowances allocated to the electricity distribution utilities each year through 2020 was published on ARB's website in August 2012.

ARB is calculating industrial allocations for sources such as refineries, cement manufacturers, and glass manufacturers based on recently verified data and the regulations formulas for facilities receiving product-based allocations.

ARB has contacted each covered entity whose allocation relies on energy-based benchmarks to inform them of their allocation of vintage 2013 allowances. Allocation will be completed when 2013 vintage allowances are allocated to the industrial covered entities in November.

ARB will also be working with the Governor's Office, the Administration, and the Legislature to develop a strategic investment plan for auction proceeds.

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AIR POLLUTION SPECIALIST DUNN: To conclude, ARB will be ready to launch the Cap and Trade Program. The CITS and the auction platform are being finalized now and have been extensively tested. In addition, allocations of allowances are taking place as planned, and market monitoring systems are in place.

We will return to the Board with a final status report in October before the November 14th auction.

Thank you. We would be happy to take any questions.

CHAIRPERSON NICHOLS: Thank you. I think I'm going to recommend that we take testimony now and have discussion after we hear from at least some of the folks who are out there waiting. So we'll just get started. And I think you can all see the list, but I'll read names also.

So first witness is Jessie Cuevas from Assemblymember Perea's office.

MR. CUEVAS: Chairman Nichols and members of the Board, Jessie Cuevas on behalf of Assemblymember Perea.

Thank you for allowing me the time to speak before you today.

The Assemblymember has asked that I deliver copies of a letter sent to the Governor dated August 27th, which was signed by 17 Legislators. The letter expressed his concerns with the proposed Cap and Trade Program in regards to economic leakage. Highlighted in the letter is a recent report by the Legislative Analyst's Office supporting an increase in the number of allowances provided to capped industries and the benefits of these increases.

Senator Perea agrees with the LAO and believes that the goals of AB 32 can be accomplished with fewer impacts to the California economy.

I have also brought copies of the LAO report.

And on behalf of the Assemblymember Perea, I ask that the Board consider increasing the amount of free allowances provided under the Cap and Trade Program in the interest protecting jobs and the economy within the state.

Thank you again for your time.

CHAIRPERSON NICHOLS: Thank you. And we have all received copies of the letter and the LAO report. Thanks.

Now we have a group of ten, as it says here. Maybe there's others -- who all signed up together and wanted to come up together. So please do. And I don't know if you're all planning on speaking, but let's at least identify yourself so we'll get your names. You didn't all get the T-shirt though.

MS. BOWMAN: Good afternoon, Congressman Nichols and California Air Resource Board.

We can fix this real quick. Two, three, four, five six, seven, nine, ten -- somebody scroll for me -- number 11, and 12 is the group of ten so you can scratch them all. And number 8 wasn't speaking anyway. So you get you further down your agenda. So I hope that helps for this afternoon.

CHAIRPERSON NICHOLS: Thank you so much.

MS. BOWMAN: I'm Lisa Bowman. I'm a USW member of Local 675. To distinguish us from the other red shirts we're all steel workers up here. We also have Local 326 out of San Francisco. We're all hourly employees of Phillips 66. Half of us are Los Angeles. Half of us are San Francisco.

We have actually united with the Blue Green Alliance, the NRDC, and Phillips 66. We have a common goal. And I know the news media talks about unions and companies fighting. I'm here to tell you today we're not fighting on this issue. We're all on the same accord.

With that being said, it's very simple for us. On behalf of the ten united steel workers unions in California itself, we have a few objectives and recommendations for the Board today.

We appreciate if you listen to us. We're only going to have I think four speakers, maybe five. California does have a strong tradition of demonstrating that a healthy environment and strong economy can work hand in hand. And we're confident it can do the same with the Global Warming Act.

And with that, I will pass it to Mr. Jeff Hall.

MR. HALL: Thank you.

The first objective we'd like you to consider is use an open and adaptive implementation process, a process that keeps California on track towards building a secure and job-creating low-carbon economy, a process that we would like others to follow.

The second objective is to remain committed to adopting additional protections as needed. Our goal is to minimize leakage and maintain a level playing field between in-state and out-of-state refineries.

MR. MOTA: I'm Steve Mota.

We urge you to prioritize strategies and achieve our emission reduction targets, while retaining good jobs in California. These are jobs that produce, distribute, and deliver fuels to consumers, including jobs in construction, maintenance, and service sectors. For every refinery job, there are 11 other jobs supported.

Fourth, to capitalize on new opportunities to create jobs in California. As businesses continue to upgrade their facilities and apply new technologies to operate cleaner and more efficiently. To promote those objectives, we offer the following recommendations for CARB should adopt.

MS. MENDEZ: We are concerned that out-of-state refiners will have an unfair advantage because they are not being held responsible for their refinery emissions. Equal treatment between in-state and out-of-state refineries should extend to both finished fuels and intermediate blend stocks. Emissions from imports must be treated just as they would be if the products were produced in California. California refineries need the regulatory certainty that investing in efficiency upgrades is in their long-term interest.

CARB should commit to ensure a level playing field is provided before any payment for compliance are made.

MR. GAMBA: Working with the Governor, CARB should provide revenues generated under the Global Warming Solutions Act on strategies that will facilitate a smooth transition for the Cap and Trade Program.

CARB should provide matching funds or other financial incentives to speed up efficiency upgrades for California refineries. This will lower compliance costs and help provide a fair starting point for businesses to compete. Leverage with private capital revenues offer an additional inventive for companies to keep production and jobs in the state of California and maintain progress towards our environmental goals.

Thank you for considering our testimony.

CHAIRPERSON NICHOLS: Thank you very much. Very well done. I think your message also has been received because I believe there have been some conversations at the staff level about how to approach this recommendation of yours. There is a concept which is one I know that has been thrown, something called a border adjustment where you do treat fuels the same regardless of where they were produced. And I know that's something that we are very interested in working on with you. So thank you.

CHAIRPERSON NICHOLS: Okay. That quickly moved us forward. Alex Jackson from NRDC and Lisa Hoyos from the Blue Green Alliance.

MS. HOYSO: Hi. I'm Lisa Hoyos with the Blue Green Alliance. We're an organization of 14 partners, ten of whom are national labor unions, including the steel workers, one of our founding members, along with the Sierra Club and four partners who are leading environmental groups including NRDC, Union of Concerned Scientists.

Our organization exists to advocate for clean energy jobs and greening existing industries. This morning, I made a personal pledge to stop saying AB 32 and to start saying the Global Warming Solutions Act. It's three more syllables, but I think it's worth it. And I think a lot of us should consider it.

Why? Because every time we say "global warming," we remember why a republican governor and democratic Legislature passed this ground-breaking rule to begin with. It's been a painful summer. Thousands of farm have lost their crops across this country. Half of our counties are federal emergency areas due the extreme draught. Thousands of homes have been -- hundreds of homes have been lost, thousands families displaced by wildfires; 3,000 heat records broken in the months of June and July alone.

Finally, I guess -- floods, severe storms, people are losing lives. You saw it on the news. You all saw it on the news.

That's why California is such a leader. We anticipated this was going to happen. We believed what the scientists were telling us.

The Global Warming Solutions Act creates jobs. It creates jobs in dozens of industries, as you all know, clean cars, clean fuels, wind, solar. And so in energy-intensive industries, what does that mean? You just heard really smart on-the-job workers, front line, every day saying we can implement this law in a way that maintain its integrity and that also addresses issues as they come up, like leakage, which, Chairman Nichols, you just outlined. There is a border adjustment mechanism. That's a solution.

So I just wanted to open by saying we are all about solutions. We'll work with any company. We want to form alliances with people who want to be bold and take leadership and do the right thing visive our children and visive our future.

So I just want to set the tone in that way. It will around the clock. We're kind of a maybe surprising alliance, because we are principal-driven to make this law work. Thank you. I'm going to now pitch to my colleagues and Alex and Rick will read the letter.

MR. Jackson: Thank you Lisa and Chairman Nichols and members of the Board. Alex Jackson on behalf of the Natural Resources Defense Council.

Just to pick up where Lisa left off, you know as a representative of a environmental group, you know, we know this program is only going to be successful if we show it's not an either/or proposition. We need to be reducing our emissions in a way that is maintaining and creating new opportunities for strong economic growth and jobs and encouraging other jurisdictions to act. That is the end game.

On that, I think you're going to be reading from a statement we put together. I'll be happy to provide copies to the Board. Got a little marked up in the process, but I will get started and pass it over to Rick from the United Steel Workers and then we will remove ourselves from the microphone.

I will just say all three of our organizations have been strong supporters of the law since it passed in 2006 and we're worked actively to protect against Prop. 23 in 2010. California has shown time and again that a healthy economy, strong environment, work hand in hand. And we see the same opportunity with AB 32.

We also share the goals of the cap and trade program to attract even more investment and build on California's position already as a clean economy, clean energy power house.

It was said in an earlier forum if you want to work in clean energy, come to California. We're maintaining that strong policy signal to do that. And we see the opportunities both from emission reduction standpoint and a job standpoint.

To maintain progress towards those goals, however, we do ask CARB to commit to a really dynamic, adaptive open implementation process. And CARB has done that. In developing this rule over the past six years, it's been incredibly responsive, incredibly open, and we as that continues once the program gets up and running. Because it's not a fixed end game proposition.

We have two specific recommendations that was laid out earlier. We do ask to consider making sure we're treating imports the same. Obviously, leakage serves neither economic or environmental goals. We want to make sure we're capturing the same emissions that are faced in the compliance obligation in state as out of state.

We also see tremendous opportunity with auction revenues to really accelerate and kick-start those investments that make it easier for companies to comply, reduce emissions at those facilities and get the co-pollutant reductions as well and really can provide the long-term sustainable path we're looking for.

I will now pass it over.

MR. ALVEZ: Good morning. My name is Rick Alvez.

We'd like to thank CARB staff for the commitment to developing the Cap and Trade Program in an open and public process.

Going forward, we recommend CARB to establish a process for direct dialect with labor to ensure concerns or questions related to AB 32 implementation so that we can be addressed on an ongoing basis.

We look forward to working together to ensure that AB 32 is implemented in a manner that achieves the State's emission reduction goals, retains high quality jobs in California, and creates new jobs in California.

Thank you for considering our testimony.

CHAIRPERSON NICHOLS: Thank you very much. Appreciate it.

I'm sorry if I butcher the next name, Jasmin Ansar.

MS. ANSAR: Good morning, Chairman Nichols, Board members.

My name is Jasmin Ansar. I'm from the Union of Concerned Scientists.

We want to applaud the California Air Resources Board for developing this landmark plan and implementing it finally.

The comments I'm going to give will address recent requests by industries to receive more free emission allowances in the Cap and Trade Program under the Global Warming Solutions Act.

Let me just stop or preface this by saying the Union of Concerned Scientists both strongly support the notion of investigating border adjustments as a means of mitigating leakage concerns.

The CARB Board has already decided to give free allowances to the majority of the industrial sector, as we heard. This is mainly to address leakage concerns. But UCS estimates that the total value of this special handout, at least for the oil refineries and oil companies, will be more than two billion dollars over the three compliance period. This two billion dollar give-away represents a massive transfer of public wealth from consumers to highly profitable oil companies which run the nation's most polluting refineries in California and have made more than one trillion dollars in profits over the past decade.

California should make polluters pay for the environmental damage associated with their production, instead of rewarding them with a public handout. I think this can be contrasted with, for example, the electric utilities who will sell their carbon allowances at the upcoming auction. And the revenues from these sales will be used to further the State's climate goals and will be used for the benefit of all Californians to help them mitigate the costs of the program.

For the oil companies and other industrial sectors, subsidizing pollution through additional free allowances misdirects these valuable auction revenues to financially benefit these companies and potentially result in windfall profits. Instead, these revenues should be used to benefit all Californians through investments in energy efficiency, renewables, and clean energy technologies.

And finally, let me just say that while the majority of California's entities have been preparing for the transition to a low carbon economy, ever since 2006 when AB 32 was enacted, for example, the electricity sector has successfully invested in energy efficiency, renewable power resulting in significant emission reductions. And this is demonstrated by the fact that

California utilities actually have one of the lowest carbon intensities in the nation.

We heard today about some of the clean vehicles and the progress they've made with respect to efficiency in fuel economy standards.

I would just say in stark comparison the refining sector over these six years appears to have made little progress. And in fact, a recent report by the Union of Concerned Scientists found that California oil refineries produce more carbon emissions per barrel than those in any other part of the nation. Thank you very much.

CHAIRPERSON NICHOLS: Time is up. Thank you.

Frank, I'm going to ask your indulgence for a moment here, but you're an economist so I know you'll appreciate the reason.

We have two members of our Advisory Committee who have joined us to speak at our request about what they did and what they think about where we are right now as far as the design of the auction is concerned.

So I'm going to call Larry Goulder and Tim Bushnell and then we'll get back to you. But they only get their three minutes. So Larry.

MR. GOULDER: Thank you very much, Chair Nichols. I appreciate the opportunity to be here.

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MR. GOULDER: I'm a Professor at Stanford Universe. And two-and-a-half years ago, I had the privilege of Chairing the Economic and Advisory and Allocation Advisory Committee to the Air Resources Board.

The views I'm going to present now reflect my personal judgment though, and they reflect not only the circumstances back two-and-a-half years ago, but also recent changes to the economy and recent contributions to economic analysis.

So if you could next slide, please.

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MR. GOULDER: As the recent Legislative Analyst's Office report indicates both free allocation without based updating and auctioning have virtues. So it's a matter of trying to exploit the best of each.

So next slide.

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MR. GOULDER: I believe that the Air Resources Board has struck a good balance between the two. That's based on three considerations. Next slide.

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MR. GOULDER: First, next is industry competitiveness. I do think that industry has reason to be concerned that they're justifiably concerned about the cost impacts of the cap and trade system.

Next slide.

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MR. GOULDER: And the use of free allocation through the outbased updating that's part of the Scoping Plan helps preserve this competitiveness and avoid leakage. What it does is implies the kind of subsidy that lowers the variable cost to the most enery-intensive and trade-exposed industries. So the free allocation is targeted to those industries that would be most vulnerable. Next slide.

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MR. GOULDER: And it helps prevent because it lowers the variable cost, the price increases that would otherwise cause the loss of competition and cause leakage. So the most especially vulnerable industries are protected. That raises the question -- next.

--o0o--

MR. GOULDER: Should we apply free allocation more broadly, given this potential to avoid price increases and to preserve competition.

My view is there is problems of applying it more broadly for two reasons. That's the next two considerations.

Next.

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MR. GOULDER: The first is fairness. Broader free allocation would often yield windfalls. That's because the value of allowances well exceeds the regulatory cost. So there is one issue of fairness there.

Also, broader free allocation would tilt the playing field in the sense that auctioning in contrast allows the auction to go to the highest value use. Free allocation would make it more vulnerable to political influence and affect the playing field that way.

And finally, auctioning yields revenues that can have adverse impacts on especially disadvantaged groups or sectors.

So for those reasons, I think fairness considerations suggest limiting the use of free allocation, exploiting these advantages of auction.

Is this just a zero sum some game?

CHAIRPERSON NICHOLS: We're going to give you more time just because you're doing this on our behalf.

MR. GOULDER: Okay. Thank you. I was planning on five minutes.

Is it a zero sum game? Is it really just a matter that if you give out the allowances free, some industries and sectors benefit by getting these free allowances? If you don't give them out free and you auction, the same allowance value goes to someone else in terms of the auction revenues going to firms providing R&D or firms producing infrastructure or to particular disadvantaged groups. Is it a zero sum game.

This is an issue that I don't think had been sufficiently brought out, for example, in the LAO report that it isn't a zero sum game, that, in fact, the overall cost to California would increase to the extent that one relies more on free allocation.

I say this for the following reasons -- to restate it: The auction does yield lower cost to the State than does free allocation for the following reasons. It's not a zero some game.

The reason is this. An economic analysis has strong consensus on this. But free allocation removes the price signal that prevents prices from going up as much, that on one hand might look great for industry but does have This deleterious implication. It yields a weaker incentive to the ultimate consumer, whether they be industry, residential, or commercial for conservation, for reducing demand for electricity or for various greenhouse gas intents of goods and services.

As a result of that, it means when industry needs to meet the cap, given that demand is higher for the products, it has to go through more strain, whether through its fuel switching or end-of-pipe treatment or other, to meet the tough cap because demand is higher. And thus, allowance prices and industry costs would actually be higher because of the fact that demand hasn't been -- there hasn't been the effect of conservation. That's important at least to higher cost.

But there is another question. This is my last main point. There is I think a number of analyses by industry groups have questioned whether, in fact, the revenues from the auction could be recycled cost effectively. This brings up the Sinclair paint issue. One of the tauted attractions of auctioning is the revenues can be used to reduce the government's need to raise other taxes in order to meet its needs. It could displace the needs to raise ordinary distortionary taxes which cause inefficiency and raise costs.

The question then is in the presence of the Sinclair paint ruling, is this potential limited because now the revenues have to be devoted -- has to satisfy the nexus test -- has to be supplied to something that's very, very close to the purposes of AB 32. It can't go to the general treasury.

Well, I argue, in fact, the Sinclair paint restriction doesn't have to eliminate this key advantage. It remains possible for auction revenues to reduce the need for ordinary distortionary taxes. The reason is if this money is fungible, if there is a program that would have been financing out of general revenues that has an environmental purpose, now through the auctioning mechanism, there is another source of revenue, which means it doesn't have to come out of the treasury. That means that the treasury has more revenues to use for other purposes or equivalently it doesn't have to raise taxes.

So you still have this important benefit of auctioning in that it reduces the government's need to raise ordinary taxes in order to meet its needs.

And in fact, the Sinclair paint restriction doesn't entirely eliminate that key advantage.

Still, I think it's important -- caveat is important here that it's important to use revenues in efficient ways rather than inefficient ones. Some of the industry commentary I think has a point. It would be a very costly thing if the auction revenues are used in ways that are inefficient. It would be especially useful to devote the revenues to fund projects outside of covered sectors. Not only would those projects lead to technological change and lower cost, but it also achieves an overall reduction in emissions because those sectors aren't under the cap.

In contrast, if they used to fund projects that reduce emissions within the covered sectors, since the cap is what determined it's not going to lead to a reduction in statewide emissions, although it may lower cost.

So all in all, I will conclude by saying that there are trade-offs here. It's not the case that one or the other approach should entirely take over. It's a matter of balance.

My view, having looked closely at the Scoping Plan and the commentary around it, as well as recent economic evidence, is the ARB has done a good job striking a balance. And there is not a good case to be made for relying more on free allocation than is currently being done.

I think the current mix of allocation methods helps use free allocation in a productive way to maintain competitiveness, while at the same time relying on auctioning in its most productive way to promote fairness and help minimize statewide cost through auctioning.

My view is that free allocation is powerful medicine, but it should be used sparingly. Otherwise, you lose a lot of the important benefits from auctioning. Thank you very much.

CHAIRPERSON NICHOLS: Okay. Thank you for coming. Appreciate it. I guess we'll hear also from Professor Bushnell.

MR. BUSHNELL: Good afternoon. I had planned on five minutes I'll speak fast.

So my name is Jim Bushnell, a professor at U.C. Davis. Like Larry, I was on the EAAC, and I echo everything Larry has just said about the issues.

What I wanted to do was highlight a couple of other aspects of the auction versus allocation question that really weren't the focus of the EAAC process. Larry did touch on this somewhat. That's really the role the auction has to play in enhancing the performance of the emissions market itself.

There's really two points I want to emphasize here. The first is that, while allocation -- particularly this updated allocation -- has beneficial effects in terms of mitigating leakage, it also has some side effects that Larry touched on. And if we use this -- lean on this mechanism too much, we start to get concerned about these side effects.

And the second is I wanted to highlight the role the auction is really designed to play in providing an important buffer to the market and controlling permanent price volatility.

So I'll start with the allocation issue.

First, it's useful to make this distinction between an allocation just based on some historic benchmark or grandfather, which can provide a windfall to the recipients, but doesn't necessarily affect their incentives to respond to an allowance price, doesn't necessarily change the pass-through of allowance prices to consumer products and so forth, because there's essentially no strings attached to the allocation.

And there has been a lot of emphasis in the unregulated industries on this updated allocation process where we are -- the current plan is to reward allowances contingent on some kind of performance metric, like keeping production within California. That has the benefit of providing an incentive to keep the production in California, avoid leakage, as Larry said. But it also has the effect of at least partially insulating the industries and the firms in them from the allowance price itself.

And to the extent that we insulate more and more industries to a higher degree from the allowance price, that makes it harder for the allowance price to do its primary job, which is to provide an incentive for firms and customers to take actions to reduce their emissions.

So if we push this insulation effect too far, it has a couple bad effects, at least two. It can push the responsibilities for reductions on to the sectors that aren't getting these updated allowances, and therefore, don't have the insulation effect from the price. But it also by making more industries less responsive to the allowance price has the effect of, in essence, making the entire market less price responsive. And in economics terms, we would say the supply of reductions is less elastic. That can raise the overall allowance price unnecessarily. And also, we're concerned it can make the market more volatile because there is less reductions that are responding to changes in the allowance price.

So very quickly one second point I want to make is that the auction has been designed to provide a buffer to the market. There are price collars on the emissions market. There is both the floor and a reserve price at which more allowance are meant to be injected. And the auction plays a critical role in providing or withdrawing allowances from the market in response to changes in the allowance price and allows this price collar mechanism to basically function.

Without it, it's very difficult to imagine a clean mechanism for which the State could provide allowances and provide this control to the allowance price, absent some kind of allowance mechanism. If all the allowances are already spoken for through some kind of allocation, it's very difficult to adjust the market circumstances and change the distribution or the amount of allowances in response to market prices. And therefore, I think there is an important role for at least a significant chunk of the allowances to be distributed through auctions to provide this flexibility to the State.

Thank you.

CHAIRPERSON NICHOLS: Thank you. So essentially what you're saying is otherwise you would have to basically print more allowances --

MR. BUSHNELL: Or take them back somehow.

CHAIRPERSON NICHOLS: Or take them away from people who already have them. Okay. Thank you very much. Appreciate your coming over to share some of the background of your current thoughts on this.

Okay, now Frank Harris. Thank you for your indulgence.

MR. HARRIS: No worries with that, Madam Chair.

Frank Harris again with Edison. I appreciate the opportunity to talk to you again today.

The last time I addressed the Board, other than this morning, I was speaking about system testing and market readiness. And since that date, Edison and some of the other stakeholders have worked with your staff to better understand that both the development of the testing of the systems that are needed for the November auction and January 1, 2013, go live.

As you mentioned earlier, the utilities are mandated to participate in this auction on November 14th. And where we not -- perhaps I would encourage as an advocate for my employer to set back and let somebody else beta test that system, unfortunately we don't really have that opportunity. So we are understandably nervous about this process.

And since the last meeting and this increased communication, all of this has been very well received. Your staff, Rich, Edie, Steve, and everybody has been really great to work with us, and including the meetings that have been facilitated by CCEEB. We've been having these technical meetings, one of which was yesterday. And one would wonder where we would be without those, actually.

And I will note that CCEEB is going in pocket on those. And having seen their accounting work, they really can't afford to go in pocket on those. But they are.

In any event, these have really increased our awareness of what's been going on. But I think more importantly, they've acted as a way of communicating information back to staff on some short-comings and what we need to see out of this.

And so while this improved communication has been helpful for us, I think most importantly it's provided a mechanism to give feedback and provide information on what remains to be done. And obviously, we are still concerned. And we have two key issues that we have consistently advocated and continue to advocate. We feel the practice auction is a really positive experience. Frankly, we want to see another one. We think the lesson learned from the first practice auction need to be implemented and a second practice auction should be developed.

Secondly, the testing that we have been made aware of, although very, very good, has not really been a true systematic stress testing that we would like to see. It has been done in a lab type environment, if you will. And we would like to see something that is more systematic end to end that would better mimic a real world environment, because I think you'll find some -- you'll learn from key lessons from that process.

In doing that, you're going to make January 1 role off much better than otherwise. And happily I'm done. All right. Thank you very much.

CHAIRPERSON NICHOLS: Thank very much.

Dorothy Rothrock.

MS. ROTHROCK: Thank you, Chairman Nichols and Board members.

My name is Dorothy Rothrock. I'm with the California Manufacturers and Technology Association. And

I also Chair the AB 32 Implementation Group, which is a broad industry group. We have spoken to you many times on these topics.

We need to send the message now sooner than later that more allowances will be available to industry in the Cap and Trade Program. 2015 is right around the corner. And manufacturers are making investment decisions this year that are going out three to five years from now. Those capital investments might not happen in California based on the current regulation that does not provide sufficient free allowances. The companies cannot depend on the hope that CARB might provide more free allowances in the future. They're making decisions today, as I said, that are years in the future. As a result, leakage may be happening right now under our noses. And we're not measuring it. We're not seeing it, because these decisions are being made.

CARB continues to rely on the fear that windfall profits might be the result of more free allowance. We think the fear is unfounded. We agree with the legislative analyst, and we think the UK experience is irrelevant, because we've got benchmarks set in California that will prevent that.

In addition, in closing, based on the presentation we just saw from Bushnell and Goulder, everything they said assumes that we made the right decision with regard to trade exposure and energy intensity. CMTA believes every manufacturer in California is trade exposed, especially since California is the only state going forward with this Cap and Trade Program.

When we started thinking about cap and trade, we were assuming we would have a western program and many other states involved. Many of those western states include companies that directly compete with California manufacturers. Not only that, we don't have a national program. That was something we hoped we would have at the national level when AB 32 was passed.

For all these reasons, manufacturing large is trade exposed and needs more free allowances. And we urge the CARB Board therefore to make some adjustments immediately to provide more free allowances. Thank you.

CHAIRPERSON NICHOLS: Okay.

Bruce Ray.

MR. RAY: Chairman Nichols, members of the Board, good afternoon. My name is Bruce Ray. I'm with Johns Manville in Denver, Colorado. We are an insulation roofing products and engineer products company. We're, in effect, Warren Buffet's energy efficiency products company. We operate a plant in Willows, about an hour north of here in Glenn County, where we make formaldehyde-free fiber glass building installation. This is used to make homes, offices, buildings, more energy efficient.

And we view AB 32 as both a threat and an opportunity. And the threat is that operating costs will increase and increase potentially substantially. But the opportunity is that certainly if you look at the Scoping Plan that energy efficiency in buildings is going to be required and is actually slated to achieve a large percentage of the greenhouse gas emission reduction goals in the statute.

And in fact, per the Scoping Plan, I think energy efficiency is slated to achieve more greenhouse gas emission reductions than the 33 percent renewable portfolio standard. So we do see a big opportunity there.

And Johns Manville opted into the cap and trade system. And there are two reasons for that. One is that we understand energy efficiency has a big part of the solution in achieving the emission reduction goals.

I think we have a role in achieving that energy efficiency measures. And in addition, Johns Manville at our Willows plants, we acted very early on, took very early action to reduce our natural gas combustion and also to reduce our emissions, not only greenhouse gases but other pollutants as well.

Our big issue, however, is of that leakage. And the cap and trade regulation put us in a medium risk category and we are not. We are high risk. And we think it's very clear, and it's explained in detail, in comments submitted by our trade association, North American Insulation Manufacturers Association, that if you simply look at a map and you look at all the other insulation -- fiberglass insulation manufacturing facilities that are in nearby states that could easily supply the California market, that we're very, high risk.

To echo what Dorothy Rothrock said, many of these companies are making planning and decisions now for production for capital expenditures five years into the future. So we really urge the Board to move fiberglass insulation manufacturing to a high risk category.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Bernadette -- I'm going to power through to the end of page one. That's my plan. And then give the Board a chance to ask a few questions of people who have to leave and then take a lunch break. Okay.

MR. JACOBSON: Hello, Chairman. My name is Dan Jacobson. I'm sorry to say --

CHAIRPERSON NICHOLS: You are not Bernadette.

MR. JACOBSON: I'm not. I'll do my best

impersonation and try to hit on the points she laid out for me to present here today.

Thank you for giving me the opportunity and for giving Environment California the opportunity to testify here. We've got a couple of key points we wanted to hit on, and then I will move off.

The first is we think that California should continue to lead both in solving global warming, continuing to be a leader on clean energy. There is no doubt that this is critical for both our environment and our economy.

Two is that businesses are already reducing CO2 and move into clean energy and saving money. And we have to continue to highlight that. That can be one of the key points that moves us into a much better economic situation. We should be looking at that as much as we can and creating opportunities.

Third is that it's critical that California's biggest polluters pay for the right to pollute. And under the auction system, I think there is a couple of key points that really need to be addressed.

First is that auctioning is the fairest means of distributing the pollution allowances.

Second is that auctioning enables the emission reductions to be achieved at a lower cost to society than if it were given away to polluters.

Third is that the auctions can protect the consumers and can maximize the economic benefits of global warming.

And fourth is that auctioning allowances encourage a transition to clean energy sources that I was talking about before.

Let me just close by saying that this is an issue that's been debated inside the State Legislature, in the courts, on the ballot box, and the ARB has done an excellent process of having an open and excellent hearings. And we think that that's why this needs to continue. We've debated this issue. Let's continue to move forward. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Cathy Reheis-Boyd and then Chris Chandler -- and I'm sorry -- Erica Morehouse. Forgive me.

MS. MOREHOUSE: Thank you. Erica Morehouse with Environmental Defense Fund.

California is poised to implement a strong and well-defined Cap and Trade Program that will ensure we reach critical greenhouse gas targets and provide benefits to California's environment and economy for years to come. This program strikes a careful balance that will allow both economic and environmental interests to thrive. And though it may not represent the exact program that any one group or stakeholder might design if they had free reign, it does represent a good program that balances the needs of California.

The program ensures that polluters will be held accountable for their emissions and incorporates numerous measures that will keep compliance costs in check. Of course, we must continue to monitor this program, as ARB is committed to do, to ensure that goals are met and that balance is maintained. But this program as designed is ready to go and will provide a strong shot in the arm for California's already growing clean economy.

Thank you.

CHAIRPERSON NICHOLS: Thanks, Erica.

Cathy Reheis-Boyd.

MS. REHEIS-BOYD: Good afternoon. Cathy Reheis-Boyd, President of the Western States Petroleum Association.

I'd like to just start by respectfully disagreeing with the introductory comments made for the section. And frankly, I'm a little disappointed in them. We, as an association, have not been opposed to Cap and Trade. It is the choice of the state of California to pick this market mechanism as opposed to others, like carbon tax. We've been working hard with this agency from day one on this, but we do oppose a Cap and Trade Program that is not well designed, that has huge consequences for jobs and the economy of the state, and our ability to supply adequate, reliable, affordable fuels to the businesses and consumers of the state of California.

This is not a one-sided conversation. You have heard from many who have expressed considerable concerns, other experts, the LAO, businesses, legislators, quite a few people who have taken a different opinion on this. And we do not need to take allowances and generate huge revenues from those business who have to make huge investments to meet the reducing cap. That is what will get the emission reduction goals and that is the importance of this program.

I cannot believe the inference that billions of dollars that we will invest to make those investments and make those reductions are being referred to as windfall profits free and/or characterized as being hand-outs. I really frankly find that appalling.

The resolution today that you have before you recognizes these concerns, but it only recognizes it for a few and doesn't recognize it for the rest of the businesses who are highly trade exposed, as we feel we are.

This is not a post-2012. It is not a

post-auction issue. It is a now issue. We are encouraging this Board to take a leadership role and to protect jobs to fix trade exposure to minimize cost and prevent leakage, while you're meeting your emission reduction goals, which we totally support doing and will make the investments to do so.

I would also like to recognize those in the audience and would like them to stand, if you don't mind, because they traveled a long way across California. They are very concerned about their jobs. And they won't be speaking all individually. I wanted to have them recognized for them being here to express their concern.

CHAIRPERSON NICHOLS: Thank you.

MR. CHANDLER: Good morning, Chairman Nichols and members of the Board.

My name Chris Chandler. I'm the manager of our Phillips 66 refinery complex in southern California located in both of cities of Wilmington and Carson.

Like our northern California refining complex, our facility is a uniquely-configured multi-site facility. We have over 1200 employees in the state, 700 of which are represented by the United Steel Workers. Many USW members are here in the audience today, as you heard earlier.

I'm here today to continue to express our concerns for some elements of this regulation. We have supported a position that the State should provide 100 percent allowances to trade-exposed industries. We have also argued that the auction is unnecessary and premature.

The State needs to protect its trade-exposed industries before engaging in an auction. Phillips 66 continues to believe in these concepts, but it is clear that the Board does not agree with our position and an auction is set to take place soon.

Therefore, Phillips 66 would like to address our immediate concerns in the area of refinery benchmarking. The chosen approach when coupled with the 90 percent sector benchmark results in a double hit to some refineries. The large is large and immediate competitive inequity between refineries.

During the October 2011 Board meeting, my counterpart in the Bay Area, Rand Swenson, provided testimony on this exact inequity. We appreciate the action that you, the Board, took at the time directing the staff to address this concern, but the inequity still exists today.

Today, we're here to further explain why size and configuration of refinery matters in setting goals to reduce greenhouse gas emissions. Before you is the breakdown of the EII ranges by refinery size and complexity. Red is the range of EIIs. The smaller refineries on the left and the large refineries are on the right. This chart comes from the 2010 Solomon study and includes 21 refineries.

As you can see in the chart, the size of the refinery is a key factor in determining its Solomon EII number, much like any other manufacturing industry. There are definite economies of scale.

You can see from the chart that the smaller refineries are not and most times cannot be as efficient as the large ones. The green dots and green line is Solomon's way of benchmarking those refineries against refineries of similar size. The approach chosen in this process to benchmark all the refineries against the very largest, and thus creating some inequity.

This isn't just a Phillips 66 issue. The unfortunate consequence of this unlevel benchmark means some of the state's largest refineries won't need to purchase any allowances. Others that are mid-size or unique configurations will disproportionately carry the burden of the ten percent sector cut and the benchmark disadvantage.

This results in greater than a 20 percent difference in allowance between refineries and transfers tens of millions of dollars out of our local operating budget the first day the program starts. These are diverted from capital investments that could be used instead to reduce emissions and create more jobs in California.

We're not against benchmarking, but it needs to be done in a way that reflects the size and configuration differences between refineries. Thank you for the opportunity to speak today. Thank you.

CHAIRPERSON NICHOLS: Thank you.

I'm just going to say that if you have a hardship because you're going to have to leave early, I would appreciate it if you would talk to the clerk. We'll try to readjust the schedule as best we can for right after lunch. I believe there are a couple of people who thought they were on earlier and can't stay until the very end. So we'll try to do what we can to accommodate anybody who is in that situation.

I do want to just give a couple minutes, because I believe we're going to lose Professor Goulder at the lunch break, if people have questions they wanted to ask him, which we should do that now.

I guess I have one, which relates to this last issue. Are you familiar with this allocation scheme that effects the refining industry and how that was done, the benchmarking.

MR. GOULDER: I must confess, I'm not deeply familiar with that.

CHAIRPERSON NICHOLS: Okay. It's interesting historically how that happened because it was they took the whole sector and then tried to basically create sort of an average and then give more to the people who were more efficient or do better for those who were more efficient. Obviously, now those who didn't make out so well want to sort of readjust the way that division was made. The only way to do that is to take away allowances I think from others in the sector, unless you once again take them from somewhere else that doesn't exist.

Dan did have a question.

BOARD MEMBER SPERLING: Yeah. Could you respond to the concern about trade exposure that Cathy Reheis-Boyd mentioned in terms of have you looked at that carefully in terms of how they've been categorized and how that fits into your analysis?

MR. GOULDER: As far as I know, the Air Resources Board had several layers of category depending on the degree of trade exposure and energy intensity of production.

And as I understand it, it was based on circumstances not assuming that the WCI would be in place or that a national policy was in place. It does account -- correct me if I'm wrong -- for the fact that California would be acting alone.

Now, I think the point is valid that to some extent a lot of industries that currently wouldn't be getting free allowances would, in fact, suffer some competitive disadvantage. It's a continuum. It's a matter of degree.

What I would emphasize is to the extent you protect jobs in those industries that have some slight adverse competitive impact, you're also hurting jobs elsewhere in the economy because by the more you use free allowances, the more -- for reasons I gave earlier -- you're raising the overall economic cost of meeting the cap. That's likely to have employment impacts as well.

So it really becomes a question of whose jobs are going to be protected, not whether jobs as a whole are going to be protected. I'll correct myself on that.

In my view, to the extent one is very cautious in the use of free allocation, you're likely overall to be boosting California employment relative to the case where you rely more on free allocation. So the jobs issue goes both ways in my view.

CHAIRPERSON NICHOLS: Can I ask sort of an open-ended question, and it's dangerous to do this. But you were one of the original Market Advisory Committee.

In fact, you were the Co-Chairman of that Committee back right after AB 32 was passed. And at that time, everybody -- well, most everybody at least was quite clear that a cap and trade system -- they also use the word "well designed" would be the most economically beneficial way overall to achieve the reductions that were called for by AB 32.

Do you still feel that way? And do you think that we're on the right track here, despite all these Perturbations and special issues that we have to deal with along the way? Did you anticipate that? Or is that not just something that you deal with the kind of the big picture level?

We've spent a lot of time as you well know and very, very detailed efforts to make sure that we've anticipated every possible thing that might happen to every piece of the California economy.

MR. GOULDER: My view is that there is a great deal to be gained through market mechanisms and emissions pricing, whether through cap and trade or through a carbon tax. And I think that politically the circumstances were such that cap and trade was a better option for California, partly because cap and trade was already being introduced elsewhere in the world, partly because there's more familiarity and experience with it.

So with that said, I think it was and still remains a very good option.

I do think some of the luster of cap and trade has been lost as people come to understand it better. First, it might have seemed better that it was in that it wasn't recognized that even if you give out free allowances that at the margin firms are still paying a cost of emissions. Once that was recognized, some of the political backing was lost.

But overall, I think there is a great deal to be gained through cap and trade, and it was a smart move for California. And I hope it remains.

The larger perspective is this. Using one of these market mechanisms either cap and trade or carbon tax offers tremendous advances rather than full reliance on conventional reclamation. I think we should be happy with either. Given the political circumstance, I think Cap and Trade was a good move.

CHAIRPERSON NICHOLS: Thank you. All right. Thanks very much.

BOARD MEMBER BERG: Chairman, may I just -- Larry, could I ask a follow-up question?

Do you believe that had we -- or do you have an opinion if we had gone to command and control rather than a market mechanism that we wouldn't really be sitting talking about the same issues of cost and jobs and the economy in this current climate?

MR. GOULDER: You're asking me to be a political scientist rather than an economist. I can speculate.

I think one of the advances historically of traditional methods is that some of the costs are less visible that under market mechanism like a carbon tax or cap and trade with auctioning. Because in those other cases, you don't see the cost directly. There is no transfer of funds from the private sector to the public sector in the form of money transfers.

So I think that that has been one reason why historically we relied so much on conventional regulation. They've been an easier approach to get through the political filters.

I think that's changing. I'd like to think that economic analyses and other analyses have helped indicate that the greater visibility of the cost, it's also the case that the overall costs are lower. So I'm hopeful that over time -- in fact, I'm very confident that over time we're going to see more and more use of these market mechanisms and in particular emissions pricing.

CHAIRPERSON NICHOLS: Okay. Thank you so much.

Let's take a break. For those who are going out somewhere to lunch, there are a few places that are pretty close by. We should certainly be able to be back here by 2:00.

(Whereupon a lunch recess was taken 12:54 PM.)

AFTERNOON SESSION

2:04 PM

CHAIRPERSON NICHOLS: And ready to go. And we're up to on our list to Will Colon.

MR. COLON: Thank you, lady Chairman and Board members.

One thing I'd like to make clear -- I heard someone make a comment earlier today regarding the refineries here in California that they're the dirtiest. I worked at every refinery in the United States. And refineries here in California, take my word, are the cleanest, best managed, and one of the best workforces in the United States.

CHAIRPERSON NICHOLS: I actually didn't hear anybody say that, but it's okay.

MR. COLON: I did.

My name is Will Colon. I'm President of a company here in California called KM Industrial. I'm here today to represent my employees and the employees of my customers.

We have three offices here in California, about 125 employees. I've been here 22 years. So I have roots here in California. We contribute about six to $7 million to the economy every year, without payroll. So we have a lot of stake here in California.

In the past twelve months, I made significant investment in building my business and for the future of the business. I put about two-and-a-half million dollars in in 2011, another million dollars in 2012. And I'm looking at about putting another $25 million in 2013, depending on how this thing goes here. I'm very concerned because I have a lot of stake in my business.

California businesses are facing an increasingly hostile business climate, a climate that leaves many business leaders questioning the wisdom of doing business in California. Wayne and Company completed a study on the competitive viability of business in the Golden State business regulatory climate. The goal of the report was to have access both to the current state and the anticipated trajectory of California competitiveness. The California competiveness project integrates the depth of economic analysis with the viewpoints of key corporate decision makers and policy experts to provide a clear understanding of the true trajectory of the state's economy and what will improve it.

The analysis revealed that the cost of doing business in California is 30 percent higher than average in other western states, and it truly is. I have 33 offices in the United States, and the three offices here in California is 30 percent higher than all the other offices.

And this being said, California regulatory environment is the most costly, complex, and uncertain in the nation. Chiefexecutives.net has ranked California as the absolute worst U.S. state for business.

In order for California to compete in this current environment, we must provide a more free emission allowance to California employers. Cost of doing business in California is already 30 percent higher than any neighbors. The cost of buying emission allowances will force employers to reduce its production as its facilities or even shut down its operation, thus adding more to the California deficit.

Once these policies are in place, employers will have to take immediate action in operating its facilities. Companies cannot afford to wait and see how these regulations pan out or how it impacts its bottom line. The immediate impact will be to reduce costs by slashing payroll. This will put more strain on California's deficit.

We can meet our emission goals without an auction and free allowances will prevent environment leakage.

CHAIRPERSON NICHOLS: Can you wrap up, please?

MR. COLON: It's important that the overall impact of all business-related legislation be carefully considered by analyzing and assessing the impact of these legislative proposals on business climate in California and how it effects the livelihood of its population. Please do not put Californian jobs at risk for no reason. A strong California is a working California. Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. BALIK: Madam Chair and Board, thank you for the opportunity to speak.

My name is Randy Balik, and I work with a few different companies. The one I'm representing here, Beacon Environmental Energy. We are a small business out of southern California that services 100 percent of petroleum industry.

Incidentally, I also have a renewable energy business. And so both of these two are environmentally-focused businesses. So when you listen to me talk about this issue, I'm actually talking about it from the terms of someone who is pro-environment, but also, for lack of a better phrase, pro-logic.

My company, Beacon Energy Services, has 45 employees. We've been growing through the last four years of this tough economy. I am the face of small business. Right now, this Cap and Trade Program is putting an entire sector of small businesses at risk. And I'm not one to say put jobs ahead of anything else. But in this case, we have to put jobs first. We can sustain the environment. We can sustain our resources, but we've got to look at jobs in our economy here in California.

I believe in environmental preservation. If you just look at the business I'm involved in, but I also believe that environmental preservation has to be done with logic, good sense, and equality. If CARB does doesn't modify its current course and help heavy industry at least in the near term, small businesses like mine will have two choices: Either leave California or close down. That's it, period. When I say "near term," if you look at the industries we service, such as the refining industry, they plan years in advance for major capital improvements and capital investment. These programs we have put forth here don't allow them to do that. That goes straight down the line to companies like mine. If they can't plan, if they can't invest, if their future is uncertain, so is ours.

As I said before, my company is hiring. We're growing. But I've got 45 employees whose lives are literally at stake depending on what we do here.

So please do the right thing. And by right, I mean find the sustainable balance so we can protect both the environment and California industry. We can do this by offering more free emission allowances. And I urge you to consider that. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Dan Hoffman.

It's not against the rules to applaud either. It just cuts into people's time.

MR. HOFFMAN: Good afternoon, Madam Chairman.

My name is Dan Hoffman. I'm the Executive Director for the Wilmington Chamber of Commerce. I thank you for giving me a little time this afternoon.

There was a question that was brought up earlier. It's a matter of jobs, but whose jobs do we protect. As the Director for the Wilmington Chamber, I'm here to tell you this afternoon I'm here to protect Wilmington jobs, protect Carson jobs, to protect jobs in the South Bay.

In Wilmington, we have three refineries, Vallero, now Phillips 66. We used to be Conoco Phillips and Tesoro. They provide thousands of direct jobs and tens of thousands of indirect jobs. They're crucial to our local economy, to our restaurants, the stop and go. They're crucial to our non-profits, who I think could very well collapse if even one of them were to go away.

They're crucial to our projects because they have thousands of hours that are volunteered year after year toward local schools to tree plantings.

Our California refineries, according to the South

Coast AQMD, are the cleanest refineries in the world. That's something we should be proud of. It's something we need to protect. And according to the study that was done by the California legislative office -- not the study, but their comments, an allowance is unnecessary in meeting the AB 32 goal of reducing greenhouse gas emissions.

And so I hope and I believe all of you want to protect jobs and that you want to protect the environment and we want the same things and working together we can do that. Thank you.

CHAIRPERSON NICHOLS: Leonard Robinson. Is Mr. Robinson here?

No. Okay. Lori Bateman.

MS. BATEMAN: Good afternoon. Thank you for having me.

My name is Lori Bateman. I'm a single mom from Benecia. I'm not anti-environment. I have been environmentally conscious since I was five-years-old, because having been raised by hippies.

I support being green as much, if not more, than most. But I strongly oppose the current implementation of California's AB 32 law.

I've been working in refining operations for nearly 24 years. I'm well aware that California refiners are world leaders in emissions reduction.

As a resident, I appreciate the efforts to do our part in climate change. However, I do not support jeopardizing California jobs for what will likely be a negative effect on our climate.

In calculating the effectiveness of AB 32, the State cannot take credit for emissions reduction as the result of a loss of a California refinery being shut down. California refineries are already some of the lowest emissions in the world. And the loss of reduction just means we have to make up the difference with foreign fuel from states or countries that don't have our strict environmental regulations. And last time I checked, we were all on the same planet.

You said to Conoco you would support holding out-of-state refiners to the same standards. How are you going to do that? Prevent imports? Not let people bring their fuel in?

If AB 32 is so expensive it causes California refiners to leave, not only will it have a negative impact on the environment, it will have a devastating impact on the economy. Not only will jobs be lost, but communities where refineries reside will experience a financial collapse, from the loss of tax revenue that the refineries provides as well as support for the community programs that receive both money and volunteers.

And I'm going to go away from my speech for a second, because I found this in my mail yesterday. It's the quarterly newsletter from the Contra Costa and Solano Food Bank, which I would be there today volunteering, but I'm here instead because we help every third Thursday of the month. I decided to look at the list to see if Valero is on the list. That's the company I work for. Not only is Valero on the list, so is Chevron, Tesoro, Shell, Phillips 66, and the Dow chemical company. And not only are they on it, there's Contra Costa Electric, PGE, Biggie Crane, and Air Products, all companies that also we support. They support us, and we support each other in the California economy.

My co-workers and I are very afraid that California will tax our employer right out of business and our families and communities dependant on our industry will suffer for nothing. If you don't think it can happen, consider this. Last time I was here, there were about 50 people from the refineries formerly known as Conoco Phillips, now Phillips 66. They were here because they were afraid. One of the Board members remarked that Conoco Phillips made $14 billion last year. Why can't they invest some of it in the environment? What happened? Conoco Phillips left. They cut their refinery loose and took their $14 billion to Texas with them.

The writing is on the wall that they are positioning to be able to close business in California.

CHAIRPERSON NICHOLS: Thank you.

MS. BATEMAN: And that will be devastating to the employees --

CHAIRPERSON NICHOLS: I believe the company was purchased by another oil company; isn't that correct?

MS. BATEMAN: No.

CHAIRPERSON NICHOLS: That doesn't count?

MS. BATEMAN: They weren't purchased by another. They just made the refinery a separate entity?

CHAIRPERSON NICHOLS: They cut the company loose. Thank you.

Mr. Robinson.

MR. ROBINSON: Okay. Chair Nichols and Board, my name is Leonard Robinson. I'm on the Board of the California Black Chamber of Commerce also Chair of their Energy and Environmental Committee.

Things will change when the pain of staying the same is greater than the pain of changing. And AB 32 is one of those things of changing because there was a lot of pain. It's already having positive impacts in California. So let's move ahead. Perfection is the enemy of the good. You can perfect, perfect, perfect, by the time it's too late.

Carbon markets put a price on inefficiency and shifts spending from polluting to clean goods and service. The long-term financial benefits will mostly exceed the short run implementation cost.

Now I speak from experience. I spent 14, 15 years at a steel mill, 14 years we were very profitable. The only year we weren't profitable had nothing to do with environmental regulations. It was just the energy issue and labor issues.

We are on the right track. Our economy still ranks sixth, seventh, eighth in the world. The AB 32 design will allow California's most innovative firms to benefit from the clean tech investment.

AB 32 -- and I call it AB 2. I was there that cold day on Treasure Island when the Governor signed the bill. I still remember he said, "We're going to eliminate global warming." At the time, warming was a good idea because it was a cold day. It's a powerful engine of innovation in California critical to the creation of a vibrant clean sector to the growing efficiencies savings for small main stream businesses. AB 32 is not one policy. It's a portfolio of strategies to transition California to the green energy economy.

Now, industry -- various industries have a long history of claiming that any given regulation would drive them out of business. I know everybody here is too young, but I remember the Clean Air Act, the Clean Air Act amendments. I remember the Clean Water Act. I remember TOSCA. I remember the Resource Recovery Act. And I remember all these acts. And that was going to drive business out, and we were all going to go to an economic Armageddon.

You know what? Right now, the way things are going, we are already in an economic Armageddon. It has nothing to do with AB 32. I think AB 32 is one of the tools that will bring us out.

When an industry operates in a perfectly competitive market otherwise, there is always the potential for windfall profit and free allocation. Environmental regulation, particularly with market-based approach, is mainly served to move spending from polluting to clean goods and services.

In summary, AB 32 is one of the few pieces of regulation that address disadvantaged communities at the front rather than a reaction at the end. So the California Black Chamber of Commerce in the beginning weren't supportive of AB 32, but as we had dialogue and, Chair Nichols, you met with the President Aubrey Stone, we had a dialogue and there was an understanding.

So the California Black Chamber supports AB 32 cap and trade. And we're working with the Governor's office for two items if he signs will help California keep their promises to disadvantaged communities. Thank you.

CHAIRPERSON NICHOLS: Thank you. Appreciate that.

Morgan Hagerty.

MS. HAGERTY: Good afternoon. And thank you for the opportunity to speak today.

My name is Morgan Hagerty with CE2 Carbon Capital.

CHAIRPERSON NICHOLS: You need to speak closer to the mike. I'm sorry.

MS. HAGERTY: Sure. Is that better?

CHAIRPERSON NICHOLS: Yes.

MS. HAGERTY: CE2 is a San Diego-based company that develops and invests in carbon offsets and renewable energy projects. We applaud the Board and ARB staff's tremendous efforts to date and strongly support a market-based solution to achieving our state's AB 32 targets.

While we understand that ARB is focused on launching the first auction in November, it is important not to overlook the time sensitivity of approving new offset protocols.

We are concerned about the potential offset shortage that has been forecast by multiple independent analysts, including a report recently released by the American Carbon Registry. As an offsets investor, we have firsthand knowledge of the time it takes to develop eligible projects. And we agree with the conclusion that offsets supply is unlikely to meet demand in the first compliance period and through 2020.

Offsets were included in the program as a cost containment measure. In order to be effective as a cost containment mechanism, there must be a sufficient supply of offsets. ARB and WCI's own economic analyses indicate that allowance prices will be very sensitive to an adequate supply of offsets. The issuance of offset credits is not a switch that can be flipped to add immediate supply to a short market. If new protocols are not brought to the Board for approval until the end of 2013 as was indicated last week, the signal to the investment community will not be sent in time to trigger the issuance of substantial offset credits from new protocols before the first in November of 2015. This will lead the higher compliance costs for California businesses and rate payers.

We encourage the Board to improve new protocols this year, to focus on existing protocols with environmental integrity and high volume potential.

We request that the Board ensure the evaluation process is highly transparent and provide an update on offsets at the October Board meeting next month.

To address the forecasted offset supply shortage, we ask the Board to promptly evaluate the coal mine methane and early action landfill gas protocols to reconsider the pneumatic valve protocols and to remove the Hawaii and Alaska exclusions forestry projects in light of the recent data provided to ARB staff by the U.S. Forest Service.

We appreciate how hard the Board and staff have worked and recognize that you have a very, very full plate. We make these requests to ensure the program is able to rely on offsets for cost containment. Thank you very much for your time and consideration.

CHAIRPERSON NICHOLS: Marlia Maples.

MS. MAPLES: Good afternoon. I'm Marlia Maples. I'm the owner of a woman-owned owned business, TJM Distribution in Bakersfield, California. I'm past president to the Ladies Auxiliary of the VFW Post 10859. Today, I'm here representing myself as well as Jake Aldred, commander of the El Camino Post of the American GI Forum.

Times are tough all over, but they're especially tough for our veterans. We cannot afford regulations that will make it harder for our veterans.

To support improving our -- we support improving our environment and our economy, but a Cap and Trade auction will not accomplish these goals and could set us back. The Legislature's analysis report that an auction is not necessary to achieve the emission reduction goals of AB 32 and could instead obstruct these reductions by causing leakage to other states.

The auction could also cause businesses to close. We view the fight against global warming in military terms. When you plan for a battle you ask yourself: What is the objective? What is the cost? Will the outcome be worse the cost?

A cap and trade auction will not advance the objective of emission reductions and may, in fact, compromise the mission. It will cost millions of dollars as well as lose businesses, jobs, and revenue. Clearly, the outcome will not be worth the cost.

TJM Distribution and the American GI Forum does not want our veterans or anyone else in California to suffer damages in this unnecessary auction. Either increase the free admission allowance or delay the cap and trade until you can come up with a cost effective winning strategy.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mike Robson and Jose Duenas.

MS. MAZUR: Madam Chair, Board members, thank you for this opportunity. My name is Nicole Mazur. I'm here representing the Valley Industry and Commerce Association and the 100,000 businesses and 1.8 million residents of the San Fernando Valley.

VICA strongly supports giving additional emission allowances to California's top employers and economic drivers in order to ease the impact of instituting a cap and trade auction. The auction will have significant impact on California's employers, forcing them to cut back on other expenses beginning with payroll and an increased customers price.

We urge the Board to make responsible planning decisions rather than waiting to see how the auction hurts employees and customers. It is worth noting that the Legislative Analyst found our state can meet its emission goals without an auction, yet the business community is willing to accept the decision of this Board to move ahead with the auction.

We simply ask for measures to ease this economic impact. VICA strongly urges you to approve this proposal for transitional assistance. California cannot afford to fulfill its environmental targets at the expense of its economic goals. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Mike.

MR. ROBSON: Good afternoon. Mike Robson here on behalf of the Glass Packaging Institute.

Glass Packaging Institute is the association of the five glass container manufacturing plants in the state of California. There are 2600 union workers.

I've testified here at this Board before on this matter on the issue of the glass container industry's benchmark. And GPI is still seeking a change in the emissions benchmark for the industry. GPI doesn't believe the consistent benchmark properly addresses the early action the industry has taken to reduce emissions. And as a result, it doesn't -- the benchmark doesn't help to minimize the risk of leakage in this industry.

As you guys know, the credit for early action and minimizing leakage is both a mandate of AB 23.

So I really want to quickly just describe what the industry's early action has been just so that's out there.

Over the years, over the last 20 years, GPI member companies that pay millions of dollars in fees to the state to support the state's recycling infrastructure to support the State Bottle Bill. The success of

California's recycling law has resulted in millions and millions of pounds of recycled glass being put back into the glass plants to make new glass bottles. And the use of this recycled glass lowers the emissions from manufacturing new glass bottles much lower than the use of raw materials.

And so the benchmark -- in order to get credit for this early action, what CARB -- what we believe CARB needs to do is compare the California glass plants, which are among the most efficient in the world, with other glass plants in the nation. Or at the very least compare use data -- use emissions data from the California glass plants that are other than the 2009 data that's currently used for the existing benchmark. If you use data that goes back further than 2009, you would then have an ability to measure the early action. 2009 was a peak year. It was a high year for the use of recycled glass in California.

So we're hoping that coming here today and see the staff report that the staff would talk a little bit about the efforts that they've been undergoing with the industry to adjust the benchmark. There is a note on the six page on the -- sixth slide I think of the continued work on benchmarks, and we appreciate that. We're hoping that the information we're getting today and our continued work with the staff that in the future meeting there will be a resolution to direct the staff to adjust our benchmark.

CHAIRPERSON NICHOLS: Thank you.

Jose Duenas.

MR. DUENAS: Good afternoon, Madam Chair and members of the Board. My name is Jose Duenas. I'm the President CEO of the Alameda County Hispanic Chamber of Commerce representing over 18,000 hispanic owned firms.

Our members support the goals of AB 32. We would like to support the cap and trade, but believe the program as planned is seriously flawed and is contrary to AB 32's goals. AB 32 specifically requires that greenhouse gas emissions and reduction policies maximize emissions reductions and maximize costs.

The cap and trade auction does neither. According to the Legislative Analyst, auctioning emissions allowances instead of providing them for free will cause economic and environmental leakage. In other words, increase cost to the point where businesses close down, down size, or relocate to other states.

An auction would encourage large industries to shift production to other states where air quality regulations are not as tough, which we would, at best, keep emissions at the same level and would increase them.

Also, according to the Legislative Analyst, an auction is not necessary to meet the emission reduction goals of AB 32. The purpose of AB 32 is to reduce greenhouse gas emissions and not raise revenues for the government or to make it difficult, if not impossible, for many businesses to survive here.

If the goal is reducing emissions, we should do it with a Cap and Trade Program with 100 percent free allowances. Throughout the state of California, we have over 600,000 hispanic-owned business that represent $90 dollars in revenue. I hope that you keep that in mind, because some of those businesses might not be around. Thank you.

CHAIRPERSON NICHOLS: Thanks.

If you can look up on that chart there and see that you're going to be next, we could hear more people if whoever is next would be ready on that to stand up and speak. Thanks.

MR. EISENHAMMER: Good afternoon, Chairman and members of the Board.

I'm here representing the Coalition of Energy Users, which is a nonprofit advocate for affordable energy and job creation. We represent 5,000 Californians, 40 percent of whom are small business owners.

It was mentioned earlier that nobody needs to participate in the carbon auction. But if the technologies to comply do not exist or if you can't afford them, then a struggling small business owner does need to buy credits. However, based on the earlier comments and those of the professor, it seems as though you have already made up your mind that more free allowances are not on the table. If that's the case, why don't you just say so and not give these good people who took a day off from work false hope.

CHAIRPERSON NICHOLS: What small business owners are going to have to buy allowances under this program?

MR. EISENHAMMER: Small business owners who are not able to afford to comply with the program.

CHAIRPERSON NICHOLS: What are they subject -- if they're not under the cap, they don't have to have any allowances at all, small businesses owners. We're talking about the firms that are actually subject to the cap and trade allowance requirement. How many firms is that again, staff?

About 500 businesses in the state of California.

MR. EISENHAMMER: I hear of businesses leaving the state every day.

CHAIRPERSON NICHOLS: It's possible that that's true, sir. But if you're an advocate for those businesses and you're telling them that they're going to have to buy allowances or hold allowances when they're not subject to the rule, you're not doing them a service.

I'm not trying to argue with you about whether or why people decide to do what they do. But we're here for an update on a rule that is in existence right now and not to do anything at the moment, as we said at the beginning, about the rule.

So we've been discussing this rule now for several years. And I think it's been clear all that time that the Conoco Phillips people are subject to the rule. They know they're under the cap. They know who they are. People who are not subject to the cap aren't under this rule. So they may not like it for some other reason because they don't like having anything happen about cap and trade. But they're not subject to this requirement. They are not in the auction. They don't have to hold allowances, whether they get them for free. If we were giving out allowances here today, they wouldn't be getting them because they're not part of the Cap and Trade Program. Okay. Thanks. All right.

Mr. Newell and followed by Mr. McIntyre.

MR. NEWELL: Madam Chair and Board, thank you for hearing me today. I work with Guardian Industries, Corp. We're the largest glass producer in the United States. We operate a glass plant in Kingsburg, California and a molecular coater.

We started major investments toward cleaning up greenhouse gases in 2003, including the opening of an molecular coater are 2004. Even though the coater uses about 5,000 tons worth of electricity in terms of carbon, it's reducing 500 times that in your businesses, in your homes, and in diverse products. Okay.

So few years later, we were planning for five years to do a major repair on the facility in 2008, the cost of $120 million. During that repair, we had already set our sites on reducing our CO2 emissions, and we set a brand-new BACT standard for the glass industry. Some of our competitors aren't happy about that because we blew through the existing standard and cut it more than by half.

So we're the cleanest glass plant in the United States right now. Yet, the 44 percent reduction in CO2 emissions achieved in that cold tank repair in 2008 are not recognized. And we were shocked when we found out our base line, our benchmark, put us in an awkward position where we were going to have to buy greenhouse gas credits. We did a little investigation and we uncovered some very disturbing facts. We made that known to staff, and we will continue to work with staff at trying to correct that benchmark.

But, the fact remains, moving forward, we have already installed the technology, and there is no current technology to take us down lower. As this cap gets crunched down on us into the future, we have typically a 17 to 20-year life expectancy on a furnace. In fact, if you look at when the plant first opened in 1978, we're 25,984 tons of greenhouse gases lower now than we were back in 1978.

So I think we've gotten a little bit better than the 1990 standard. Quite a bit better. And we will continue to strive to move forward in the future as we continue to add another unit into the molecular coater that is going to add more energy efficiency to the product heading out to the commercial residential customers.

We are also investigating every energy options that we can in the facility. But that's not going to change what's the benchmark going to do to us. If, in the future, if we are not cold tank repair yet, we can't make major changes. That means we must reduce production. Reducing production means laying people off. That is an unfortunate fact, but that's how things work.

We also manage fiberglass products used throughout the building industry and automotive products. There is a lot of things the glass is being used for today. A lot of the solar panels being produced today have our glass in it. That glass has tremendous downstream help to get to our goal.

I thank you very much for your time today a great day.

CHAIRPERSON NICHOLS: Thank you for being here.

MR. MC INTYRE: Good afternoon, Chairman, Board.

My name is Charles McIntyre. I'm President of the West Coast Protective League and represent the workers in the glass container manufacturing here in California. I'm a third generation glass worker myself. We're talking about an industry that has the long generation of family workers in this industry.

And as Mr. Robson mentioned about the benchmark, we would really like to have that looked at and have that benchmark truly reflect our industry.

I heard a gentleman talk about, you know, the steel mill. My family, they worked in glass and they worked this steel. Show me a steel mill around here. I know where they're at. They're oversees.

So, for an example, since 1980, we had roughly over 20,000 union glass jobs in the state. Now we lost 18,000. Mr. Robson said we had 2600. That's about 2300. We are starting to hire a little bit. But the economy really hit these factories hard, because the profit margin is really, really small in glass. Anything in the economy, energy, materials, any blip, it affects our workers. And we do have job losses and leakage. So if we don't get this benchmark fixed, it's going to be bad.

Mike, he spoke about the bottle bill. We put millions of dollars -- these container industries put millions of dollars into the Bottle Bill. And we rely on that Bottle Bill. We relied on that recycled glass. We have the 35 percent minimum content these factories have to make. But with this Bottle Bill, as you all know, the politicians here in Sacramento, they raid that fund. When they raid that fund, it puts our industry at risk. And when it's at risk, we lose jobs.

We have to look at this that they are a green industry. You have to look at our products as being green. It's because of what we make. And as to you guys -- everybody talks about green this, green that. And I've heard saying, yeah, we're going to have some job losses and we don't know what the new jobs are going to be. They're building more Wal-Marts and we are losing for manufacturing in this state and we need to protect these jobs.

So anyway, Madam Chair and Board we'd appreciate if you would reconsider that benchmark and take a look at it for us. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Jason Ikerd and Nicholas Balistreri.

MR. IKERD: Thank you, Madam Chair, members. My name is Jason Ikerd. I'm here today on behalf of Qualcomm, Incorporated.

Qualcomm is one of the but-for CHP entities that staff presented to you on earlier this morning. And they made their investments in combined heat and power in an effort to reduce greenhouse gas emissions in the state, and they were successful. Those investments have resulted in a reduction of a little bit over 6,000 metric tons of greenhouse gas annually.

Qualcomm has found that combined heat and power works well for their operations. And they're a growing company in California. And they would like very much to continue to rely on combined heat and power as they expand. But unfortunately, the cost of compliance under cap and trade is such that it would be very difficult to do so.

For those reasons, Qualcomm is pleased to see in the resolution that's before you today potential exemption for but-for CHP entities such as Qualcomm. They believe that's appropriate for the Cap and Trade Program. They believe it's consistent with the Governor's finding and the findings of this Board that combined heat and power will result in a reduction in greenhouse gas emissions.

And so they support that aspect of the resolution. And they look forward very much to working with the Executive Officer and your staff to resolve this issue as quickly as possible. Thank you.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER ROBERTS: I want to thank the staff for working. As you recall, this was not just Qualcomm, but some of the universities and others have really done things that we had hoped they would do and very environmental in terms of their movement. So I'm glad that we're getting this worked out. Thank you for your testimony.

CHAIRPERSON NICHOLS: Okay.

MR. BALISTRERI: Madam Chair, Board members. My name is Nicholas Balistreri. I'm with the University of California.

I want to thank you for addressing the concerns of the university and let you know we support your initiative. U.C. is committed to working with the state of California and the Air Resources Board in reducing statewide greenhouse gas emissions. We look forward to working with ARB staff towards this goal.

U.C. has a long track record of supporting the state's environmental goals and has been a leader in adopting energy-efficiency technologies and renewable energy solutions. Over the last three years, we have invested a quarter of a billion dollars and partnership with the state investor-owned utilities for energy efficiency retrofit projects.

U.C. has invested heavily in state-of-the-art highly efficient cogeneration plants. We have over 130 megawatts on our campuses. And these are the primary source of our emissions that bring us under the cap and trade program.

We have also invested in over 17 megawatts of renewable energy capacity on our campuses.

U.C. does not plan on resting on its laurels. We will continue our environmental stewardship in the state of California. By recognizing our previous efforts to determine a compliance obligation, U.C. will more easily be able to invest in carbon reduction projects.

We look forward to investing in biogas development, teaming with wastewater treatment plants to upgrade the facilities and put methane to productive use. We'd like to design, source, and construct large-scale organic waste from manure and agricultural byproducts to produce biomethane and use those in our facilities.

We'd like to fund large-scale remote side renewable energy projects to be consumed on our campuses.

We'd like to fund small-scale renewable projects, such as roof top solar, on more of our campuses.

We'd also like to have capital improvement projects towards our combined heat and power plants for higher electric conversion efficiencies.

We appreciate the assistance outlined today and the efforts taken by the Board to address our previous efforts. This initiative will help reduce our future operational cost and will help us through these tight fiscal times.

We look forward to working with ARB staff on implementing these regulations. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

BOARD MEMBER ROBERTS: My previous comments were premature. I didn't realize they were next up. That's exactly what I was talking about. So thank you.

CHAIRPERSON NICHOLS: Well, you know, staff really has been working with a lot of different industries. And some problems are easier to address than others. The CHP one, once there was thought given to what the policy was there, it wasn't all that difficult to see that you had to separate out the electricity portion from the rest of the emissions. Some are more complicated. There's no doubt about it. And so we're still working away.

Nick.

MR. LAPIS: Good afternoon, Chair Nichols and Board members.

Speaking of complicated issues, I think we have one in our sector. My name is Nick Lapis. I'm with Californians Against Waste. We are a statewide environmental organization founded around promoting recycling, reducing resource use, supporting conservation.

We join our environmental colleagues in supporting the ARB auction mechanisms, but we have strong concerns about the waste-to-energy exemption that was added into the resolution that's before you today. This is the third paragraph of the resolution, and it's the third paragraph -- third page and third paragraph of the resolution.

We have strong substantive reasons that -- greenhouse gas reasons for believing waste to energy facilities should not be exempted from the cap. That includes the emissions from these facilities are not necessarily going to go to uncapped sector, which is what the industry claims. We believe a lot of these facilities compete with recycling, not only landfills. So if we decrease the compliance obligation required of this sector, we are decreasing the competitiveness of the recycling industries that reduce greenhouse gases. And that creates significantly more jobs than this iteration.

We also believe that this action is based on a misinterpretation of a Cal Recycle study. And that study compared the emissions from landfills and waste-to-energy facilities. It did not speak to the combination of what affect the exemption of these facilities from the cap would have on recycling and other greenhouse gas reduction entities.

But most importantly, we're concerned about the process that has undergone since the last time this was before you. If you remember the last time that you acted on this, it was in the 15-day changes at October's Board meeting. At that time, there was a proposal to exempt incinerators from cap and trade, as one of the 15-day changes. The Board elected to not take that option and directed staff to have a stakeholder process to evaluate both waste-to-energy emissions, but also emission reduction opportunities from recycling, potential emissions from landfills, and the whole suite of inter-related industries.

Since then, there hasn't been a single public workshop. There hasn't been a single stakeholder meeting. There hasn't been a single discussion of what we should do, what we shouldn't do, what the greenhouse gas implications are of this kind of action.

So you can imagine our surprise when we heard last week that this would be taken up as part of a resolution that had not been publicly noticed in terms of this item would be a part of it and where no public process has taken place.

We think it's premature to come to the conclusion that exempting waste-to-energy facilities will have a positive greenhouse gas benefit.

We do support staff analyzing this sector further and reaching conclusions with stakeholder input on what to do. But at this point, I don't think we're ready to say that the pre-determined outcome of that action should be exempting these facilities, which is what the resolution says. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Monica Wilson followed by Beth Vaughan.

MS. WILSON: Good afternoon. Thank you again for the opportunity to speak to you today.

My name is Monica Wilson. I'm with an organization called GAIA, Global Alliance for Incinerator Alternatives. We have many members across California and around the world who represent environmental justice organizations and others who care a great deal about what happens to waste and recycling.

And I wanted to comment specifically on the same proposal that you just heard about, the proposed resolution to exempt incinerators from the cap.

I wanted to make three points today. One is that know that CARB is already moving in the right direction by recognizing the role of recycling and the composting in the mandatory commercial recycling work that you've already put forward that we already heard about today. And with California's new 75 percent recycling goal, this is definitely moving us in the right direction we hope this is just the first of actions -- number of actions from CARB that will support this sector and the growth of jobs through recycling and composting and the important role they play in greenhouse gas reduction and energy conservation.

My second point is that -- go back to the first point -- that supporting incinerators is actually a problem for recycling, because they compete for the same materials. So incinerators would like to burn plastics and paper and cardboard and many of the same materials that recycling sector needs and where we recognize greenhouse gas benefits from recycling.

On my second point is what's up for debate today is really about the fossil fuel emissions from the incinerators. What happens when we burn plastics and do we count the burning of plastics, which comes from fossil fuels. And I argue we should, because they're coming from fossil fuels. And that's really an important thing to recognize when we're looking at where greenhouse gas emissions are coming from.

And then my final point is around environmental justice. There is new research that looks at the siting of incinerators across the United States, and it's really clear that where incinerators are built is predominantly in communities of colors and low-income communities. I would hope that under the cap we can reduce greenhouse gas emissions from incinerators, but also reduce the co-pollutants that are of great concern.

So I hope in this resolution we can have a public process to address this issue and a transparent process with Cal Recycle and other who are experts in this field and figure out what is really the best approach for supporting a recycling sector in California and for dealing with waste under this cap.

Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

David Lizarraga and Andrew Barrera.

MS. VAUGHAN: Thank you. Chairman Nichols and Board members, thank you very much for the opportunity to make comments.

I'm Beth Vaughan, the Executive Director of the California Cogeneration Council. Our members have 34 combined heat projects here in California. And as Chairman Nichols pointed out --

CHAIRPERSON NICHOLS: We want more

MS. VAUGHAN: So would we. And they come in all shapes and sizes. And consequently, it is complicated. And I would say they're all impacted differently under the cap and trade regulation.

But I'm very pleased to be here today to support Resolution 12-33. And in particular, there are three out of six resolutions here that impact combined heat and power facilities and consequently my members.

I think the last time I was here testifying was at the auction proceeds workshop where I was asking for help from the proceeds. But this is our preferred option, specifically transition assistance for those that are caught up in the legacy contracts. And in particular, the but-for CHP facilities, the exception of the first compliance period which you heard from previous speakers.

I think that these are the correct direction. We've been advocating this now for a year-and-a-half. And I think this is the right direction to go in.

I would urge the staff to convene the stakeholders as soon as possible to help set expectations. I appreciated the letter that Chairman Nichols sent to Assemblyman Fletcher at the end of August, but I was inundated the next day with all sorts of phone calls with everyone thinking they got included in the category of but-for CHP.

I was actually pleased to hear Mary Jane in her description identify it was probably less than a dozen. Similarly with legacy contracts, there's 17. I think we need to get out there and talk with the stakeholders and make sure people understand what the rules are and around eligibility. And we're more than happy to help with this large and strange membership. We're a good litmus test for all the different ideas folks have of how to develop these methodologies. So thank you very much.

CHAIRPERSON NICHOLS: Mr. Barrera.

MR. BARRERA: Actually, I'm playing two roles here. Mr. Lizarraga asked me to speak on his behalf.

As you know, Mr. David Lizarraga is the President and CEO of TELACU. Also the former Chairman of the United States Hispanic Chamber, and a long time civil rights champion for low and moderate-income communities, which includes the consumer based small businesses communities as well.

He has delivered a detailed letter that has already been entered into the record, but I'll just cover some of the main points that he's covering.

Madam Chair and honorable members of the Board, TELACU is a 40-year-old institution committed to service, empowerment, and self-sufficiency. Our unique business model for the communities and economic development is based on profitability, concurrent with positive impacts on people and in their communities. And we evaluate government policies on the same basis. And in our belief, it must meet these same standards.

We regret to say that cap and trade as currently structured will likely impair the profitability and sustainability of small local businesses as it will have a negative and social impact on our communities as well.

The element of the program that we find troubling is the intent to withhold free allowances from regulated entities and require them to purchase them on an international auction. You have seen the legislative analyst's opinion that the auction would created economic and emission leakage; whereas, free allowances will minimize compliance costs and protect California businesses and revenues.

The LAO also concluded that AB 32's goals can be met without an auction. So to pursue an auction under these circumstances is unsupportable.

Admittedly, there is some discussion of implementing programs to mitigate these costs with respect to small business and low income communities. But there is absolutely no evidence or reasonable guarantees that such programs will be sufficient and to fully remediate what this agency has described as a necessary price on carbon or that available funds would be fairly and effectively and efficiently distributed.

A more likely scenario is that we will see a significant business flight and excessive job loss, declining revenues and a further erosion of the social safety net. This is unacceptable. TELACU is supportive of a well-designed Cap and Trade Program, provided that it is compatible with our model of profitability and genuine social responsibility.

A return to free allowance model for cap and trade would be an important step in this direction. Now may I read --

CHAIRPERSON NICHOLS: Sure. You can be two people.

MR. BARRERA: Thank you. I'm playing two roles here. The next statement us much smaller.

Madam Chair and honorable members of the Committee. My name is Andrew Barrera. I'm here representing the Los Angeles Metropolitan Hispanic Chamber of Commerce. I'm a former traction under Richard Katz for the State Assembly and also a former representative of Los Angeles Mayor Richard Riordan.

In Los Angeles, we already are feeling the effects of AB 32. The laws and policies have or will substantially increase energy costs. The Los Angeles Department of Water and Power is also facing enormous costs to comply with the renewable portfolio standard.

For example, rates have continued to go up. And only just the past few weeks, the department has asked for another 11 percent increase. We cannot afford a new emission allowance tax on top of that. That is, in our opinion, the cap and trade auction will be exactly that.

Our chamber is supportive of reducing greenhouse emissions, but it must be done in a cost-effective way. Not only is the auction not cost effective but in our opinion is not necessary.

The Legislative Analyst has warned that without free allowances, we are likely to lose businesses and revenues to other states and along with that the emissions and these companies would take with them.

The LAO has also stated that we don't need an auction to meet our AB 32 emission reduction goals. We can think of no reason to move ahead with this. And with the amounts -- what amounts to be a multi-billion dollar energy tax when it can be met with the existing AB 32 goals without it. Frankly, we are having trouble understanding why we would even consider this in today's bad economy.

And the L.A. Metropolitan Hispanic Chamber of Commerce urges you to protect our business, our jobs, and amend the cap and trade to include a more free allowance. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

MR. CANETE: Good afternoon. Julian Canete, President, CEO of California Hispanic Chamber of Commerce.

We have often expressed our concern about the impact of AB 2 regulations on small and minority-owned businesses. We are disappointed substantive steps have not been taken to protect these businesses and the communities they serve.

The cap and trade auction will be the most costly AB 32 initiative to date. Numerous recent studies have projected enormous cost, job loss, and significant loss of revenues. The Legislative analyst last month announced that the with holding of free allowances will likely put California business at a competitive disadvantage to the point some would down-size or close. Those likely to close are not large directly regulated entities, but the smaller businesses, the auction cost would be passed on to.

We do not have the resources to pay those costs and don't have the option of moving out of state. We don't have the luxury of waiting it out until you review the impacts a year or two into the program and make adjustments to reduce the cost. We will just be gone.

We appreciate that you may be looking into ways to direct some of the auction revenues the assist those who suffer economic harm as a result of the program. But there is already intense competition for those revenues and it's highly unlikely it will be enough to protect everyone. The Legislative Analyst's has concluded an auction is not necessary to meet AB 32 emission reductions, goals, and that free allowances will protect businesses and the environment.

We are urge you to choose in favor of protecting businesses and their environment by revising the Cap and Trade Program to include maximum free allowances instead of costly unnecessary auction. Thank you.

MR. VERDUZCO-VEGA: Good afternoon, Madam Chair and members of the Board.

My name is Erick Verduzco-Vega, and I'm the President and CEO of the South Bay Latino Chamber of Commerce out of Los Angeles County. And I'm also a proud business owner that is happy to be able to employ nine people with my business.

Our members are hispanic-owned business. The majority of them are small businesses, just much like mine. We are interested in economic growth, and we're also very interested in job creation. And like everyone else in this audience, we want to do this not just for the benefit of our companies, but we want to do this for the benefit of our communities.

And again, we want -- like everybody else, we, too, like clean air. We like clean water. We want to support your efforts, but responsibly.

We're extremely concerned that the auction as planned will have an opposite of effect of what we as small businesses want. The Legislative Analyst has determined that cap and trade will likely increase the cost for most covered entities. And as a small business owner, I'm comfortable in telling you this is going to lead to higher consumer prices for our customers.

The LAO also found those higher costs could cause a leakage of business out of California and will eventually lead to higher carbon emissions. This isn't what AB 32 intended to do.

On the other hand, the LAO definitely states that an allowance auction is not necessary to meet AB 32's reduction goals. It's simple. More free allowances means more protection for California jobs and protection for the environment. Not increasing the number of free allowances means putting businesses, jobs, our communities, and our families at greater risk.

The South Bay Latino Chamber of Commerce respectfully urges you to increase the number of free allowances for the good of the economy, the environment, and the community. Thank you very much.

Thank you.

MR. LOMBARD: Madam Chair and Board, my name is Edwin Lombard. I'm an advocate for minority small businesses and community-based organizations throughout the state of California.

Today, I'm representing nonprofit organizations such as the WLCAC, which is a labor organization, based in Los Angeles. They provide workforce development and job placement for low-income communities and organizations like the MaryAnne Wright Foundation out of Oakland. They provide meals for homeless and underserved communities in Oakland, California.

When you talk about auctioning off emission allowances as part of a cap and trade, you don't talk about it in terms of organizations like these and the people they serve. You talk about putting a price on carbon that will be paid by power plants, refiners, and manufacturers. But the fact is when the cost goes up on these industries, they go up on everyone. And those costs increases, most those will hurt those that can afford them the least.

MaryAnne Wright Foundation, as well as many other nonprofit organizations throughout the state, already are on the verge of shutting their doors because of sky-rocketing utility costs, much of which are directly related to the renewable portfolio standard and other carbon reduction policies. They cannot afford one more dollar of utility increases. They and countless other nonprofit organizations are likely to be the nameless victims of this auction. And their closures will be noticed only by the people who have come to rely on them for the basics of human needs.

I understand that you would like to take some of the auction revenue and use them to help offset these costs. Unfortunately, these organizations cannot wait around for those programs to kick in, if at all.

The most painful part of this is that according to the Legislative Analyst, we can meet the emission reduction goals without an auction.

So our recommendation, our plea, is that you go ahead with cap and trade with more free allowances and without this expensive and unnecessary auction. Thank you.

Mr. Aldrid, Mr. Baggett, Mr. Terebkoue.

MR. BAGGETT: My name is Sean Baggett. Is everyone awake? I know everyone's food settled.

CHAIRPERSON NICHOLS: That's fine.

MR. BAGGETT: Thanks. Hello. My name is Sean Baggett. I'm President and COE of Academia Resource Services. We work with special education students and their families advocating throughout the state of California. Most of them are usually disenfranchised in communities throughout California. Not because the love isn't there; it's because the lack of resources makes it difficult for them to partake in main stream activities because of this loss in revenue.

We all want the best for our kids. And that includes a clean and healthy environment, but we can't afford to waste money on environmental programs that won't have a meaningful impact in those areas. The cap and trade auction to me looks like one of those programs.

The LAO office has said cap and trade will work with or without the auction because it's the cap, not the auction. That will reduce greenhouse gas emissions.

It's also said without free allowances we will lose businesses and revenue, which is another excuse for businesses to flee California.

Between the State's massive deficit, which means fewer resource available to help our special needs children and the ongoing recession which has dried up a lot of the private funding forces, our kids are at a greater disadvantage than they've been in generations. We can't take this chance that the auction will provide enough money to make up for those losses. They're already suffered.

I would hope that we would do everything we can to protect our business, jobs, and revenues that we already have, not risking them by an unnecessary auction. Free allowances and auction is the way to go. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Sergey Terebkoue, Henry Casas.

MR. CASAS: Good afternoon, Madam Chair and Board members.

My name is Henry Casas. I'm the Director of Government and Community Affairs for Soledad Enrichment Action. We are a nonprofit that serves thousands of at-risk youth throughout L.A. County, from as far east as Pomona and as far west as Hollywood, as far south as Long Beach, and as far north as Pacoima, and all the areas in between. We provide educational opportunities for those wishing to finish their secondary education and those seeking vocational training.

What I've seen in my years working with SEA is there's nothing more important to these kids than an education and a real opportunity to get a job.

We believe this cap and trade auction, by increasing costs to existing employers and discouraging new ones from locating here, will make these goals harder to achieve.

Without an increase in free allowances, businesses will be cutting back on jobs, scholarships, and job training programs. What this means to our students, it will mean less opportunity to get internships, financial assistance, and training jobs for good paying blue and white color jobs.

On a second note, our schools would suffer from higher energy and other costs from a decrease in local property and tax revenues. They will experience as businesses downsize or leave the communities all together. The unemployment and drop-out rates in our communities are already alarmingly high. This will make them worse.

Cap and trade can be successful without auction. As a matter of fact, the Legislative Analyst has said free allowance are the way to stop businesses -- are a way to stop business and revenue leakage while maintaining the environmental integrity of the program.

We need these revenues from taxes paid by successful businesses and jobs from companies that are already here, not some that might locate here despite the costs.

Please take the LOA's advice to heart. Free allowances will do our kids much more good than an unnecessary auction. Thank you for your time.

CHAIRPERSON NICHOLS: Thank you.

James Brady and Brenda Coleman.

MR. BRADY: Good afternoon, Madam Chair, Board.

My name is James Brady, and I represent 100 Black Men of America, as well as I'm a small business owner. We are a group of volunteers committed to improving the quality of life for the youth in our local community.

With unemployment African Americans in California among 19 percent, we are always interested in policies and helping create jobs for economic relief for their communities or families. But we do not believe the cap and trade auction will do that. And it may do the opposite. The auction will drive energy costs up by billions of dollars, forcing many business, especially small, to down size or leave the state. That means fewer jobs, disadvantaged youth, and a few dollars available to support community programs.

And while just about everyone who believes the auction will cost billions, there's very little low income communities. Our communities of color getting back what they will have to pay in higher utility and fuel bills.

It's my understanding that we don't need an auction to reduce greenhouse gas emissions under the Cap and Trade Program and free allowances, which would seem a more straight forward and cost effective way to go. And one that won't give false hope to people that have to pay the auction bills.

But one other thing that concerns me is I have not heard even discussed here today -- and it was discussed at the last meeting -- was water. We have water in the air every day. And I think the two elements that need to come together is CO_2 and H_2O. If you don't have a water policy inside of this program, it's just going to drive up a lot of resource for farmers.

So I would like to ask the Board to reconsider. And I know you had asked us last time. We have the ability atmospherically to extract hundreds of gallons of water from the environment every day in climate control, climate change. It's getting hotter every day. The humidity levels are rising. And we have the ability to extract moisture from the air and create pure drinking water and therefore easing the load on the system.

With that, I thank you for your time and consideration.

CHAIRPERSON NICHOLS: Thank you for coming.

Brenda Coleman.

MS. COLEMAN: Good afternoon, Madam Chairman and members of the Board.

I'm Brenda Coleman here on behalf of the Chamber of Commerce. I'm here on today of behalf of over 13,000 members that will either be directly regulated under the cap and/or will experience cost impacts passed down in the form of higher energy and fuel prices.

I think it's important and worth noting that since -- or throughout the entire process Cal Chamber has expressed its support for a well-designed market-based mechanism. That is one that is cost effective and that provides industry flexibility in achieving greenhouse gas reduction goals.

However, as it stands today, this program is far from flexible and far from cost effective, as it seeks to impose a multi-billion dollar energy tax on business and consumers. The imposition of this tax runs completely contrary to the explicit goals of AB 32, which is that of minimizing leakage and maximizing cost-effective emission reductions.

In fact, we believe that the proposal you have before you today to exempt certain entities is a clear recognition and indication of the negative impacts this program will have on the state's economy. We believe, members, that this impact can be mitigated by adjusting the program and providing for 100 percent free allocation to all sectors.

We, like several before me today, completely support the recent recommendations of the Legislative Analyst office on how to protect against emissions and economic leakage from the high cost of the cap and trade auction.

I'll just briefly quote a brief paragraph from that LAO report that said, "A key advance of 100 percent free allocation is it would offset significantly more of the marginal cost increase resulting from compliance with the program as compared to the ARB approach and reduce the potential leakage while preserving the environmental integrity of the program."

In closing, members, we urge you to adjust the program in a manner that is consistent with the LAO recommendation and to allow for 100 percent free allocation.

It is time, members, to stop seeing -- folks stop seeing this program as a revenue source for the state and instead start focusing on ways to achieve our environmental goals in a manner that is consistent with the requirements of AB 32 while protecting jobs and our still struggling economy. Thank you.

CHAIRPERSON NICHOLS: Thank you.

MR. STARK: Hello. I'm Josh Stark, State

Campaign Director for Transform. We're an organization dedicated to world-class transportation and walkable communities.

The Air Resources Board chose a carbon cap and trade mechanism as one method for curbing carbon pollution because it allows efficiencies to accrue to emitters, easing the burden on individual companies who by law must reduce their pollution emissions.

However, these efficiencies only accrue to all Californians to the extent that the mechanism is both robust and predictable and to the extent that revenues from the auction are used to mitigate the mechanism's aggressive impacts and impacts from carbon and other pollutants, also disproportionately borne by disadvantaged communities and non-economic entities such as habitat.

Using the market mechanism to criteria at value for greenhouse gas pollution and giving away all of this value would set a terrible precedent. The mechanism would become unpredictable, sending a signal to large companies to invest in political economy rather than pollution reductions while leaving small businesses to flounder without any direction.

The mechanism would also become far less robust with no clear price discovery for carbon.

Most importantly, without auction revenue capture, the mechanism would lose its ability to mitigate the regressive impacts of carbon pricing and co-pollutant emission reductions inherent in a market mechanism. These imitations are absolutely critical to ensuring that the benefits of cap and trade and thus the goals of AB 32 and the California Air Resources Board accrue to all Californians in an equitable manner.

Transform also commends the Chair and United Steel Workers for considering border adjustments as a way to improve the fairness and robustness of the cap and trade mechanism. Thank you.

CHAIRPERSON NICHOLS: Peter, it's your turn.

MR. WEINER: Thank you, Madam Chair, members of the Board and staff.

My name is Peter Weiner from the Law Firm of Paul Hastings. I want to thank you all for the thousands of hours that you have spent, not hundreds, but thousands of hours, in implementing certainly the most ambitious environmental law in this country at this time.

Inevitably, with something so new and so large, there are what we might call technically glitches. One of those glitches has been the flight of legacy contracts. And I know this Board has been aware of those legacy contracts and the issues presented by them. I'm very pleased to be able to thank staff for their staff presentation today and for including a paragraph on legacy contracts and Resolution 12-33. We are very pleased at the responsiveness of the Board and its staff to this issue. We hope it could be resolved prior to mid-2013, but we are so pleased that you are addressing it.

Thank you so much.

CHAIRPERSON NICHOLS: Thank you. Appreciate that.

Craig Anderson and then William Barrett.

MR. ANDERSON: Good afternoon, Chair Nichols and members of the Board.

My name is Craig Anderson. I'm the Director of Environmental Affairs for solar turbines. Solar is the manufacturer of industrial gas turbines. We haven't powered them by the sun yet. We're working on that.

So just to be clear, we're based in San Diego. We've been there for 85 years. And we have about 4800 employees in California.

Chair Nichols and Supervisor Roberts, as you witnessed to your visit to our facility, our placards and our products show destinations of the U.S., China, India, Malaysia, Europe, Africa, South America. We are providing clean energy solutions to our customers, several of which you heard from today.

We are the only turbine manufacturer in

California, and therefore not a single competitor of ours will be subject to the Cap and Trade Program.

We have very much appreciated the time that staff as well as several members of the Board have expended to understand our very unique business and our concerns about how cap and trade will impact our business. We have voluntarily reported our emissions under the Climate Action Registry. We've been named a climate action leader. We've reported and verified our emissions with the Air Resources Board. We're registered and we will participate in the auction in November. We will do everything possible to comply with AB 32.

However, we remain deeply concerned about our designation as a medium leakage risk. This designation will require us to reduce our emissions or purchase allowances for more than 25 percent of our testing capacity starting in 2015 and more than 50 percent beginning in 2018. We believe that we are a highly trade exposed business. We are more than willing to pay our fair share under this program. But we believe it's not justified for our business to secure more allowances or reduce our emissions in amounts far greater than the 20 percent objectives of AB 32.

The current leakage approach represents a considerable risk to our business. We have and we will continue to work very hard to reduce our emissions from engine testing. Our customers requirements for demonstrating product safety will not allow reductions to meet the requirements. This is not about necessarily the cost of allowances. We are not an energy-intensive business. It is the uncertainty of how the market will function in the future years.

Specifically, I need to stand in front of my business and say that we will be able to secure allowances five years from now, seven years from now, to keep our business running.

We request the Board suspend the leakage designation and corresponding industry assistance factors beyond 2015 until the methodology is vetted through additional studies and reaffirmed by this Board.

This would not impact the planned November auction. Thank you very much for your time. I appreciate it.

CHAIRPERSON NICHOLS: Thank you. Did you submit -- yes, you did. Great. Thank you. Just curious.

MR. BARRETT: Will Barrett with American Lung Association.

Thank you, Chairman Nichols, for the opportunity to speak to you.

The American Lung Association of California has been a strong supporter of AB 32 to reduce the threats to our air quality and our climate. We believe the full package of AB 32 programs must be successful if we are to protect against the worse impacts of climate change.

California's unique air quality problems have elevated the importance of successful implementation of AB 32 to the forefront. Despite our decades of leadership on clean air policy, Californians still experience some of the most polluted air in the nation, largely due to our reliance on dirty fossil fuels.

Numerous studies do link air pollution exposure to asthma attacks as well as increased risk of emphysema, chronic bronchitis, heart attacks, diabetes, strokes and many other respiratory ailments. These specifically impact our children, elderly, residents, residents of low income communities, and communities of color specifically. The public health cost of these illness and deaths add up to billions of dollars a year in California. This is unacceptable. And climate change will only worsen these air quality problems.

So we do believe we must do everything possible to implement AB 32 and cut off all of our pollution problems through cleaner technologies including our smog, soot, greenhouse gas issues, if we are going the reach our clean air goals through our state.

We do applaud the State Air Board for moving forward with AB 32, including the Cap and Trade Program. And I'd like to just quickly emphasize three points about the Cap and Trade Program.

First of all, the Cap and Trade Program places a cost on carbon pollution for the first time in our state, meaning that our air is no longer a free dumping ground for this harmful pollution. Companies that pollute must not only reduce their emissions, but pay for any emissions in excess of the cap. This is a vital policy component that need to move forward.

As you know, the Lung Association initially supported 100 auction as part of the design for the program. And we felt that was going to foster a more rapid transition to clean energy economy.

Now that we've settled on the 90 percent free allowances, we do urge you to hold the line and reject further attempts to get additional free allocation.

We believe that the investment in the cap and trade auction revenue does provide a critical opportunity to further the goals of AB 32, especially in terms of improving air quality and public health. We believe those investments should be prioritized to maximize the goals of AB 32, especially maximizing the public health goals up there. We believe that disadvantaged communities and a clean energy economy will result if the program goes forward as planned.

We think that we can achieve cleaner transportation technologies, cleaner transit and freight systems in our state, clean renewable energy and sustainable community planning are all some of the benefits that we see ripe for investment in the future. So continuing California's clean air leadership is vital to air locally and globally as others look to our leadership.

So I'd just like to end with thanking the staff for their open communications over the course of the development of the program and to the clerk of the Board for helping get stakeholders into the process and in a smooth way. So thank you very much.

CHAIRPERSON NICHOLS: Thank you. Appreciate that.

Ken Payne, are you here?

If not, Belinda Morris. And then Michelle Passero.

MS. MORRIS: Good afternoon, Madam Chair and members of the Board. Thank you for the opportunity to speak today.

I'm Belinda Morris from the American Carbon Registry. We'd like to applaud the ARB staff for all your hard work and dedication in getting the Cap and Trade Program ready to launch. We particularly appreciate the work of Steve Cliff and his team in what you've been doing on the offsets program. We're one of the applicants to become an offset project registry. It's been a pleasure to work with your staff in the application and training process.

We do have some concerns about sufficient offsets supply in the program. A previous speaker referenced American Carbon Registry's recent carbon offsets supply analysis. The analysis forecasts offset apply for all three compliance periods. We found that if covered entities use their full offset quota, they will be a shortage in supply and compliance periods ranging from 29 percent, or around seven-and-a-half million tons in the first compliance period, and rising to 67 percent, or 134 million tons by 2020. We encourage ARB to adopt additional protocols in the very near term in order to fill this gap.

Offsets, as we know, are an important cost containment mechanism. And additional offset protocols approved early next year would benefit the program and the economy in the long term. In particular, the adoption of coal main methane, rice management, and low pneumatic valves could bring an additional seven million tons to the program in the first compliance period, closing the projected supply gap.

We know you are considering coal mine methane and rice management, but we encourage you to reconsider the adoption of the pneumatic valve protocol, which we project could bring five of those seven million tons into the program in 2013 and 2014. The protocol is uncomplicated and enables project developers to produce real, additional quantifiable, and permanent emission reductions in the near term.

I've provided you with a two page summary -- I left it when I signed in -- of the American Carbon Registry supply forecast, and the longer report also be made available to you.

So again, we'd really like to thank the staff for all the diligent work they've done and they continue to do and in the efforts to ensure the smooth implementation of the program. We know that you're very, very busy. And we greatly appreciate the attention you give to the offsets program. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Michelle, and then Cassie Gilson.

MS. PASSERO: Thank you, Mr. Chair Nichols and members of the Board. Appreciate the opportunity to speak.

My name is Michelle Passero. And on behalf of the Nature Conservancy and over 100,000 California members, we express our continued support for the Cap and Trade Program and the numerous measures being implemented by the State to reduce emissions and protect quality of life.

As you mentioned earlier, Chair Nichols, support for these actions are clearly articulated by Californians with the resounding defeat of Proposition 23. We acknowledge a tremendous amount of work and analysis of ARB staff and this Board, as well as the process to integrate public input into the current program design that will reduce emissions efficiently and cost effectively.

And we also agree with the many experts and the Economic Allocation Advisory Committee that the auction of allowances is critical to establish a price on carbon to create the appropriate market incentive to lower emissions and transition us to a low carbon economy. Like many of our other colleagues in other states and countries, California is not doing this alone.

We need this price signal for our own investments in forest offset projects that will lead to greater conservation, greenhouse gas reductions, as well as other public benefits. And the land owners that we work also need this price signal to take advantage of the new market opportunities.

The fees generated from the auction also provide a significant opportunity to invest in additional greenhouse gas reductions that will have the added benefits of facilitating job creation and cleaning our air and water, among other things.

This is what voters supported. And this is what the Nature Conservancy continues to support. So we look forward to the first auction this November as necessary. And we look forward to the many benefits that the program and the Global Warming Solutions Act will provide to all California. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Good afternoon.

MS. GILSON: Good afternoon, Madam Chair and members.

Cassie Gilson on behalf of the Air Liquide. Air Liquide is an industrial gas manufacturer that produces everything from the oxygen you might receive at the hospital to the carbonation in your soda to the hydrogen used by California refineries to produce California's cleaner burning gasoline.

I wanted to commend the Board and staff today for the recognition in the Board resolution of the unique circumstances of firms that are subject to long-term or legacy contracts that don't allow them to pass through the cost of compliance with the Cap and Trade Program onto their customers.

As your resolution reflects, it's critical that these firms are eligible for additional transition assistance, regardless of the subject matter of their contract, whether that be electricity or steam or, in Air Liquides case, hydrogen. This is important to meet the programs goals of establishing a transparent carbon price that can be passed through, as well as to avoid the industry dislocation that would come from forcing individual firms to bare compliance costs that are significantly in excess of their competitors and bare no relationship to their facility's relative efficiency or the amount they've invested in greenhouse gas reduction measures to date.

In closing, I just want to pay a particular thank you to staff who has spent countless hours working through this issue with us. And I look forward to continuing to work with them and you to develop the regulatory language to address the legacy contract issues going forward. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Kristi Foy, and then Frank Caponi.

MS. FOY: Thank you. Good afternoon. I'm Kristi Foy here on behalf of the City of Long Beach. And we want to thank you for addressing our concerns.

The City of Long Beach supports the ARB's approach as outlined in the resolution and supports the exemption and continued review of the waste-to-energy program using the best science available.

We look forward to working with Cal Recycle, ARB, and others as they continue to analyze the potential impacts throughout the waste sector. Thank you for allowing the time for a full and open scientific review. We agree that everyone needs to come together and take a close look at the most up-to-date scientific information that's available. We are confident after this important scientific review and the analysis by staff that everyone's concerns will be fully addressed. For these reasons, we support the resolution. Thank you.

CHAIRPERSON NICHOLS: Mr. Caponi and then Tom Jacob.

MR. CAPONI: Good afternoon, Madam Chair, members of the Board.

My name is Frank Caponi with L.A. County Sanitation District. I, too, would like to support the resolution concerning waste energy.

This support has also been established by our

Board of Directors of the two cities and Los Angeles County that signed a resolution also supporting an exemption of our waste to energy.

I want to take this opportunity to thank staff. This has been a long and hard process that's literally gone on for years. And staff has worked diligently with us. And I want to thank everybody involved in this. And hopefully, one of these days we'll come to a full resolution on this issue.

Just a quick note on the waste to energy. It had been suggested earlier that waste to energy is in competition with recycling. In reality, waste to energy compliments recycling. We only take postrecycled waste. The State of California is at about 60 percent diversion right now. So we take postrecycled after that. When it hits 75, it will still be postrecycled. It hit 90, it would be still be postrecycled. If we ran out of paper and cardboard, we would shut down. It's that simple.

We're looking with the carpet recycler, one of the biggest in the state and most efficient. They have about a 90 percent recycling of carpeting going on, best in the world right now. They have gone ballistic thinking our facility would shut down because they use our facility for that ten percent they cannot recycle. And that's just the reality. There's certain things out there you cannot recycle. Technology will do it, but right now, they need an alternative. And incineration is a good alternative.

I just want to say we support the staff on their efforts to continue to study this problem, and we will work with them very diligently. I'm hoping out of this process -- I think Nick Lapis said earlier we need to take a complete look at everything. And I would support that. We need to look at everything.

And I think what you'll find out when you look at everything is that waste management is an amazing success story when it comes to greenhouse gas reductions. Recycling reduces tremendous amounts of greenhouse gases. You have passed through your early action measure a landfill measure that now makes landfills in the state of California the cleanest in the world. And I'm sure in the updated Scoping Plan you're looking at Phase 2 of that.

Waste to energy is a net greenhouse gas reduction. All in all, this industry has reduced greenhouse gases to very, very low levels and continues to do so. And we want to tell that story because it is a true success story. Thank you.

CHAIRPERSON NICHOLS: Thank you. Did I miss you?

MR. JACOB: Tom.

CHAIRPERSON NICHOLS: Sorry. Flipped my page too fast.

MR. JACOB: That's all right. I'm Tom Jacob. I'm here representing the Chemical Industry Council of California. Some of you may have encountered me in my previous incarnation with DuPont. I'm very familiar with the cap and trade issues with the arguments that Professor Goulder was issuing. I was there in Geneva when Ilene Clauson put the cap and trade on the table in the UN Framework Convention in the mid-90s.

I do believe that if you're going to take on climate change, you must achieve a cost-effective use of capital over the long term. And that market mechanisms such as cap and trade are necessary in order to do that.

However, that long-term benefit does not require an auction. We are concerned that an auction does carry short-term risks of costs that will ripple through an already fragile economy, even to our small or medium enterprises. We appreciate that these are being addressed, but they're being addressed incrementally. And we are not comfortable that is sufficient in the current economic circumstances.

Allowances are not inherently a windfall. We are at a very delicate economic state in California. And that future is all the more uncertain because of what's going on in Europe because of the stabilization in China.

And we believe that there is a very significant potential for political forces to overtake auction revenue and divert significant amounts of it from the use in conjunction with achieving greenhouse gas goals.

Just a couple of final points regarding border tax adjustments. Obviously, there's two dimensions to those when you're dealing from the standpoint of the state like California. State to state issues of movement of goods and services, but also international. And this issue of border tax adjustments is far from settled in terms of its dynamics at the international level, let alone from the perspective of a state as opposed to a nation.

And finally, it's not just a question of getting the policy right. Those decisions do have to be timely. We appreciate the steps that have been taken in recognition of this. But again, we're concerned with they may not be sufficient.

Thank you very much. And again thank you to staff for very forth right and welcoming manner in which they've dealt with our members. We continue to get very positive feedback about those incremental interactions. Thank you.

CHAIRPERSON NICHOLS: Thank you. Okay.

Kassandra.

MS. GOUGH: Good afternoon, Chair Nichols and

Board members. Thank you for taking the afternoon to hear from all of us.

My name is Kassandra Gough. I'm with Calpine, the state's largest renewable energy producer and the state's largest independent power reducer.

I'm pleased to report back to you today that since I last spoke before you in June, we have made significant progress on two of the three issues of concern to Calpine.

The first issue is dealing with legacy contracts. For those of us who have contracts that don't have pass-through provisions, we've had very productive conversations with staff on how to resolve those. And I believe that's addressed in the resolution before you today. So we look forward to working on the details on that in 2013.

The second issue is on auction purchase limit. As you recall, I testified that because of our size, we're probably the largest obligated entity in the first compliance period and we received no free allowances. The auction purchase limit and holding limit are both restrictive and really restrict our flexibility and will impact the liquidity in the market.

On the auction purchase limit, we've had very productive conversations with staff here again to talk about increasing the auction purchase limit and levelizing it among all parties. And so again, we wish that would have happened in 2013, but we're glad to see forward movement on that. And we hope to have that adopted and finalized maybe even in time by the last auction in 2013. So thank you for that.

The third issue of concern that is not addressed in the resolution before you but was contained in the two previous resolutions that the Board adopted is regarding holding limits. And as you know, this is an issue for many companies. But for I think all of those companies except Calpine is a very serious issue for them in the second compliance period. We're actually okay in the second compliance period because it increases enough for us to give us that head room and flexibility.

It's really the first compliance period that is extremely difficult for us to terms of flexibility, particularly in light of the fact that the utilities are unlikely to provide us with any allowances for our tolled contracts.

So I'm asking today that you include language directing staff to continue these discussions on the holding limit with the goal of getting some changes in the proposed 2013 regulations.

So with that, I have put forward language that

I've given to staff and to Chair Nichols that would add another whereas clause on the holding limit, that "whereas, the holding limit should neither prevent covered entities from acquiring sufficient allowances to comply with cap and trade reg at the auction, nor to provide the largest covered entities the flexibility the regulation was designed to provide. All covered entities" -- and then fast forward to the "be it further resolved" last from the bottom on page three. We would add after the "auction purchase limit," we added the words "and holding limit."

And then at the end of that sentence we would say, "and do not deny the largest entities the flexibility the regulation was designed to provide all covered entities."

We ask that you consider that language prior to adopting the resolution today. Again, we look forward to continuing our very productive conversations and hoping that we can get these regulatory changes adopted sooner rather than later. Thank you.

CHAIRPERSON NICHOLS: Thank you.

I know it's frustrating to all of us that once we on the Board have made up our mind, that doesn't mean it just happens. It could be a year from the time you propose through the time there's actually a rule.

MR. WINEFIELD: Good afternoon. My name is Matt Winefield. I'm the president and founder of Alta Environmental. We're a firm of environmental engineers and scientists. And already I'd like to digress from my 60 seconds of prepared comments by commenting on some statements that were made earlier about refineries in California being the most polluted or being the most pollution in the world. That's patently untrue, I'm sure if you check with the air districts in California, they deem our refineries as the cleanest in the world. So back to my prepared statement.

CHAIRPERSON NICHOLS: I think the Board knows that

MR. WINEFIELD: After 15 years of sweat equity, I'm am fortunate to have grown from a one-man outfit working out of my second bedroom to a consultancy of 40 wonderful professionals. I frankly have the petroleum industry and other manufacturers subject to AB 32 to thank for the success. And I know that there are hundreds of other small businesses, not just environmental consultancies that are thankful as well for the same reason.

My staff and I value CARB's continuous involvement with interested stakeholders to ensure refineries and other manufacturers don't close due to a myriad of cost/benefit concerns associated with allowances and leakage.

These cap and trade issues that are currently unresolved are daunting to many of my clients. Two have told me they are closing. And they are two of the 500 and closing because of AB 32. The more daunting than any of the regs I've encountered that I've observed in 25 years in the industry. I was around are for reformulated fuels and many other Clean Air Act, Clean Water Act and the like. This is worse.

So I'm simply here to share feedback from clients who want to close due to cap and trade as AB 32 currently stipulates. You've listened keenly today to very real and legitimate concerns with cap and trade. I look forward to your prudent actions. I'd like to keep my staff employed. And more self-servingly, I'd like to remain employed. I thank you.

CHAIRPERSON NICHOLS: Thank you.

Paul Mason and Barbara Eastman.

MR. MASON: Thank you, Madam Chair. Paul Mason with Pacific Forest Trust.

The down side of going 65th is all of your comments have been stated at least once, so I'll try --

CHAIRPERSON NICHOLS: Oh, come on.

MR. MASON: I'll try not to repeat my prepared statement.

I think it is useful to look back a little bit. It's been over six years since the Legislature adopted AB 2. I can't even begin to estimate the number of hours that your staff and this Board has put into the thoughtful implementation. And I can't believe how transparent and open the staff have been in meeting with stakeholders on environmental side, on the industry side. It's been truly impressive. And you deserve a huge amount of credit for that. I heard that from a lot of different stakeholders today.

It was a real drag at the time when Prop. 23 was on the ballot two years ago. The up-side there was how overwhelmingly supportive Californians were. That passed by a wider margin than anything else on the ballot and got more votes than the Governor. And won by well over 20 point. So the state of California is very much --

CHAIRPERSON NICHOLS: We don't remember that any more. That was then.

MR. MASON: Years ago.

So you very much have the vast majority of California still very dedicated to taking action on global warming. And we've heard over and over that this is a well-designed program. Perhaps the most well-designed Cap and Trade Program you've seen in the world, having learned from other examples out there that there is a reason why we have an auction and why that helps send a price signal.

You've done a lot to account for the fact that it's a difficult economic time. We've made a commitment to look at these issues going forward.

I guess sort of stepping back and looking at the broader context, it's really not surprising that the entities that are the biggest emitters in California are here at the eleventh hour saying, "Hey, can't we have more free stuff? Do we really have to pay anything?" That's entirely understandable. But you have every reason in the world to proceed with the well-designed program that you have right now. You've done an outstanding job engaging the stakeholders designing thoughtful regulations. We support you and encourage you to move forward.

CHAIRPERSON NICHOLS: Thank you so much.

Barbara Eastman here?

Jim Frassett.

MR. FRASSETT: Thank you, Chairman and Board for the opportunity to speak today.

My name is Jim Frassett. I've been involved in heavy industry in Southern California for the last 35 years. And currently, I'm semi-retired.

California already has the highest gasoline prices in the nation. Coupled with strict regulations, tremendous insurance costs, and other detrimental road blocks to business, leakage, as you like to call it, has become a massive sucking sound headed anywhere but to the state of California. We have lost rubber, steel, ship building, plating, the automobile industry, the aircraft industry, 95 percent of independent refiners, amidst a host of smaller manufacturing companies and even Hollywood only produced six movies in the state last year where they used to do 200.

If it costs $100 to make an item today, after cape and trade, it may cost $120 to make the same item. That cost will be passed on to the end user, you and I. For gasoline to consumer, another cents per gallon is a tax. We pay it at the pump. The refiners buy the credits and pay CARB for the ability to make it, which splits the money in a nebulous investment and the bad guys are the oil companies. That will be the public perception of what happens if cap and trade proceeds on the path we have all deemed as equitable.

The Boston Consulting Group gave you a bird's eye view of the catastrophe cap and trade will bring to our state. Please consider where the pain is going to land, squarely on every business in the state, big or small. The Legislative Analyst's Office has suggested other ways to meet the requirements of AB 32. And we hope you will consider what they have put out there as a possibility. Thank you for your time.

CHAIRPERSON NICHOLS: Thank you.

Kathryn and then Weston LaBarr.

MS. PHILLIPS: Thank you, Chairman Nichols.

I'm Katheryn Phillips with Sierra Club California.

First, Chairman Nichols, I want to thank you for your opening comments. Also, I'd like to associate my organization with the incisive comments made earlier by representatives of the Blue Green Alliance and the Union of Concerned Scientists.

Finally, I'd like to underscore three points. It is more than common for certain industry interests to laud the notion of protecting the environment and working hard to prevent any action that will actually protect the environment.

My respected friends in the energy and oil sectors are particularly adept at this strategy, and I've seen it over the last dozen years.

Free allowances, my second point, are a free ride. They don't accelerate GHG reductions. They simply delay action by those who depend on those free allowances. CARB -- if any of the Legislature is listening -- should resist any temptation to increase the percentage of free allowances.

And finally -- and this is sadly true -- climate change is here. It's happening now. Just yesterday, the Wall Street Journal reported about how the Chinese and other entities are looking at debating competing about how they're going to take advantage of the ability to cross the Artic because there as been so much snow cap or ice caps melt.

We can't stop it. But we may be able to reduce its impact if we act boldly. We need to resist the tendency to procrastinate. We need to resist demands to delay or role back or to start capturing the substantial reductions we need to keep the climate effects we're seeing from becoming even worse.

Therefore, I ask you to proceed with what you're doing. And I'd like to mention that significantly my organization who's not been one to embrace cap and trade, but we are anxious to get the ball moving, to get California into position the rest of the country into position to actually reduce the impacts of climate change and reduce our greenhouse gas emissions. Thank you.

CHAIRPERSON NICHOLS: Thank you.

We remember well the mail that we got against cap and trade when we were working on the Scoping Plan. Okay.

Our last witness Mr LaBarr.

MR. LA BARR: Finally, right. Thanks for having me.

My name is Weston LaBarr. I am here representing the Long Beach Chamber of Commerce and our 1,000 diverse members, businesses, organizations and individuals. Being situated in a poor area, our members have been baring the cost of more environmental regulations than other areas and it has been a struggle.

This is why we are extremely concerned about costs that auction will impose to our businesses and the industries they do business with, many of which are energy intensive. These costs will make us even less competitive than we are now.

We are already fighting to keep business flowing through the Port of Long Beach because the higher costs and red tape here has caused a lot of business to shift to other locations. That has taken a tole on our local economy.

The unemployment rate in the city of Long Beach is 22 percent higher than the state average and 62 percent than higher than the national average. We heard earlier jobs will be lost. We need to save the jobs in Long Beach, Los Angeles County and the South Bay Area. A lot of those can be contributed to the port and refining industries.

It's unthinkable to impose any additional costs on our businesses when we can meet AB 32 goals without an auction. Please protect our businesses and our economy by increasing the number of allowances in the Cap and Trade Program.

I just want to close by saying while I was out in the audience, I read a very interesting article by the Sacramento Bee with a title that says, "Air Pollution Chief Rejects Calls to Change California's New Greenhouse Gas Program." I really hope that the comments given to you today were not falling on deaf ears. Thank you.

CHAIRPERSON NICHOLS: Thank you.

We've heard from the public at this point. We now turn to the Board and some draft Resolution language we have. I think we're okay to proceed with the document.

I know I have Board members who are leaving.

I just once again want to say this is not the last word on this topic. One reason why I can assure you your comments did not fall on deaf ears is this item is going to be back in front of us in October for another update before we actually move forward with the final allocation of allowances and the auction that is currently scheduled for November.

And I want to say here what I've said in other places that if I personally am persuaded and obviously taking advise from others, including our Market Advisory Committee, et cetera, utilities who are immediately the most subject to this, that we aren't ready to go to an auction. We would not hesitate to postpone, reschedule, or put off doing an auction.

What I think I heard today from the people who have been most intimately involved with this, including those subject to it, is we are on track. Not that we are there. But we are proceeding along a path which will lead us to a successful auction, assuming that we keep the design of the program roughly the way it is. And there are a number of specific items that are in this resolution that make small but important adjustments to that regulation that will have a big impact on certain industries or organizations, like University of California or electric-generating facilities, et cetera.

So we continue to work through these issues. And as you've heard, we will be working on many of these items even where we have a sense of direction from the Board. We expect we'll be working on them next year and the year after that and that we will be in an interactive learning mode.

There is sort of a philosophical issue here. And I hope the Legislative Analyst is basking in the glow of having been quoted about 100 times here today, even though their report was a little bit quoted out of context about how you could get away without having an auction because, although I read the report, too, and I read that line, I'm not convinced by that, that they understood all of the factors that go into a decision about what to do with that last increment of allowances. Because, remember, it is a fixed pool of allowances, assuming you're trying to use this program to actually accomplish something for the environment. And I hope we're not doing it just as some sort of an idle exercise.

So we intend to try to make this program both affordable and effective. That's the goal. And we are listening to the comments that we hear. We also listen to the concerns, but we have to try to go with the best expert advise that we can from people who actually have studied the economics of these situations and of the different elements of the California economy and take that as our overarching guiding star.

So that's enough comment from me for now. I think starting down on this end, I know Supervisor Roberts had to leave to catch a plane early and asked to be allowed to go first. So here you are. Also because we ignored you the last time.

BOARD MEMBER ROBERTS: Well --

CHAIRPERSON NICHOLS: We don't want to do that again.

BOARD MEMBER ROBERTS: Thank you. I'll try to be brief.

First of all, it was a consequence I wore a red tie today. It wasn't to show support or anything else, but I appreciate the red T-shirts.

This hearing has been different than I expected. It's far more peaceful. I think we made significant progress, and I'm pleased by that. I sited earlier the Qualcomm and University of California situation. And I know staff has worked very diligently on.

I'm seeing this LAO letter for the first time today, and it raises all kind of puzzlement. And I'll work with staff subsequent to this meeting to try to fully understand that. It sounds like may be there is a hybrid system out there also that we're looking at and I don't know the implications of that. So I don't necessarily have like to get into that.

I also note that the -- Tim Haines of the Water District who spoke earlier this morning, but who didn't speak to this issue, but I think his comments were equally applicable to both -- would indicate that we're making some progress on that front also.

And I want to thank all the people who testified because it was far more pleasant than some of the earlier meetings that we've had here. And I want to thank staff for their work.

I'm satisfied with what needs to be done today. And I think your comment that we still are going to be looking at this with issues that have been raised today, and I know I personally have work to do. Solar raised some things that we will continue to work with them on. And I'll work with staff on that.

The LAO letter is something I'll have to look again a little bit. But I'm actually satisfied with where we are and what's being proposed today.

CHAIRPERSON NICHOLS: Thank you.

Alex.

BOARD MEMBER SHERRIFFS: I had a couple questions for staff. A couple businesses raised issues about benchmarks and also leakage issues for whether they were high risk, medium risk. And I was hoping I would be reassured that those are issues that are continuing to be looked at and worked on.

And then I also had a question about the staff's response to the language offered by Calpine.

CHAIRPERSON NICHOLS: Do you want to Steve?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF CLIFF: On the leakage risk, we're working with the University of California to put together a contract to do an updated leakage risk analysis. And we expect those results to be out by sometime mid next year. So if it's appropriate, then we would make recommendations to the Board to change the leakage risk for various industries if we believe that's warranted based on the results of this analysis.

BOARD MEMBER SHERRIFFS: I was hearing not just industry concerned, but particular businesses with industries that were concerned how they were placed, I think.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF CLIFF: Sure. So the way we've done that analysis is to look at the product itself that is competitive in a global market. So that, by its nature, groups various businesses within a particular category. We often call them a sector. It would be refinery sector and so on, so forth. So we'll be continuing to look at that.

As I said, we would recommend changes to the Board. We have this catagorization set up such that if you're high leakage risk, which means you're going to have a hard time passing along those costs and therefore it would be likely your product output in California would reduce and therefore potentially shift out of California. So if you're high leakage risk, you receive a 100 percent assistance factor throughout the life of this program.

It's not true that all industries in California are high leakage risk. And our analysis that we presented to support the regulation back in 2010 pointed that out very clearly.

What we're doing now with this new analysis is to use updated data and updated analytical methods in order to do the best analysis that we can.

CHAIRPERSON NICHOLS: So may I interject on this point? Because I think when we did this the first time, if I'm not mistaken, this is the first time anybody had ever tried to do this kind of analysis, at least at a state level, even for a state with the economy the size of California. So it's inevitable I think that there will be new information that will improve it.

But the other thing is that it's kind of dynamic. I would think almost by definition that economies are not static and that, therefore, these risk assessments will change and also the factors that you use, these percentages that we used will probably be subject to some changes as well.

So I don't know that it will make everybody happy. Or it may make some people unhappy and the chips will fall where they may.

But I think the important thing is to recognize is this is an area where we need to do additional work.

And again, it would be so much easier if there were a federal program that we were a part of. And we're still not holding our breath, but it's one of those things where inevitably I think the United States is going to begin to take an interest in this topic and will begin to see some greater action happening at the federal level that we can look to as well. Anybody else on this end have a -- DeeDee or --

BOARD MEMBER LOVERIDGE: Just very quick comments one six years going to study which you hear that mentioned. I think one other theme which is here is the -- we just didn't show up today and it happened. There was enormous work by staff and negotiations and hours involved in what we've heard today.

I like the language you offered, as Chair. I think we want something that's affordable and effective. I like that language. I think I agree with the message. We need to stay the course. Beginning today, I heard somebody say something, come to California. And I think rather than talk about exits from California, we need to talk about come to California, work on/for clean air energy future.

BOARD MEMBER D'ADAMO: Well, I too just want to compliment the witnesses. I agree, Supervisor Roberts, it was pretty peaceful. And I especially appreciate the Blue

Green Alliance and the effort. I don't know if anybody is still here. But the effort you all made to give very specific recommendations and your coalition and just really hope that you will be able to continue that hard work.

I have been working kind of off and on on some of these issues throughout the last year. And I know firsthand staff has done an amazing job in pulling this together. And obviously, we still have some remaining pieces coming back in October. There's going to be future hearings. But I've read through the resolution and I think it's a good solid resolution and just want to compliment staff for all their work.

Just a couple of areas. Wondering if the language in the resolution, if staff, you believe it's broad enough to address the out-of-state fuels issue and the commitment to take a look at that.

Benchmarking, I don't see where it's specifically mentioned. But I'm assuming that you have the discretion to make adjustments. Looking at different benchmarking methodologies, you have that ability to do that on your own. So if not, you can just comment on that.

Holding limits, I still sort of struggle with that. And I'd like to see staff continuing to work on that. So if you could comment on whether the resolution needs to incorporate it or if you're planning on continuing to look at the holding limits issue.

And lastly, on the waste-to-energy issue, I'm comfortable with the language, but just would like to see if we could get a firm commitment from staff to come back looking at the comprehensive waste stream.

So just want to make sure that the discussion is not over. I know there's some language on that, but it's just in a general nature want to make sure staff is committed to looking at the broad issue. And of course, what Nick Lapis mentioned about recycling opportunities. Anything we can do to push the envelope on that.

CHAIRPERSON NICHOLS: I have some draft language here I think staff prepared that expands on the language that was in the draft before. I don't know if you want to propose that now or if you want to wait until the end. But they added a couple of sentences to that. And if that is agreeable to you, I think it would be something that I certainly would like to see.

BOARD MEMBER D'ADAMO: Yes. With the date, I think that's terrific.

CHAIRPERSON NICHOLS: Great. Pass it along to anybody else who is particularly interested in that.

Anything to add?

BOARD MEMBER RIORDAN: Just my thought about the continuing evaluation of the trade exposure. I think that's very important from my perspective because I think we do have some unique businesses in California. And I'm hoping when we do that continuing evaluation that it's on sort of a face-to-face basis.

Now, did I hear correctly that there is to be a study? Is that what I understood?

CHAIRPERSON NICHOLS: There was nodding of heads. People need to say yes.

DEPUTY EXECUTIVE OFFICER COREY: Yes.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF CLIFF: Yes, we're initiating the study. Actually, we did a workshop on July 30 to talk to stakeholders about the study we were undertaking. We took comment on that and are modifying the basis of that study based on comments.

CHAIRPERSON NICHOLS: Okay.

BOARD MEMBER RIORDAN: And my thought would be that we would ask those that we are contracting with to do this work. That they meet with some of these businesses. I think it's very important to understand the uniqueness. And some of it is very, very unique. And I think that's extremely important not just a quick analysis, but a real analysis to get the intricacies of their business models and their export and who their competitors are.

I do want to offer my congratulations to staff for including so many issues in this resolution that really resolve some of the outstanding concerns I think people had. And that's not easy to do.

And to those who testified, maybe it's because of your excellent testimony and work prior to this hearing that that was accomplished in the resolution. It's a real pleasure to look at the resolution that deals with really most of the issues that were raised.

CHAIRPERSON NICHOLS: Okay. Ms. Berg.

BOARD MEMBER BERG: Thank you. I, too, want to ditto my fellow Board members' comments, because it's absolutely true; if we look at 60 days ago when we were looking at this in June, the tone today was 100 percent different.

Everybody has covered my list. The only thing I have to add is really the issue of early credits that was brought up by the glass manufacturers. And that was a very compelling argument to me. And I'm not asking for any additional language to be added. But the fact that we do take a look at these industries that have been very proactive, came up with solutions, whether they're better to be lucky than smart, whether it supplies to greenhouse gas, still, never the less, they have done things. They are remarkably cleaner than their counterparts across the country. And if that is the case, what should we be doing about that. So again, I'm not asking for anything to be added to the resolution, but it is on my radar.

CHAIRPERSON NICHOLS: Thanks. You took one of the issues I also, which is a questions of what we do to recognize people who have taken significant early action. Because although we wrestled with this from the very beginning when we first started dealing with AB 32, the reality is that you want to be able to do more than give people a pat on the head when they've done a lot.

So I think staff has heard this and is going to be thinking about it as they go into the allocation and also into the leakage risk analysis.

And one of the problems, as I think everybody now sees, is that there's so many different boxes you can put some of the same issues into. It can be under leakage risk. It can be under added allowances for transition assistance. You can look at benchmarking. There's all these different ways you can slice the same basic set of issues.

But the bottom line is that you know that you need to find a way to address some particular situation that may be inequitable. And that is the other thing. I guess when I said the affordable and effective, I should have added the word "equitable" too. That really is what continues to drive this whole process is our search to come up with the optimum set of parameters that will achieve these things.

I'm hearing general support for the resolution with the addition of additional language on waste-to-energy to be specific about the further studies to be done with Cal Recycle to do a more comprehensive approach to end-of-life as we might call it for waste.

Is there anything else from staff's perspective that we're missing here that you see? If not, we're going to probably take a vote.

DEPUTY EXECUTIVE OFFICER COREY: I think we have it covered.

CHAIRPERSON NICHOLS: Okay. In that case -- yes?

BOARD MEMBER D'ADAMO: I want to make clear about the holding limits.

CHAIRPERSON NICHOLS: Oh, sorry.

BOARD MEMBER D'ADAMO: If we are going to continue with that. I don't know that needs to go in the resolution, but just they're going to continue to look at it.

CHAIRPERSON NICHOLS: I have struggled with this issue, as you have. And I know Kassandra Gough was good enough to say that we had solved two of her three issues and this is the one that she still holding onto.

I find that the purchase limit issue was very sympathetic with because they're companies, lots of facilities. They need to be able to buy enough allowances at auction so they have to be out there every time there is an auction, you know, to get enough to put into their compliance account and to know they can comply at the end of the day.

The holding limits issue is a little bit more complicated because I think what it really means is they would like to be able to play the market in allowances. If we fix their purchasing option, they can have enough allowances to fill up the pot they need to fill up and be perfectly secure they will have enough allowances to comply.

The holding limit is the thing that prevents them from trading in allowances whenever it seems like it might be more financially advantageous to do that. Now, you know, they're not the only company that wants to do it and there are companies that are going to have an easier time because they're smaller and they don't have to have as many Allowances to comply so they'll have an easier time playing around in the market.

But I'm finding it hard to feel like that's an issue that we have to address. But I'll be frank about it. I don't think it's -- for me, it's not an ideological issue. It's just a practical issue, I guess, as to what would be the impact on the allowance market and specifically energy prices from going in one direction or another.

So if there is a way to analyze it that gives us some additional information, then I would be in favor of doing that. So I'm again looking back at our craft team to ask if there is a way we can do this.

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF CLIFF: So we have contracted with a market simulations group, and they will be evaluating the holding limit. In the Resolution 11-32 from last year, we said that we would look at the holding limit for the second compliance period.

I agree with you that making a change at this point is really not practical. And we don't believe it's warranted. Certainly, Calpine is able to comply with the regulation the way that the holding limit is structured. And they've said they don't have a problem in the second compliance period. We just don't believe it's practical at this time to try to make a change this late in the game.

CHAIRPERSON NICHOLS: Is that okay?

BOARD MEMBER RIORDAN: But you would do the analysis; correct?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF

CLIFF: Absolutely. For the second compliance period, we believe it's important to continue to analyze this issue.

BOARD MEMBER RIORDAN: I think that would be an interesting analysis.

BOARD MEMBER BERG: I just want to make sure she said they didn't have second. But does that mean they don't have a problem for the first either?

CLIMATE CHANGE PROGRAM EVALUATION BRANCH CHIEF CLIFF: They're able to comply with the regulation for sure in the first compliance period, that's correct.

DEPUTY EXECUTIVE OFFICER COREY: Just to add, Ms. Berg, the distinction between the three items: The legacy contracts, the purchase limits. We were persuaded by virtue of the analysis and recommendation brought here that there was an issue to deal with when persuaded on the holding limits.

CHAIRPERSON NICHOLS: All right. Do I have a motion to approve Resolution 12-33 as amended?

BOARD MEMBER BERG: So moved.

BOARD MEMBER RIORDAN: Second.

CHAIRPERSON NICHOLS: All in favor, please say Aye.

(Ayes)

CHAIRPERSON NICHOLS: Opposed?

None. No abstentions.

All right. Thank you all very much. And we'll see I'm sure many of you again in October.

(Whereupon the Air Resources Board adjourned at 4:19 p.m.)

CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 8th day of October, 2012.

TIFFANY C. KRAFT, CSR, RPR
Certified Shorthand Reporter
License No. 12277