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Ms. Mary Nichols, Chairperson
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Ms. Sandra Berg
Ms. Doreene D'Adamo
Mr. Hector De La Torre
Mrs. Barbara Riordan
Supervisor Ron Roberts
Dr. Alex Sherriffs
Dr. Daniel Sperling
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Mr. Tom Cackette, Chief Deputy Executive Officer
Mr. Richard Corey, Deputy Executive Officer
Ms. Ellen Peters, Chief Counsel
Ms. Lynn Terry, Deputy Executive Officer
Mr. Joshua Cunningham, Staff, ZEV Implementation Section, Planning and Technical Support Division
Mr. Kurt Karperos, Assistant Division Chief, Planning and Technical Support Division
Ms. Johanna Levine, Innovative Strategies Branch
Mr. Eric White, Assistant Division Chief, MSCD
APPEARANCES CONTINUED

ALSO PRESENT

Ms. Elizabeth Adams, US EPA
Mr. Craig Anderson, Solar Turbines
Mr. Tony Andreoni, CMUA
Mr. Mark Aubry, Electrification Leadership Council
Ms. Kate Beardsley, PG&E
Mr. Mark Bell, Street Vac
Mr. Todd Campbell, Clean Energy
Mr. Tim Carmichael, California Natural Gas Vehicle Coalition
Ms. Ann Chan, The Wilderness Society
Mr. John Clements, Kings Canyon Unified School District
Ms. Brenda Coleman, California Chamber of Commerce
Ms. Kassandra Gough, Calpine
Ms. Jamie Hall, Calstart
Ms. Susan Hayman, Foss
Mr. Frank Harris, Southern California Edison
Mr. Ted Harris, California Strategies and Advocacy
Ms. Bonnie Holmes-Gen, ALA
Mr. Andy Katz, Breathe California
Mr. Matthew Kevnick, Toyota
Ms. Juanita Martinez, General Motors
Mr. Paul Mason, Pacific Forest Trust
APPEARANCES CONTINUED

ALSO PRESENT
Ms. Erica Morehouse, Environmental Defense Fund
Ms. Belinda Morris, American Carbon Registry
Ms. Cindy Parsons, LADWP
Mr. Norman Pedersen, SCAPA
Mr. Mark Perry, Nissan
Ms. Tamara Rasberry, Southern California Gas Company
Mr. Seyed Sadredin, San Joaquin Valley APCD
Mr. Chris Shimoda, California Trucking Association
Ms. Eileen Tutt
Mr. Barry Wallerstein, SCAQMD
Mr. Mike Wang, WSPA
Mr. William Westerfield, Sacramento SMUD
Ms. Tracy Woodard, Nissan
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PROCEEDINGS

CHAIRPERSON NICHOLS: Welcome, everyone, to the June 28th, 2012, public meeting of the Air Resources Board. Please come to order. And we will begin with the Pledge of Allegiance to the flag.

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

CHAIRPERSON NICHOLS: Thank you.

The Clerk will please call the roll.

BOARD CLERK MORENCY: Dr. Balmes?

BOARD MEMBER B ALMES: Here.

BOARD CLERK MORENCY: Ms. Berg?

BOARD MEMBER BERG: Here.

BOARD CLERK MORENCY: Ms. D'Adamo?

BOARD MEMBER D'ADAMO: Here.

BOARD CLERK MORENCY: Mr. De La Torre?

BOARD MEMBER DE LA TORRE: Here.

BOARD CLERK MORENCY: Mayor Loveridge?

Mrs. Riordan?

BOARD MEMBER RIO RDN: Here.

BOARD CLERK MORENCY: Supervisor Roberts?

BOARD MEMBER ROBERTS: Here.

BOARD CLERK MORENCY: Dr. Sherriffs?

BOARD MEMBER SHERIFFS: 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 very much.
A couple of opening announcements, which will be familiar to those who are regulars here. But in case you're not, we're required to do this anyway.
Anyone who wants to testify and did not sign up on line should fill out a request to speak card. And they're available in the lobby outside the boardroom. Please turn it into the Clerk over here. And then she'll sort them and make sure I have a list of everybody who's asked to testify.
If you did take advantage of the on line sign-up feature, you don't have to fill out a request to speak card, but you do need to check in with the Clerk anyway so she knows you're here. Otherwise, she'll take your name off the speakers list.
We will be imposing a time limit on testimony today. We'll certainly try to hear from everybody. But we normally give people three minutes to speak and a
reminder that it's a lot easier for us to follow, especially if you've given us your written testimony, if you'll try to summarize your testimony.

Also please note the emergency exits at the rear and on the sides of the podium here. In the event of a fire alarm, we are required to exit the room and the building immediately, go down the stairs and going out to the park across the street until we get the all-clear sign. And I think that's it for opening announcements here before we turn to the program for today.

I want to begin our first item, which is a progress report on the staff's draft of the "Vision for Clean Air, a Framework for Air Quality and Climate Planning," which they will be presenting to us shortly. And I just want to give a little bit of context to this document which I think is an important milestone actually in the working relationship between ARB and the air districts and in the unfolding of our role as an agency that is engaged in planning in California.

So we have, by way of background, of course, been working for years with the districts on specific State Implementation Plan elements for addressing different gases. And we leapt into the new world of greenhouse gas emissions with AB 32 and our Scoping Plan.

But we now are faced with a situation where we
have multiple different objectives for which we're regulating essentially the same set of sources. And what we need to do and what the staff has been doing is to try to lay out a more coordinated planning framework for reaching our multi-pollutant goals. And this beginning effort by the staff is an attempt to begin that conversation about our future plans. So it's a beginning. I know we've referred to it in the past, I certainly have, as being the vision document. I think it's important to say this isn't the vision. It's a process for developing a vision and hopefully will lead us fairly quickly in that direction.

But the first step here is to lay out some of the analysis that gives us a framework for doing some joint planning with our regulatory partners in the air district and with the public and the people that we regulate.

So with that, I will turn it over to Mr. Goldstene.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

ARB staff from several divisions are working with the South Coast and San Joaquin Valley Air Districts to develop a shared vision for meeting both air quality and greenhouse gas reduction goals. The outcome of that work is the draft report that Chair Nichols just mentioned.
Vision for Clean Air illustrates the nature of multi-pollutant planning needed to meet the Federal Clean Air Act and Greenhouse Gas Reduction Goals between now and 2050.

The critical dates for air quality are the federal deadlines for ozone attainment in 2023 for the current SIP and 2032 for the recently updated ozone standard. 2050 is the State's long-term greenhouse gas reduction goal.

Typically, the plans staff brings to you are focused on fairly short time horizons and set out actions over the next three to five years.

Today's presentation discusses a planning process that considers multiple pollutants over the long term. This long-term perspective allows us to look more at air quality and climate planning. This helps to provide a common foundation for future planning efforts, including important SIPs this year and again in 2015, for the new ozone standard, the AB 32 Scoping Plan update, and freight transport planning next year.

Mr. Kurt Karperos, the Assistant Division Chief of the Planning and Technical Support Division will provide the Board with an overview of the Vision for Clean Air effort and results. Mr. Joshua Cunningham of the Mobile Source Control Division will present some of the
more detailed analytical results.

So with that, Mr. Karperos will begin the presentation.

(Thereupon an overhead presentation was presented as follows.)

ASSISTANT DIVISION CHIEF KARPEROS: Thank you, Mr. Goldstene. Good morning, Chairman Nichols and members of the Board.

In today's presentation, we'll provide a summary of the public review draft of the Vision document prepared jointly by the staff of the Air Resources Board, the South Coast Air Quality Management District, and the San Joaquin Valley Air Pollution Control District.

The word "vision" in this process is intended to convey our intent to outline a framework for exploring common strategies for achieving both air quality and climate targets. The joint efforts over a relatively few short months have resulted in more coordinated technical work, the illustration of new ways to look at air quality and climate planning and a more common perspective of challenges and opportunities.

The Vision effort is in many ways the beginning of a dialogue on how California can move forward to address its clean air goals in ways that enhance both its economy and environment.
I will start staff's presentation with a description of the purpose and general approach. Then Joshua Cunningham of the Mobile Source Control Division will discuss the technical work done that is enabling us to look at strategies from a multi-pollutant perspective. Then I'll close with some questions and next steps.

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ASSISTANT DIVISION CHIEF KARPEROS: The vision process was designed to take a broader view of clean air strategies than the traditional SIP process under the Federal Clean Air Act. Under the SIP process, each update to an air quality standard triggers a new air quality plan with a specific deadline for meeting the standard. Each pollutant is addressed with a separate plan tailored to the applicable attainment deadline.

When federal SIP planning requirements are combined with California's greenhouse gas reduction programs, a broader view is needed to effectively address both air quality and climate planning together. The overarching goal of the vision process is to set out a framework to do that.

As part of the framework, staff developed a new analysis tool that considers greenhouse gases and conventional pollutants at the same time. The tool starts with a series of technology assumptions of what might be
possible and translates those into estimates of what emission reductions could result and how quickly.

The vision process is a prelude to detailed planning, which must include refined analyses of costs and benefits. The goal is more integrated planning going forward, including for SIPs required by the Federal Clean Air Act, AB 32 Scoping Plan updates, and freight transport planning over the next couple of years.

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ASSISTANT DIVISION CHIEF KARPEROS: This slide illustrates the federal deadlines for meeting a series of PM2.5 and ozone standards alongside the greenhouse gas planning horizon year of 2050.

Coordinated planning is needed to ensure near-term deadlines are met, and clean air strategies are designed with longer-term goals in mind.

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ASSISTANT DIVISION CHIEF KARPEROS: The vision process is a next step at building upon the Powering the Future document that was an outcome of the last ozone SIP process in the South Coast. While the focus of powering the future is conventional air pollution, its forward-looking nature is consistent with the vision's long-term view for both air quality and climate planning.

Vision expands on powering the future by posing
questions such as:

How best to deploy technologies and other strategies to meet both air quality and climate targets?

How best to coordinate federal, State, and local activities to ensure success?

What are the implications of air quality deadlines that proceed greenhouse gas targets?

And what are the energy demands of air quality and climate strategies?

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ASSISTANT DIVISION CHIEF KARPEROS: California's clean air targets are statewide for greenhouse gases and regional for air quality standards.

Another 80 percent reduction in NOx emissions from current emission levels is needed to meet the ozone standard in 2023 in the South Coast based on the region's federally-approved ozone SIP. As much as a 90 percent reduction may be needed by 2032 to meet the recently updated federal ozone standard. And an 85 percent reduction in greenhouse gases is needed to meet California's 2050 target.

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ASSISTANT DIVISION CHIEF KARPEROS: What are the benefits of this type of framework?

Why begin this discussion on comprehensive
Staff believes it is important because it's necessary to take a broader look as we try to develop the needed comprehensive air quality clean air strategies. As a state, we want to identify ways to achieve both air quality and climate goals together. Coordinated programs can lessen the burden on businesses having to meet multiple environmental requirements.

Air quality and climate programs affect large and essential parts of the state's economy. Comprehensive planning can provide a clearer picture of the role air quality and climate programs play in the broader context of the economy and the environment.

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ASSISTANT DIVISION CHIEF KARPEROS: Vision's analytical process starts with emission benefits of all existing programs and policies, a business as usual starting point. New scenarios are built to go beyond business as usual by assuming further changes in the levels of technology, fuel supply, and efficiency.

The primary focus of the vision analysis is on transportation-related sectors because they are the largest contributor to greenhouse gas and regional air pollution in California. The analysis also includes off-road mobile sources. And lastly, the vision analysis
includes regional upstream emissions from energy production associated with transportation.

While the vision analysis focuses on mobile sources, the overall framework could be applied to other emission sources which must be addressed in the comprehensive planning processes for SIPs and AB 32.

It is important to note that in this framework, in these type of analyses, the scenarios illustrate potential pathways to achieve emission reductions, but do not predict future technology mixes or favor one technology over another.

Vision results do not answer the question of which pathway should be taken to achieve emission targets. Instead, they are intended to help inform the next planning steps and future actions.

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ASSISTANT DIVISION CHIEF KARPEROS: As I just said, the vision planning framework encompasses the transportation-related sectors: Passenger vehicles, trucks, locomotives, shipping, aviation, and off-road equipment.

To show the type of insights that this multi-pollutant planning can provide, the next few slides will look at one sector as an example, in this case, trucks.
One of the things that the vision analysis shows is that a transition to bio fuels, while providing very significant and important greenhouse gas reductions, does not reduce NOx emissions coming from the engine. This is not unique to trucks where you're only using them here as an example.

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ASSISTANT DIVISION CHIEF KARPEROS: So a multi-pollutant view reveals that strategies to reduce NOx that can work in tandem with the use of bio fuels are needed to meet SIP requirements.

Now let me stop here and ask Joshua Cunningham to walk through some of the analysis that supports this conclusion. Joshua.

MR. CUNNINGHAM: Thank you, Kurt.

I will briefly describe some of the technical analysis that staff has done and share a few examples of the results to demonstrate the utility of a multi-pollutant perspective.

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MR. CUNNINGHAM: The basic vision analytical approach is the same approach staff applied to cars in late 2009. At that time, staff presented to the Board scenario analysis results that showed the need for zero emission vehicles to achieve the 2050 greenhouse gas
targets for passenger cars. This ultimately helped to inform the advanced clean cars regulation adopted by the Board this past January.

This figure shows the greenhouse gas emissions for trucks that result from a scenario that meets the 2050 target. The scenario included assumptions about increased fuel economy, the use of biofuels, a growing population of advanced zero and near zero-emission trucks, and finally moderate changes in the rate of activity growth. These results and the NOx emissions that you will see on the next slide include both truck emissions and so-called upstream emissions that come from the production of fuels to power the trucks. Linking of downstream and upstream emissions is more common in greenhouse gas analyses, but is a new approach for looking at NOx emissions.

This figure shows the NOx emissions from the same truck scenario. This scenario achieves all the NOx targets represented on the chart by the dotted line showing the 2023 target and by dots representing the targets in later years.

However, the scenario's emission reductions did not occur in the attainment year time frames. This is largely because of the time it takes to change and the fleet to occur in the on-road fleet over time.

The various scenarios explored in this analysis
generally showed that reaching the NOx targets will be more difficult than achieving the longer-term statewide greenhouse gas targets. The existing program, including the transition to the fleet in 2010 engine standards provide the large reduction seen between now and 2023. After that, the bulk of the scenario's reductions are the result of assumed lower NOx emissions from future engines and growing numbers of advanced zero and near zero emission trucks in the fleet over time.

The scenario's assumptions of lower NOx emissions in the future is a response to the point that we made earlier that a transition to biofuels, while providing very significant and important greenhouse gas reductions, does not reduce NOx emissions coming from engines.

The next slide shows this in more detail.

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MR. CUNNINGHAM: This slide outlines which strategies were most effective for the two pollutants: Greenhouse gases and NOx. For trucks, the greenhouse gas emission reductions come primarily from improvements in fuel economy and a heavy reliance on low carbon biofuels. Today's existing program plus two measures resulted in about an 80 percent reduction in greenhouse gas emissions from today's levels, very close to the 85 percent reduction target in 2050. That is shown as the blue bar
in this chart.

The results are different for NOx shown as the red bar. The current program plus fuel economy and biofuels resulted in nearly a 65 percent reduction in NOx emissions. A large reduction, but not as close to the target as these two strategies achieve for greenhouse gases.

--o0o--

MR. CUNNINGHAM: These two new bars show the additional benefit of adding in an assumption of cleaner conventional engines beginning in 2025. Here, truck NOx emissions were reduced by over 90 percent, much closer to the target.

Finally, the addition of zero and near zero technology is able to fully realize the greenhouse gas and NOx targets in 2050. Examples of zero emission technologies are both fuel cells and battery electrics. Near zero emission technology examples are regular hybrids and plug-in hybrids.

--o0o--

MR. CUNNINGHAM: This figure shows the heavy-duty truck population split up by technology type that could achieve the result we just saw. Reaching this level of advanced technology in the fleet, over 50 percent in this scenario in the long term, requires aggressive sales rates
over multiple decades.

As you can see in this scenario, conventional but assumed cleaner internal combustion engines continue to be a large part of the truck fleet well into the future. Those cleaner trucks could be either diesel or natural gas.

--o0o--

MR. CUNNINGHAM: Although NOx and greenhouse gas emissions have been the primary focus so far, the strategies assumed in these scenarios also reduce diesel particulate matter.

This figure shows the diesel PM emissions resulting from the same scenario. You can see the larger reductions in PM from ARB diesel rules by the end of the decade. And then as the scenario assumes that more zero and near zero emission trucks enter the fleet, diesel PM is reduced even more. This is an important benefit that is revealed through a multi-pollutant perspective.

--o0o--

MR. CUNNINGHAM: While this presentation focused its discussion on the findings on truck emissions, these findings are not all that different than what was seen for other transportation sectors.

For example, this figure shows how NOx reductions could change with time for cars, the other large mobile
source category included in the analysis. Using the same
types of strategies applied for trucks, improved
efficiency, lower NOx standards, and zero and near zero
emission technologies.

Similar to trucks, the car NOx emissions are
projected to decline over time, achieving the 2050 target.
I'll now turn the presentation back to Kurt Karperos to
close.

ASSISTANT DIVISION CHIEF KARPEROS: Thank you,
Joshua.

I said at the start that in many ways Vision for
Clean Air is intended as the beginning of a dialogue on
how California can move forward to address its clean air
goals in ways that enhance both its economy and
environment.

A dialogue often starts with a question, or in
this case, questions. I mentioned just four earlier and
they are repeated here. Vision for Clean Air provides a
framework and analytical approach for beginning to sort
through these and other critical questions. We have not
answered them yet, but have gained new insights into them.

--o0o--

ASSISTANT DIVISION CHIEF KARPEROS: In terms of
next steps, we are planning to hold workshops on the
Vision framework this summer. The Vision report was
posted yesterday on ARB's planning website. Many are obviously very interested in both the report and the analytical framework. We plan to hold the workshops in August after we release the detailed vision analysis tool for public review.

SIPs are due at the end of this year for the 24-hour particulate matter standard and in 2015 for the recently updated federal ozone standard. The Vision framework will facilitate multi-pollutant discussions in the context of the development of these plans.

Finally, next year, ARB must update the Scoping Plan as required by AB 32. And staff is initiating efforts now with a wide variety of stakeholders on freight transport planning that will be a focus next year as well. Here again, a multi-pollutant perspective will be essential.

Thank you. And that concludes staff's presentation.

CHAIRPERSON NICHOLS: Thank you, Kurt.

We have ten people that have signed up to speak on this item. And we'll be giving them each the usual three minutes.

But before we do that, I wanted to just turn to the Board members because I know you've only recently gotten a copy of this material. But if you have any
questions at this point before we launch into the public testimony -- yes, DeeDee.

BOARD MEMBER D'ADAMO: Just a quick question. Trying to better understand the magnitude of the challenge. Looking at slide three on the conventional, does that contemplate any changes to the rules that we've adopted over the last several years on-road, off-road?

Slide 13.

ASSISTANT DIVISION CHIEF KARPEROS: We have approved ozone SIPs for the two critical regions, the two extreme regions in this state, the San Joaquin Valley and the South Coast, for ozone attainment in 2023.

The South Coast, through its process of updating its particulate matter standard this year, is working to propose what they are calling early actions to accelerate progress towards the 2023 standard. The focus on the San Joaquin Valley on the 24-hour standard will require NOx reductions. Those NOx reductions are also beneficial for ozone in the 2023 time frame.

BOARD MEMBER D'ADAMO: Well, but I'm focusing not necessarily on the SIPs, but on the trucks, just as an example.

ASSISTANT DIVISION CHIEF KARPEROS: The vision analysis is not attempting to identify measures or strategies in the near term. It's trying to lay out the
general framework for how to consider what are the implications of the sort of stringency we have to deal with the standards over time.

Certainly, some of the conclusions that we can draw is that from a chart like this which shows the technology mixes that can lead to emission levels that reach the targets, that early actions to support the development and deployment of advanced technology and cleaner NOx in trucks, for example, would move us more quickly towards the standards.

BOARD MEMBER D'ADAMO: Right. But just focusing on the conventional piece that you have in the chart. I guess what would be -- just to put it in perspective of, well, magnitude of the challenge, where would that line be if we overlay our current rules? Just to see what the gap would be within the conventional piece only.

ASSISTANT DIVISION CHIEF WHITE: This is Eric White from the Mobile Source Control Division.

I think the best way to try to look at this as we went through this effort, we took into account the turnover in the fleet that occurred from the truck and bus regulation and looked at opportunities to accelerate replacement of trucks instead of 2010 technology trucks with advanced technology trucks through this process. So moving forward, I think that some of the outcomes that we
saw in here are there opportunities to complement and build on the turnover that's already going to occur from the truck rule to achieve these additional NOx reductions that we're going to need both in the near term and the long term.

So I don't think that anything came that showed that the truck rules was at odds with what our long-term goals are. And we need to continue to look for opportunities to leverage those benefits we're going to achieve already with what we need in the long term through this planning process.

CHAIRPERSON NICHOLS: Dan.

BOARD MEMBER SPERLING: Let me help out a little bit on this discussion. I think this is very ambitious. But at the same time, in a simple way, all we're doing is saying we've got these air quality goals for the South Coast and San Joaquin, especially. We've got the climate goals. And let's get smart and look at them together, instead of taking the stove pipe approach that is human nature and regulatory nature and government nature and business nature. Let's put it all together and do it in a smarter way. And this is providing the framework for that.

I think as Chairman Nichols started out, I think it's great. It's not laying out any new goals. And in
fact, if anything, it should make these strategies and
policies and targets easier and less expensive than they
would be otherwise. And it's not just within ARB, of
course, it's working for the South Coast and working for
the PUC and working with others.

So this is, you know, great. This is almost a revolution in how governments perform and behave. I think it's to be commended.

And I just want to add a note, I'm so proud to see two of my former grad students sitting right there next to each other, Doug and Joshua.

CHAIRPERSON NICHOLS: A commercial for University of California strikes again.

BOARD MEMBER SPERLING: And because they're the ones, you know, it's the younger folks here that are going to live with this and are going to implement this. So I'm proud and happy.

CHAIRPERSON NICHOLS: Thank you. That's great.

All right. Let's go to our witnesses then starting with Barry Wallerstein and then Seyed Sadredin and Elizabeth Adams.

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

It's a pleasure to be here today on the release of what I think is a really fantastic document and an
extremely important one. And one that will not just
collect dust on people's bookshelves, but that some 10 or
20 years from now people will look back and say a seed was
planted that created a clean air oak tree that provides a
foundation for achieving federal standards as well as the
state's greenhouse gas goals.

In terms of this project, I have to tell you that
I don't think our staffs have ever worked better together,
that this was a great example of using the expertise and
wisdom that is embodied in the organizations involved, San
Joaquin, ourselves, and your staff. And we got a much
better product for it. And I hope that we can, as we go
forward, build upon this. Certainly, we've had great
accomplishments in this past. But this one really went
very smoothly. And I think a lot of the credit goes to
all the technical people that did the underlying work, but
also to Kurt who was the main interface with us and Lynn
who also jumped in at the end and helped us smooth out a
few things.

I can tell you I've read this document now twice
in the last week, and I'm really impressed with the
document. And I think the Chairman had it right and I
think Dr. Sperling had it right. Chair, you had it right
that it starts a process. But as this Board and everyone
in this room knows, sometimes that first step can be the
most important step, and that is what we're doing here today. And I think Dr. Sperling had it right. We really are looking at things differently. And in looking at things differently, I think our investments will be wiser, that we'll reap economic advantage as well as public health advantage. And what we will see is a clearer -- I'll use the word vision again -- a clearer vision as to how to get to attainment to meet the State's greenhouse gas goals. And we look forward to working with your staff and the San Joaquin District over the summer to receive public comments and make refinements to the document.

Thank you for the opportunity to be here.

CHAIRPERSON NICHOLS: Thank you very much.

Seyed.

MR. SADREDIN: Good morning, Madam Chair and members of the Board. It's a pleasure to be before you. I'm here to support the document that is before you and also at the beginning of the process to bring all the other key stakeholders into the mix to make this document ultimately one that we can rely on and use in many critical areas that I think we need a well-crafted document such as the one that is before you.

As we look at the document, you'll see we're going to reach certain milestones in the future where technology is available, but to get the technology
deployed in a timely fashion with the time lines before us, the deadlines before us, it will require a public and private investment. I think a document like this will be critical to bring resources to the state, to the region, to get the job done ultimately, both to deploy the technology and also to develop the technology that is yet to actually be there.

I know I will use this document extensively when we go to Washington with my agricultural friends in the farming community to get the farm bill to do what it has done historically. And we want to maintain the resources that are in that bill ultimately.

I know this will be -- if we do it right -- will be a critical piece in our approach to re-authorization of some of these funding resources that are about to expire.

And then more importantly in terms of good governance, when we get to doing our SIPs and future measures with respect to the climate change, I think this document will serve strongly in harmonizing, integrating, and according to our efforts to make sure we do maximize co-benefits for greenhouse gases as well as criteria pollutants and also make sure that as far as the bureaucratic redundancy and duplication we don't do what would not constitute good government.

Now to make this happen, we do need to bring in
the other key stakeholders into the mix. I know my friends in the business community and the environmental community are a bit nervous, apprehensive. I won't say paranoid, but some might be, because they have not seen the details of this document. We've talked to them here and there about what we're working on, but they're anxious to see what is in there. As we pursue the public process which will include a workshop in the valley and more get-togethers, I'm hoping everyone ultimately makes this document even better.

But one thing we need to point out as we go through that process, that this is not a regulatory document. At the end of the process, to the extent our regulatory efforts, the SIPs, future measures with respect to climate change will rely on this document for ideas, those activities will have their own public process and the cost effectiveness, economic analysis that we have to complete.

So just on time. Thank you.

CHAIRPERSON NICHOLS: Thank you very much.

Thanks for emphasizing the beginning of the process here.

Elizabeth Adams.

MS. ADAMS: Good morning, Madam Chairman and esteemed Board members. Thank you for this opportunity to speak with you today.
I'm Elizabeth Adams, Deputy Director of the Air Division at EPA Region 9's office in San Francisco. First, I would like to thank the staff of the California Air Resources Board and the South Coast and San Joaquin Valley Air Districts for their hard work in preparing the materials presented here today. EPA greatly appreciates the proactive collaborative effort of California's state and local agencies to develop a comprehensive strategy for addressing both criteria pollutant and greenhouse gas emissions through the year 2050.

As you know, the central part of EPA's mission is the protection of public health and the environment. In service of this mission, our agency is dedicated to providing clean air to our nation's residents. In California, we will need innovation and a strong commitment to deploy zero and near zero emission technologies in order to demonstrate attainment for the existing national ambient air quality standards for both ground level ozone and fine particulate material matter pollution.

The Federal Clean Air Act allows extreme ozone non-attainment areas like the South Coast and San Joaquin Valley to rely on the future development and implementation of new technologies to demonstrate
attainment. Our collective leadership and commitment to accelerate the development and deployment of these technologies is the only way these areas will be able to attain the existing federal 8-hour ozone standard.

EPA acknowledges that California must look wholistically at long-term emission reduction strategies and we understand that there is no one solution. We also recognize that no technology is truly zero emission. Every method of power generation has its impacts and we need to be vigilant about these impacts. However, drastic reductions in mobile source emissions are needed to improve air quality in California's most impacted areas.

We must continue to work together to plan and implement the strategies that will help deploy these new technologies in California. EPA is actively reaching out to our federal partners, including the Department of Energy, Transportation, and Defense to find potential resources that will help demonstrate and deploy viable zero and near-zero emission technologies in California.

Right now, many entities are in the process of making decisions that will impact the State's ability to attain the federal ozone and PM2.5 standards. We need to make sure that these efforts have a coordinated vision to both optimize the implementation of new technologies and maximize the health and environmental benefits for the...
residents of California. There is much work for us to do
and we're happy to help you along the way. Thank you.

CHAIRPERSON NICHOLS: Thank you very much. Thank
you for being here today and for your approach to this
document. Obviously, one way everybody -- every
stakeholder is going to look at this is what are the
implications for me and for my work. And as I know from
personal experience, EPA is oftentimes on the receiving
end of all of the criticism coming from State and local
governments about how they're not doing enough with the
so-called federal sources. And here are the implications
are pretty profound in terms of the need for further
effort to get clean up from these sources. So your
willingness to come and to commit to helping us to engage
in that effort is really terrific. Very much appreciated.
Thank you.

MS. ADAMS: Thank you.

CHAIRPERSON NICHOLS: Okay. Tim Carmichael and
Todd Campbell and Bonnie Holmes-Gen.

MR. CARMICHAEL: Good morning, Chair Nichols,
members of the Board. Good to see you all. Tim
Carmichael with the California Natural Gas Vehicle
Coalition.

I want to share a few thoughts that I had the
opportunity to share with your staff last week. I
appreciate very much the challenge of what you guys are undertaking here. But I'd say it's fair to characterize my membership as one of those concerned parties.

One of the slides behind the slides you saw today shows very little, if any, growth in natural gas as a transportation fuel over the next 40 years. That's not only a very different vision than what my membership has, it's a very different vision than what we're hearing in virtually every transportation conference across the country this year. So I would flag that as, you know, something that we would like to work more on with your staff and with you as Board members because we see tremendous growth in natural gas and we don't see that fact at odds with the goals you're trying to achieve. In fact, CARB staff shared in the presentation today that they're looking at a 2025 mandatory low NOx standard. That's well and good, but we would submit that we believe with the natural gas engine we can get there in the next few years.

And today, there isn't really an incentive in place for the engine manufacturers to go out and get that. And by the next few years, I'm not committing to 2015, but 2016, 2017, my members think is very realistic for achieving the low NOx standard as you see it or very, very close to that. That's eight or nine years in advance of
what you're proposing as a regulator target. I would submit there is a lot of value in collaborating to achieve that as soon as possible. And frankly, not just on a workbench or test situation, but deploying those vehicles.

The next thing I want to point out is I was very pleased to see the staff add particulate matter or a chart on particulate matter to the presentation today, because one of the things we talked about last week, if this is really a multi-pollutant strategy, PM has to be part of it. That's another area where the natural gas industry thinks we're way ahead of the competition and think that we can get low PM or virtually no PM out on the road sooner than your graph represented.

The last point I want to mention has to do with what I perceive to be a disconnect between your plans for funding an incentive funding and this vision document. Take Proposition 1B funding specifically. That is the biggest pot of money that you guys have to deploy over the next couple of years. And currently, the plan is to spend that money on newer diesel engines.

I would submit again that is not consistent with this vision and that you should be thinking seriously this summer about shifting the remaining funds in that program to alternative fuels only. And I mean alternative fuels. I don't mean just natural gas. I mean alternative fuels.
I do see natural gas as being a key part of that. But I think all of the alternative fuels we're talking about are more worthy in trying to achieve this set of goals for those funds than clean diesel trucks are today.

Thanks very much.

BOARD MEMBER SPERLING: Excuse me. I have a question.

You know, along with Tim Carmichael says strikes at the heart of this whole visioning exercise, the idea that we're going to leverage. We're going to look at different strategies, look at trade-offs. And without getting into the specifics, there are -- I think when we come back to the framework, we need to come up I think -- perhaps the next step is coming up with principles that we think are really important that underlie this whole process. And you know, that's to what extent the leveraging, the trade-offs, and so on.

But it leads me to one question, which kind of illustrates this. And I don't know the answer to this. Is it true with the heavy-duty engines that if you do lower emissions you get credits that can be traded to other manufacturers that produce -- these like a low NOx, a very low NOx heavy-duty engine? Is that true?

MR. CARMICHAEL: One of the ideas -- I know some of my Board members have spoken with some of you about is
an occupational low NOx standard. And not making that a requirement in the next couple years, but making it an option that has a benefit possibly framed the way you just did for the manufacturers to go after. And the sooner they achieve it, the more credits they would generate and could use as part of their compliance strategy.

BOARD MEMBER SPERLING: So let me just leave it at an overarching thought is thinking about how can we adjust regulations, programs so they provide more incentive for innovation to do better. And we've started doing that. I mean, I think it's one of the things ARB deserves a lot of credit for over the last 10, 15 years more and more moving in that direction of creating more flexibility, creating more opportunity, creating more ways of incentivizing innovation. Now it's even much more crucial for the next 10 or 20 years to do that.

MR. CARMICHAEL: Thank you, Dr. Sperling. Thank you.

CHAIRPERSON NICHOLS: Todd.

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

My name is Todd Campbell. I represent Clean Energy.

And we agree strongly with staff that this vision does start a very important dialog. And as a partner not
only to the Air Resources Board, but also the South Coast and many other air districts throughout this fine state, we wanted to present a pretty exciting update of our industry.

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MR. CAMPBELL: As you know, earlier in January, the President had come out and supported natural gas as a policy to move forward for natural gas -- for transportation. And we think that that is an important step in growing the awareness of natural gas as a tool to reduce not only our dependence on foreign oil but also to reduce harmful criteria pollutants and greenhouse gas emissions.

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MR. CAMPBELL: One of the unique drivers of natural gas of course is economics. As you see, the savings can be about $1.50 or up to $2.00 depending on the time frame. This graph doesn't consider escalating prices for foreign oil. The nation consumes about 25 gallons of diesel for goods movement and about three billion for the state. And a two dollar savings, that's about a 50 billion annual savings for business, as well as 6 billion in savings for the state as well.

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MR. CAMPBELL: A recent MIT study came out and
showed both private benefits as well as external benefits, when using a natural gas truck versus a diesel powered truck. And some of those social benefits and external benefits are pretty significant, as you see on the bottom line. Of course, that's assuming the $70,000 incremental cost for natural gas. Today's natural gas engines are coming down to about 30 to 35,000 incremental costs. Those benefits are destined to go higher.

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MR. CAMPBELL: The other important factor is every manufacturer now has a natural gas product for the heavy-duty space. And this is very exciting. Ranging from anywhere between 8.9 liters all the way up to a 15 liter, both in high pressure direct injection engine or a spark-ignited scenario.

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MR. CAMPBELL: And Clean Energy just recently announced the American Natural Gas Highway. It's a 150 station development of liquified natural gas in CNG stations for heavy-duty trucks to facilitate the goods movement. This is going to be built out by 2013. We're not alone. There's plenty of providers out there, including Shell and Travel Centers of American and General Electric that are moving to this space and announced similar plans.
MR. CAMPBELL: These are the customers that are very interested in this development and are taking a very serious look at this technology.

MR. CAMPBELL: The benefits are, of course, low NOx. You can see the low NOx values there for the 2010 standard and the industry moving toward a .05 gram standard, which is a near zero emission standard for nitrogen oxides. A PM standard of .002 grams. And of course the World Health Organization's announcement of diesel being a known carcinogen, that is extremely important --

MR. CAMPBELL: -- as well as our greenhouse gas benefits are pretty significant, especially if you use biomethane.

MR. CAMPBELL: I just want to conclude we're also looking at other strategies, for example, cadinary (phonetic) systems that air quality is looking at, we think we can match that. With a renewable component and low optional NOx incentive, I think we can move this industry forward.
MR. CAMPBELL: We think that finally we're happy that this graph moved off of the presentation from May and the new graph is in place. Because it inspires all of us, not just the natural gas industry, but all industry players, to move towards near zero, zero emission standard.

With that, I'd like to thank you for your time.

CHAIRPERSON NICHOLS: Thank you.

There are a lot of graphs that back up the graphs that are in this presentation and in the draft. I just wanted to comment this is a good time to do it, that there is literally stacks and stacks of analyses that are behind every one of the ones that actually got published and are really alternatives. And we expect groups like yours to delve into that and to come up with versions of your own, too. I mean, I think that's one of the great benefits of this process is by really laying out their thinking, the staff has now opened up the opportunity to have that kind of dialogue. So thank you for that.

MR. CAMPBELL: Thank you. I'd just like to say it's important for our industry to have synergy with the agencies. And we are there to move in the direction that you want to go to. We know it's extremely important for the health of Californians, but I also think that we're providing an opportunity for businesses to also see a
benefit to moving in this direction.

CHAIRPERSON NICHOLS: Absolutely. Thank you.

Bonnie Holmes-Gen.

MS. HOLMES-GEN: Chairman Nichols and Board members, I'm Bonnie Holmes-Gen. I'm the Executive Director for Air Quality and Public Health with the American Lung Association of California.

And I basically want to express our support for the work that CARB is doing in this visioning study and beginning this dialogue and how important we think it is to take this broader look at how we achieve both our air quality and our climate goals. And we need to do this so we understand the scale of change that is needed in the future and of course the actions that we need to take in the very short term as we're developing our SIP plans and frame works.

We're very pleased that this process has provided such a great opportunity for the ARB and the air districts to work together in this kind of comprehensive planning effort. We think that's extremely important.

And again, we need to dig into the details and participate and look forward to the process moving forward.

I just wanted to call attention to this study helps remind people of the pressing need to do more,
particularly to reach our national air quality standards and reduce the serious health effects that are linked to ozone and particle pollution, ranging from asthma attacks to premature deaths.

It seems there are new studies every week coming out that raise new issues and concerns related to health effects of health criteria pollutants and help explain the serious nature of the health emergencies that are happening because of this pollution.

And we also think this process is important. As we can see from the information you presented today, this affirms the need to do what we have been trying to do to move very quickly forward in the direction of zero emission technologies and advancement in that technology area. So we support that effort.

And finally, this underscores the importance, of course, of early actions and of the incentive programs like the AB 118 program that we'll be talking about later today. And we hope we can use the information that's developed in this process to help inform the decisions in the near term and translate some of this information about what these pathways need to be into what are the mixes that we need over the next decade and how can we get our funding to promote that technology mix. So we look forward to working with you and thank you for this effort.
CHAIRPERSON NICHOLS: Mark Bell and then Chris Shimoda and Jamie Hall.

MR. BELL: Good morning. I just flew in from Honolulu to announce we're number one. Honolulu just beat out California for being the most congested highways in the nation. We've been battling I guess Los Angeles for the number two/number one position, but we got it.

I'm representing a very small company based in Honolulu that developed some technology that I would like to share with you, hoping that maybe you could consider this. The company -- our company is called Street Vac. And we've developed a very simple inexpensive solution. It's an impact filter that goes in the wheel well of a vehicle. And the way it works is you just remove the adhesive backing, stick it in the wheel well, and then it picks up pollution contaminants that are on the street. This PM matter that you're talking about, brake dust, tire wear, fluids that leak out of the engine and some of the emissions that end up on the streets, as well as the wear from the asphalt off the streets.

This is what a filter looks like after six months. And it's full of material that could be burned in a plant, such as an H power plant. It's an inexpensive solution to road pollution. They cost less than a dollar to manufacture. And if enough vehicles have
these both cars and trucks, then we believe we'll be
picking up more garbage off the streets than what we're
laying down.

There are many health benefits from this. We
have lots and lots of studies. We've been working on this
project for over ten years now. And at this point, we're
ready to implement it.

I just got back from Manilla, which some of you
may know is somewhat polluted as well, and have a signed
contract from a manufacture that's going to produce them
and distribute them in Manilla. We have a verbal
commitment from the government they're going to mandate
these are on all their vehicles.

So I hope that you would consider something like
this as part of your plan. It could be implemented
tomorrow. It's inexpensive. You don't have to change out
an engine. And it's a simple solution to our road
pollution program.

Thank you.

CHAIRPERSON NICHOLS: Thank you. I hope you'll
leave material with the Board clerk so our staff takes a
look at whatever you brought with you. I would just
comment to you that there would be interest I think in
what you're talking about, not only as an air issue but as
a water issue.
MR. BELL: Oh, absolutely.

CHAIRPERSON NICHOLS: Because runoff pollution from streets is actually an even bigger problem in urban areas.

MR. BELL: Without a doubt, yeah. In Hawaii, when it rains it goes in the storm drains, out into the ocean. It kills our reefs, poisons our fish. So without a doubt, it's a multi-solution.

CHAIRPERSON NICHOLS: Thank you. Thanks for coming. Okay.

Next is Jamie Hall. Not Jaime Hall. Chris Shimoda. Excuse me.

MR. SHIMODA: Chris Shimoda, Manager of Environmental Affairs for the California Trucking Association.

Just wanted to say that this document is very useful as kind of a scoping vision of where the Board wishes to go in the next several decades. But did want to mention that this is really the easy part of the work that you guys have in front of you. What's to come is really hashing out the details of how all this gets implemented.

I just wanted to comment on one specific part of the document that I think is one of the first things that are going to come up on your radar. Page 18, we're talking about -- to Board Member D'Adamo's point as far as
how this interacts with existing rules moving up a  
requirement potentially for very specific subsect of  
drayage trucks that service near dock rail facilities.  
We're really talking about the ICTF and the potential SCIG  
(phonetic) project. It's about 500 trucks moving into  
some kind of electrified technology.  

Just this one small sliver of this document  
spawns a whole volume of questions and we're really  
talking about years of work to try to figure out how  
that's going to be done. So just you know using that  
small example of kind of really what we're facing with a  
document like this is just a lot more questions that need  
to be answered and a lot more work that needs to be done.  

So again, we're very thankful to see this  
document as a direction where the Board is looking to go.  
And will definitely try to stay engaged as far as how this  
stuff is going to get implemented.  

And obviously to the point that there is no  
economic component here. It's been mentioned a couple of  
times by staff. That's really something we're going to  
have to watch because we are moving from some very known  
commodities as far as technologies that have been  
implemented so far to stuff that's either in its very,  
very early demonstration phase to stuff that is actually  
not really commercially available now.
So again, looking forward to the work that's ahead and keeping the dialogue open with the Board. Thank you.

CHAIRPERSON NICHOLS: Thank you very much. Okay. Now it's Jaime Hall and then Tamara Rasberry.

MR. HALL: Good morning, Madam Chair and members of the Board. Thank you for the opportunity to provide comments this morning.

My name is Jaime Hall. I'm Policy Director for Calstart. This is certainly something that is right up our alley that we're tracking quite closely.

I want to start by thanking the staff for doing the math around emission requirements and technology needs. This is really important work. Shows the magnitude of the challenge we're facing.

One key take-away for me is that climate and air quality needs are really converging. We need zero and near-zero emission technologies to meet both of these. As Seyed noted in his comments, public and private investment is going to be needed to get us there.

We need to think about how to drive innovation and move towards these advanced technologies and need to identify and pursue the technology pathways that move us in the right direction. This long term perspective is very important and will have implications we think for the
regulations that you work on and for the incentive
programs at ARB and CEC.

As Barry said earlier, the investments will be
wiser now that we have this longer term more comprehensive
perspective.

Look forward to actually reading the document as
opposed to going off the presentations that I've seen thus
far, working with you on addressing the barriers, and
making progress towards the vision laid out here.

There are a lot of companies here in California
that are making the technologies that can help get us
there. They're just going to need a little help. It's
going to be exciting.

So thank you. Look forward to working with you.

CHAIRPERSON NICHOLS: Thank you.

MS. RASBERRY: Good morning, Madam Chair and
Board members.

My name is Tamara Rasberry. And I represent San
Diego Gas and Electric and Southern California Gas
Company.

And we appreciate the opportunity to make
comments today on behalf of Southern California Gas
Company on this vision plan for 2050. So Cal Gas
understands the challenge California faces to meet
greenhouse gas and criteria pollutant emission reduction
goals.

For many years, natural gas has been one of the alternative fuels the State has relied on to reduce emissions from stationary sources and heavy-duty vehicles. And while there has been a great deal of focus on electric and fuel cell vehicles, So Cal Gas believes the recent changes in the industry position natural gas to continue to be part of the emission reduction solution for California.

I'm glad that our partners at Clean Energy and Natural Gas Vehicle Coalition went before me because I want to just piggyback on what they said and fully support the comments they made earlier. On a national level, as has been stated earlier, the Obama administration has recognized the potential for natural gas as a transportation fuel, siting the low cost and availability of domestic supply as a way to ensure energy independence.

More importantly, we're seeing the market look at the cost advantage of natural gas vehicles variety of heavy- and medium-duty trucks. We have not reached the technological limits of what natural gas vehicles can achieve in terms of emission reductions. We believe that now is a critical time for California, the Air Resources Board, and the EPA to establish policies that support the development of new natural gas vehicle technologies and
maintain its leadership in this area.

So Cal Gas believes ARB should support all strategies to reduce greenhouse gas and criteria pollution emissions. A neutral and broad approach will encourage the development of the most economic technologies to reduce emissions and reduce the risk that a pre-selected technology doesn't prove to be effective.

We look forward to working with the Air Resources Board as this vision plan moves forward. Thank you.

CHAIRPERSON NICHOLS: Thank you.

That concludes the list of witnesses that I had. I don't believe there are any additional people that have signed up. This does not require action on the Board's part or a record that has to be closed. It was an opportunity for the Board and the public to get a first look at what's going to be an intense process. And certainly the witnesses that we heard this morning have given us some indication of the kinds of issues and concerns that will be raised by this attempt to engage in new thinking.

Board comments? Yes.

BOARD MEMBER BERG: I would just like to add on to your comments that I want to thank staff and the South Coast and San Joaquin Valley for just a yoman's group in this. The presentation was dynamic and exciting.
And one of the things that struck me with the list of witnesses was the fact that there really is a positive feeling about the need for this. Nobody is surprised by the challenge. But the fact that this document can give us the framework to find some of the commonalities for a very, very tough challenge ahead. And I'm excited about that. I just want to thank staff along with our partners. Great job.

CHAIRPERSON NICHOLS: Thanks.

John.

BOARD MEMBER BALMES: Yes. I also want to praise staff and the others that have contributed to this document with regard to the multi-pollutant focus. Just strictly from the health side, without going into climate change mitigation, the need to look at air pollution and air pollution control from a multi-pollutant approach as opposed to the stove pipe approach that Dr. Sperling mentioned is key.

From my work with U.S. EPA on the Clean Air Scientific Advisory Committee, it's been a struggle for the last few years to actually even frame the science around specific pollutants with regard to setting national ambient air quality standards because really we're dealing with, as everyone in this room knows, a pollutant mixture that contains multiple hazards to health.
So just to emphasize on the public health side, we need to look at multi-pollutants. And then when we look at climate as well as public health, we have to get smarter, as Dr. Sperling said.

So I applaud staff's effort. And I wanted to especially say that I'm pleased that the California Trucking Association came here with a positive attitude towards the framework.

As Mr. Shimoda said, there is no economic analysis here. And obviously, there is going to be major hurdles in trying to meet the aspirations of this document.

But I think we all benefit by working together as opposed to fighting. I think early on sort of having a clear common vision is important.

CHAIRPERSON NICHOLS: Hopefully, it will help focus everybody's analytical efforts. Thank you all.

I think that will conclude this item and we'll move onto the next.

We're going to next be looking at our research program for fiscal year 2012/2013. I'm happy to say we still have a research program. I'm being a little factious. But in an era where science is under attack in many respects, even though the program is small, it continues. And the subject is not a controversy when it
comes to our funders in the Legislature. It's been very
gratifying to see the continued support.

So this next item is the overview of our research
program. Every year, the staff brings us a new research
concepts in the form of an annual plan and the process
provides an opportunity for the Board as well as the
public to provide input on the staff's proposed research
priorities for the upcoming fiscal year so that when we
get actual projects or funding requests, we're in a better
position to see how they fit into our overall set of
priorities.

The approved research concepts, which hopefully
will be approved today, are then developed into more
detailed project descriptions that go to the Research
Screening Committee prior to the final Board approval.

Mr. Goldstene, would you please introduce this
item?

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman
Nichols.

There are 13 projects in this year's research
plan being recommended for funding. The list of proposed
projects was developed from research ideas provided by the
public, academic researchers, ARB program staff, and other
State and federal agencies.

The proposed projects support ARB's priorities in
three key areas: Foundational science, clean air strategies, and program effectiveness. If approved by the Board, the projects described in the research plan will be developed into full proposals and then brought back to the Board for your final approval over the next several months.

With that, I'd like to introduce also Annalisa Schilla of the Research Division who will describe this year's proposed research studies. Ms. Schilla.

(Thereupon an overhead presentation was presented as follows.)

DR. SCHILLA: Thank you, Mr. Goldstene. Good morning, Chairman Nichols and members of the Board.

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DR. SCHILLA: Today, we'll be asking the Board to approve the proposed 2012-2013 research plan. $6 million is requested to fund 13 research projects that will support the Board's decision making.

If the plan is approved today, staff will work with our research partners over the next few months to develop projects into full proposals and to secure co-funding or other leveraging where possible.

We will then take proposals to the Board's Research Screening Committee for review before returning to the Board to request approval and funding for each
research project.

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DR. SCHILLA: This research plan proposes funding projects in four key research areas. Just over half of the funding will be allocated to research related to mobile sources, with the goal of identifying strategies to reduce air pollution and greenhouse gas emissions.

The remainder will be dedicated to research on the effectiveness of ARB's programs, studies on the emissions of air pollution exposure, implications of transportation, land use, and community design strategies, and scientific foundation research, which this year will focus on the sources, formation, and climate impacts of the organic carbon fraction of PM2.5.

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DR. SCHILLA: The development of this research plan benefited from ongoing strategic plan dialogue with ARB's division and executive office and represents a concerted effort to focus on research that satisfies ARB's highest priority program needs.

ARB received 154 responses to the annual public solicitation for research ideas, from which staff selected concepts that address ARB program priorities. Staff prepared additional research concepts to address ARB's crucial program needs. All of the proposed research
projects link to California's long-term air quality and climate goals. We sought feedback from the public and private agencies that fund similar research to identify partners for collaboration and co-funding and to avoid duplication.

DR. SCHILLA: ARB's research program will continue to play an important role in meeting the challenges of increasingly stringent federal air quality standards and long-term climate goals. The projects included in this research plan will improve ARB's ability to meet and demonstrate compliance with lower PM2.5 and ozone standards and to achieve greenhouse gas emission reductions consistent with climate goals through 2050.

DR. SCHILLA: Passenger travel and freight transport are major sources of both criteria and toxic air pollutants and greenhouse gas emissions in California. To meet long-term air quality and climate goals, emissions from these sectors will need to be significantly reduced beyond what is expected from already adopted regulations.

Five research projects are proposed to study mobile source emission reduction opportunities. The first two projects address research needs identified by the Vision for Clean Air and investigate the potential for
reducing emissions from heavy-duty trucks and trains.

Three additional proposed projects support the Advanced Clean Cars Program that the Board adopted in January. These projects will address stakeholder concerns and support the mid-term review in 2018 when the appropriateness of the longer term standards will be evaluated in collaboration with U.S. EPA and the National Highway Traffic Safety Administration.

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DR. SCHILLA: The first proposed research project will evaluate the effectiveness of technologies and methods for lowering NOx emissions from heavy-duty trucks beyond the 2010 standard. As the Vision for Clean Air points out, heavy-duty trucks will continue to be a significant contributor to overall NOx emissions in the state. Even though the heavy-duty engine emission standard for NOx was lowered by 90 percent in 2010, further NOx emissions reductions will be needed to meet upcoming federal air quality standards.

This project will investigate the lowest level of NOx emissions feasible by optimizing current engine and aftertreatment technologies for both diesel and natural gas trucks. This study will examine how to achieve these NOx reductions without an overall greenhouse gas penalty and preferably with a concurrent greenhouse gas emission reduction.
benefit.

Results will be used to develop cost effective strategies for achieving the NOx reductions needed to meet future federal air quality standards. ARB staff anticipate significant co-funding for this project.

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DR. SCHILLA: The second proposed research project will evaluate the economic and operational implications of transitioning to a zero or near zero emission rail system in California. By 2020, more than 75 percent of remaining rail yard emissions are expected to come from diesel-powered line haul locomotives. And the Vision for Clean Air illustrates that California will need to transition to a zero or near zero emission locomotive fleet in order to meet air quality standards and climate goals.

This evaluation will focus on economics and rail operations, but will extend beyond just the cost of new locomotives and infrastructure to include fuel savings associated with both fleet modernization and optimization of rail operations. Results will complement ongoing in-house work, which is focused on the technology and energy implications of a transition to zero or near-zero emission rail.

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DR. SCHILLA: The next three projects will support the Advanced Clean Cars Midterm Review.

The first project responds to the Board's request in January to study the actual emission benefits associated with transitioning to advanced clean cars, accounting for the variability that results from individual consumer usage and charging behavior.

Plug-in electric vehicles are expected to account for an increasingly large share of new light-duty vehicle sales as ARB's Advanced Clean Cars Program is implemented. The proposed project will collect a detailed in-use vehicle data to quantify the share of miles driven with grid-based electricity, including evaluating whether households shift miles to non-electric vehicles due to the limited range of some electric vehicles.

Results will improve emissions estimates of various electric vehicle types as well as the overall light duty fleet. In coordination with the California Energy Commission and Public Utilities Commission, the project will also assess the charging behavior of plug-in electric vehicle drivers in order to improve understanding of grid impacts from vehicle charging, rate impacts on charging behavior, and the need for public charging infrastructure.

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DR. SCHILLA: This next project will evaluate the potential of vehicle load-reduction which manufacturers are expected to pursue to meet the new advanced clean cars greenhouse gas emission standards. Vehicle load reduction includes strategies such as improved aerodynamics, reduced tire rolling resistance, and vehicle light weighting. These approaches will have the added benefits of allowing for down-sized power trains and reduced energy storage requirements.

This proposed project will quantify the potential fleet-wide emissions benefits if all vehicles in future model years were to adopt today's leading load reduction technologies. This project is designed to quickly provide an estimate of the potential for vehicle load reduction to help manufacturers meet the new standards, and relies on data that is currently available.

Results will inform assessments of the technical feasibility and associated costs of achieving greenhouse gas emissions reductions for all types of advanced technology vehicles to support the advanced clean cars midterm review. Future studies are proposed to address the life cycle impacts of light weight materials and batteries.

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DR. SCHILLA: This last proposed midterm review
The project will address the measurement challenges presented by the advanced clean cars PM standards. At the ARB Board meeting in January, staff committed to resolve whether PM could be reliably measured at such low levels.

This project will augment a proposed coordinating research counsel project investigating possible improvements to PM measurements. ARB's funding contribution will ensure that researchers evaluate methods for measuring at the one milligram per mile level required by California's new standard.

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DR. SCHILLA: In spite of substantial improvements in California's air quality over the past few decades, ozone and PM2.5 levels continue to exceed health-based air quality standards in both urban and downwind rural areas of California.

The proposed scientific foundation studies will focus on the organic carbon fraction of PM2.5 and will improve our understanding of its emissions, formation, and role in climate.

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DR. SCHILLA: The first proposed scientific foundation project will inform strategies to reduce PM emissions. This study will build on results from recent research which showed that light-duty gasoline vehicles
emit significant amounts of precursor organic compounds that form secondary particulate matter and that diesel particulate filters effectively reduce emissions of both directly emitted and secondary PM.

This project will identify the most accurate and cost-effective method for measuring precursor organic compound emissions from light-duty vehicles and will determine the technical feasibility and potential for reducing emissions.

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DR. SCHILLA: This next proposed project will update ARB's photochemical air quality models to reflect the most up to date understanding of atmospheric chemistry. Photochemical air quality models are required as part of the ARB's planning process to meet health-based standards for ozone and PM2.5.

In order to predict the impact of air pollution control strategies, those models must represent ozone and PM formation as accurately as possible. These models are also used to estimate the ozone formation potential of individual volatile organic compounds for use in consumer products and low emission vehicle regulations. This research will improve predictions of the formation of ozone and the secondary organic carbon fraction of PM2.5 and will shed light on the role of volatile organic
compounds in generating ozone and PM in California's air sheds.

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DR. SCHILLA: The last proposed scientific foundation project will investigate the climate impact of the brown carbon fraction of PM.

Last month, the Board heard several presentations on short-lived climate pollutants, including black and brown carbon. Black carbon is literally black and is the soot that spews from diesel trucks in the absence of any emission controls. Black carbon is now widely recognized to have a warming influence on the climate.

Brown carbon is the brown and yellow smoke that also results from combustion. And recent research has revealed that it, too, warms the climate. But due to its lighter color, it is not as efficient at trapping heat as black carbon. This climate warming effect of brown carbon is poorly understood and is entirely neglected in climate models.

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DR. SCHILLA: This project will identify California's likely sources of brown organic carbon, investigate how it is formed, including quantifying the relative contribution of primary and secondary PM, and assess brown carbon's contribution to regional climate
impacts. These results will improve projections for California and elsewhere.

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DR. SCHILLA: Achieving California's 2050 climate goal will require dramatic changes in transportation, land use, and community design. Research to support these transitions is relatively new, but ARB staff from multiple divisions have been coordinating with Caltrans, the Energy Commission, the Governor's Office of Planning and Research, various metropolitan planning organizations and University of California scientists to identify and prioritize research needs.

This year's three proposed research projects will study the air quality, climate, and health impacts of transportation, land use, and community design strategies. The goal of these projects is to improve land use planning and transportation strategies and to support the development of community's plans to meet SB 375 goals.

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DR. SCHILLA: The first proposed project in this research area will examine traffic management approaches and urban designs with the goal of identifying specific strategies that minimize air pollution exposures in heavily traveled urban corridors.

As California pursues increasingly compact
development to reduce vehicle travel demand, the air pollution exposures of people living and walking in these areas may increase.

In order to ensure that SB 375 implementation is balanced with the need to protect public health, land use and transportation must incorporate estimates of air pollution exposure.

This study will modify the existing the existing operational street pollution model to more accurately simulate the low rise and widely spaced urban landscapes that are typical of California. This project will also employ ARB's mobile monitoring platform to capture micro-scale street level emissions and meteorological data in multiple Los Angeles street environments. This data will be used both to validate the model and to quantify the exposure impacts of different traffic management strategies and community designs. Results will assist California planners in designing and managing communities to minimize air pollution exposure.

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DR. SCHILLA: The next proposed project will assess changes in travel mode for households living in the vicinity of a new light rail line in Los Angeles. Many communities are working to improve citizen's access to transit as part of their SB 375 planning. In Los Angeles
alone, there are six light rail projects currently planned and a number of other regions are also planning or considering them.

This project will collect travel mode choice data from the same households as those evaluated in the study that assessed the travel modes of approximately 250 households before the line was opened. Results will help local governments and planning agencies better account for reductions in vehicle miles traveled and changes in other transportation mode choices related to the construction of the light rail infrastructure and to prioritize SB 375 strategies accordingly. These findings will also allow ARB to assess the actual emission benefits of AB 375 strategies.

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DR. SCHILLA: The last proposed project in this research area will examine the measured emission benefits of cool pavements. Pavement materials that absorb less of the sun's energy reduce urban heat islands, slow smog formation, reduce building energy use, and cool the earth's atmosphere. If cool pavements were used widely throughout the state, they could reflect enough sun to offset the equivalent of at least two million metric tons of carbon dioxide and have significant air quality benefits.
ARB is currently co-funding a cool pavement demonstration project with the California Energy Commission and the US Department of Energy and has funded related work to assess the reflectants of cool roofs.

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DR. SCHILLA: This study will leverage and expand upon ongoing research on cool surfaces. The project will measure emissions of air pollutants from both cool and conventional pavement materials commonly used in California and will conduct greenhouse gas life cycle assessment for cool pavements. This project will be closely coordinated with Caltrans. Results will inform the development of regionally appropriate guidelines for use of cool pavements and provide ARB insight into the actual climate and air quality benefits of these materials.

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DR. SCHILLA: To verify that ARB's regulations are successfully meeting their targets and protecting public health, staff propose funding two projects to quantify emissions from cars and trucks operating on California's roads. Results from these projects will shed light on the emissions reductions that have occurred in response to recent ARB regulations and will assess the durability of current emission control technologies.
DR. SCHILLA: The first program effectiveness project will assess the real world emissions reductions realized from the recently adopted truck and bus rule. The project will measure emissions from trucks traveling through the Caldecott Tunnel in the San Francisco Bay Area in 2014, 2015, and 2017 corresponding to key implementation milestones for the truck and bus rule. This study will assess the effectiveness and durability of exhaust aftertreatment technologies over time. The proposed project will complement related research examining heavy-duty trucks in the Los Angeles basin in order to characterize the statewide emissions from the heavy-duty truck fleet and to improve emissions forecasts. Results will be used to quantify the actual air quality benefits of the truck and bus rule.

DR. SCHILLA: The last proposed project will evaluate the effectiveness of the low emission vehicle program. As vehicles older than the LEV program begin to exit the fleet in significant numbers, emissions from the light-duty fleet need to be monitored to assess emissions reductions over time.

The proposed study will measure emissions from passenger cars at the La Brea Boulevard onramp to
Interstate 10 in Los Angeles in 2013 and 2015. This study will build upon prior measurements from this same location which began characterizing passenger car emissions in 1999 in order to allow ongoing analysis of emission trends.

This project will evaluate the durability of emission reduction technologies and characterize the relative importance of high emitters to fleet average emissions and will examine a new technique for measuring evaporative emission. Results will improve ARB's emissions inventory and quantify the benefits of the LEV II program.

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DR. SCHILLA: This year's annual research plan reflects ongoing coordination with federal and State agencies and will leverage multi-million dollar funding commitments from NASA and the National Institute of Standards and Technology to study California's air quality and greenhouse gas emissions.

We are also coordinating with the U.S. EPA and the coordinating research counsel on projects related to the midterm review of ARB's advanced clean cars rules.

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DR. SCHILLA: If the 2012-2013 research plan is approved today, staff will work with our research partners to bring full proposals to the Research Screening
Committee. Then we will return to the Board to request approval and funding for each project.

We recommend that you approve the 2012-2013 Annual Research Plan.

CHAIRPERSON NICHOLS: Thank you.

I know that Board members in many cases have had more extensive briefings from staff on specific projects, but if there are issues anyone wants to raise at this point, this is a good time to do it. We have only one witness who signed up on this item. Yes?

BOARD MEMBER SPERLING: So I was one of those.

I've been paying attention to the Research Program, and I'm pleased to see I think we -- I mean, the challenges that we have a limited amount of money and how do you spend that money. And I think we're getting better at focusing in on what the real needs of ARB are in terms of our missions, our needs.

So I think -- and I like the line about how the results are going to be used. And so I think, you know, overall, I think we're -- this is good.

You know, the only thought that came to my mind -- additional thought beyond what I conveyed to the staff already is listening this morning to the discussion about division framework. It occurred to me that this really is unique what we're doing in terms of integrating
the criteria planning with the greenhouse gases and working across jurisdictions and so on. And it's probably where we do need better research support to understand how all these things fit together if we are talking about -- there's all this talk about new technologies, but the other part is how does that integrate into a system and how does that integrate into land use, community design, and so on. Not too many people really think about it in the ways that we are as a system and forward-looking like that.

So I would suggest kind of the next round of thinking about it. How do we take the 375 program and mix it together with the things the South Coast is doing and with our vision framework in a way that's kind of at a high level in some ways. There's lots of people out there getting into the weeds. I know some of my academic friends are going to disagree with me on this there's plenty of research going on in the weeds. What we need is --

CHAIRPERSON NICHOLS: Important weeds.

BOARD MEMBER SPERLING: It's important weeds.

But what we also need is better understanding of how it all fits together and how we can use that and how South Coast and San Joaquin and the Bay Area can use it as we move forward with our greenhouse gas and our criteria
CHAIRPERSON NICHOLS: So you're suggesting that at least for the next round they actually try to look for some support for the integrative kind of analysis that we're doing; is that what you had in mind?

BOARD MEMBER SPERLING: Yes. That's number one. And number two is actually think about doing the research that would help us figure out -- you know, one simple way to think how do you actually implement SB 375 and all the NPOs and cities are all kind of struggling with different things. But integrating that with all of these technologies and very low emitting strategies.

CHAIRPERSON NICHOLS: Okay. Sounds like a vision.

Dr. Balmes.

BOARD MEMBER BALMES: If I might amplify on Professor Sperling's comments and may be get a little more specific.

I really like the fact that slide five was put up. That's the one with planning considerations, and it showed the time line from 2010 to 2050 with regard to multiple goals. And I think that's great. This is the first time I've seen something like this in a research presentation in the few years I've been on the Board, research planning presentation.
But I think that in addition to this kind of time line where we talk about ozone and PM standards, greenhouse gas emission reduction targets, that we actually have the rules -- the important rules that we are trying to implement on here as well to try to see how -- move toward what Professor Sperling is asking for, an integrated plan for the future and where we have data gaps that are necessary to fill to move forward as smoothly as possible.

So I think this was a great first start and I like the time line with standards. But I would encourage us to have the actual rules -- the major rules and regulations that we're using to reach those goals on here as well. Because there is a time line for each one of those.

CHAIRPERSON NICHOLS: Seems like a useful suggestion.

Any other comments? Yes.

BOARD MEMBER D'ADAMO: Just like to -- Professor Sperling reminded me of a thought I had after I had my briefing last week on this with respect to 375. And just wanted to encourage staff to maybe see if they could work with some of the public health organizations like the Lung Association to develop a research that can help tie in a connection between 375 goals and improved public health.
I think that will help to sell the program, particularly in the San Joaquin Valley where we're seeing a lot of challenges with acceptance of the climate change goals.

CHAIRPERSON NICHOLS: I would also just add to that that I'm seeing just among people that I bump into as I go around to meetings and conferences a surge of young academics who are interested in working on these kinds of topics. I think that's actually good because that means that if we do put out some RFPs in this area, we're likely to get some interesting proposals. And that would also be very much to our advantage.

BOARD MEMBER RIORDAN: Madam Chairman, just a comment. And the visioning is very important. But what I really am supportive of is looking at our program effectiveness, the real time, some of this real time effort. I'm very pleased that staff has included that and I think we're going to learn a lot about how effective we've been in terms of some of the rules that we have considered in the past. And that I'm very excited about that.

CHAIRPERSON NICHOLS: Thank you. We do have one witness as I mentioned before. And that is Mark Perry from Nissan. Mr. Perry.

MR. PERRY: Good morning, Chairman Nichols. Thank you for allowing us to speak.
Just like to offer Nissan's support of the staff recommendation on plug-in electric vehicle advanced charging and travel behavior. As you may imagine, we collect lots of data. We have millions of miles of real customer use data in California already that we're willing to share. They're a very engaged bunch, our owners. They are not wallflowers. They tell us what's happening that's good and bad so we have lots of real use data. It's a very large sample size, too. From a research standpoint, we'll have no trouble meeting any of the standard research criteria.

I do see a couple of hurdles though. Our own corporate bureaucracy. I have to work through that because that data is collected globally. It sits in a global data center in Japan right now. We'll have to pry that out of our system. I think we can do that.

Then there is that little thing called privacy laws, too. There are some privacy laws we'll have to work through together. If the research is funded and approved through the Board, Nissan stands ready to support. We look forward to the process.

CHAIRPERSON NICHOLS: Thank you very much. Appreciate that.

BOARD MEMBER SHERIFFS: As a recent purchaser of an all-electric vehicle now having 1200 miles on it, I
must say I'm really happy with the vehicle. Every time I start the automobile, I get a message that says, "Can we collect data?" And it would mean a lot to me if I knew how widely that data was being used to improve what's going on with emissions and air quality. So I'd love to see the cooperation and coordination. Because there is obviously a lot of data in Nissan and other manufacturers as well.

CHAIRPERSON NICHOLS: Okay. Terrific.

BOARD MEMBER SPERLING: Chairman Nichols, I don't want to let one of my former students feel bad I left her out. I have a third student sitting there, Belinda.

CHAIRPERSON NICHOLS: We're going to have an alumni meeting any minute now. Thank you. Thanks for pointing that out.

Okay. We have a resolution in front of us to approve this research plan.

BOARD MEMBER RIORDAN: I move approval.

BOARD MEMBER D'ADAMO: Second.

CHAIRPERSON NICHOLS: All in favor, please say aye.

(Ayes)

CHAIRPERSON NICHOLS: Any abstentions or nos?

Great. All right.

In that case, we have one more item. The plan
for today was to move through all of the items other than the cap and trade rule and then take a break for lunch. And at lunch, I believe we are going to have an executive session, if our general counsel is back. She is out on a matter I wanted to have reported on this afternoon if it's possible. So I'm going to announce that we will have an executive session. If for some reason that doesn't work, I'll make that clear when we get back and report on what happened.

But our next item now is to look at the program for spending the money in the air quality improvement program for this coming year, fiscal 2012/2013. The is the funding that comes through AB 118, which has served as an extremely valuable resource for advancing our work on clean vehicles and fuels. This year's funding plan is a blueprint for spending about $40 million in incentive funding, and it will establish the Board's priorities for this cycle, describe the projects that we would fund, and set the actual funding allocation. So I'm sure there is going to be a lot of interest in this. And I know there was a lot of work and consultation to get to this point.

So Mr. Goldstene, would you like to introduce this item?

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman Nichols.

AB 118 signed into law in 2007 created AQIP which
provides ARB between 25 and $40 million annually through 2015 to invest in clean vehicle and equipment projects to reduce criteria pollutants and air toxics often with concurrent greenhouse gas benefits.

AB 118 expands ARB's portfolio of air quality incentives providing the opportunity to fund projects not covered under our other incentive programs such as the Carl Moyer, Goods Movement, and Lower Emission School Bus Programs, which focus on near-term emission reductions from fully commercialized technologies. AQIP funds are unique in providing ARB with a dedicated funding source to help pay for technology advancing projects.

In the program's first years, we use these funds to help accelerate the introduction of the advanced motor vehicles technology trying to enter the market, such as hybrid trucks and buses, and zero emission passenger cars.

As you just saw on the previous item, our vision counts on widespread use of these technologies to help meet our post-2020 air quality emission reduction targets and the 2050 climate change goal.

AQIP investments are an important early step in the fundamental transformation of the California vehicle fleet necessary to meet these goals. This year's funding plan continues hybrid and zero emission passenger vehicle and truck incentives as well as advanced technology
demonstration project funding. The funding plan maintains coordination with the Energy Commission portion of AB 118, the alternative and renewable fuel and vehicle technology program, which supports the necessary infrastructure foundations for cleaner cars and trucks. In particular, the hydrogen fueling and electric charging infrastructure funded by CEC compliments our funding for clean car deployment through the Clean Vehicle Rebate Project.

Finally, this year's funding plan also includes provisions to adjust funding targets if revenues are lower than the amount appropriated in the State budget, as we've experienced in previous years, and to reallocate dollars as necessary to ensure funding is available where it's needed most.

Ms. Johanna Levine of the Innovative Strategies Branch will present the staff's proposal.

(Thereupon an overhead presentation was presented as follows.)

MS. LEVINE: Thank you, Mr. Goldstene.

Good morning, Chairman Nichols and members of the Board.

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MS. LEVINE: We are here to present our plan for the expenditure of next fiscal year's funds under the Air Quality Improvement Program known as AQIP. Overall, this
program has been highly effective in promoting advanced
technology in the first three years, and we are excited to
build on that momentum as we embark on our fourth year.
You will see over the course of my presentation that we
are recommending continued funding for our largest and
most popular projects.

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MS. LEVINE: First for some background. AQIP was created by Assembly Bill 118 signed in 2007. ARB receives between 27 and 40 million annually depending on revenues to fund clean vehicle and equipment projects which reduce criteria pollutants and toxics and also provide climate change benefits.

The California Energy Commission also receives AB 118 funding for a complimentary program focusing on alternative and renewable vehicle and fuels projects to reduce greenhouse gas emissions and increase fuel diversity. This program has complimented AQIP's progress by establishing the necessary infrastructure foundation and increasing fuel diversity.

AQIP expands ARB's portfolio of air quality incentives, providing the opportunity to fund projects not covered by our other programs, such as the Carl Moyer and Goods Movement Programs. These generally focus on near-term emission reductions from fully commercialized
AQIP has a different focus as an ARB's only incentive program that allows for investment in mobile source technology-advancing projects critical to meeting California's post-2020 air quality and climate change goals. This longer term focus combined with the near term focus of other incentive programs puts us on the path towards the fleet transformation presented earlier this morning.

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MS. LEVINE: AQIP investments to date support the deployment of hybrid and zero emission trucks, zero emission passenger cars, and other advanced technologies which are the basis for the transformation of the vehicle fleet that is necessary to meet our long-term air quality and climate change goals, as you heard during this morning's vision for clean air presentation.

AQIP investments are an important early step in this transformation. We must start placing these advanced vehicles on our roadways today to achieve large scale reductions in future decades. Accordingly, we believe the Board approved guiding principles from our previous funding plans which focus on these longer-term goals continue to be appropriate and necessary.

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MS. LEVINE: Now I'll provide an update on implementation of projects funded since inception.

You may remember that the Legislature directed 2008 funds for trucking financing to help truckers impacted by the fleet rules. This program is ongoing with financing provided for over 1700 trucks and retrofits.

In AQIP, we funded five project categories in the first year, the largest two being vouchers for advanced technology trucks and rebates for clean cars. We continued funding these projects in subsequent years. These programs have also benefited from additional funding from the Energy Commission. Specifically, two million for clean car rebates and four million for enhanced vouchers for zero emission trucks.

Demonstration projects have been an important part of AQIP in each year providing the opportunity to fund technologies on the cusp of commercialization.

AQIP also provided funding for zero-emission lawn and garden equipment, which has replaced over 12,000 mowers statewide. The zero emission agricultural work vehicle project concluded at the end of last year with 56 rebates issued. Unspent funds were returned and reallocated to clean car rebates and hybrid truck testing. The off-road hybrid equipment project is ongoing. Staff is proposing the flexibility to include this equipment in
the voucher project for advanced technology trucks if testing shows positive results.

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MS. LEVINE: AQIP projects provide both immediate emission reductions from the vehicles directly funded and more importantly is the down payment for greater reductions in the future associated with large-scale deployment of advanced technologies. Advanced technologies face deployment barriers and AQIP bridges the gap until they become mainstream, primarily through reduced production costs and raising consumer acceptance.

AQIP further supports the transfer of technology to new sectors. For example, zero emission battery electric vehicle technology has made the jump from the light-duty vehicles to heavy-duty trucks.

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MS. LEVINE: For a little more on our coordination with the Energy Commission, they receive about 100 million annually under AB 118 for fuel and vehicle projects that help meet California’s climate change goals. There is similarity between the vehicle projects that can be funded in each program, so we coordinate closely to make sure our respective investments complement each other.

There are many examples on how these programs
complement each other. For example, on the light duty side, the Energy Commission has stepped in to augment our clean vehicles projects. And last month, the Commission adopted their latest investment plan, which included up to five million in funding for ARB's clean car rebates. In addition, the Commission continued their investments in fueling infrastructure which are critical to insuring a successful California ZEV roll out.

The Energy Commission has also taken the lead on investing in workforce training to support the technologies funded through both of our programs. I would also like to note that the Energy Commission is represented here at our staff table.

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MS. LEVINE: With that overview, let's move onto our proposed plan for the upcoming year.

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MS. LEVINE: I'll start by highlighting our priorities for the year. Staff proposes to continue directing most of this year's funds to our two largest projects, the clean vehicle rebate project, more commonly known as CVRP, and the hybrid and zero emission truck and bus voucher incentive project, commonly known as HVIP. We are seeing strong demand for funding in the CVRP. While demand in the HVIP has slowed down over the past year, we
believe that both hybrid truck and zero emission vehicle technologies are at a key point where the public incentives can help them become more prominent mainstream choices.

We also propose to continue an allocation for advanced technology demonstrations. These are an important part of the program because successful demonstration projects can lead to new deployment opportunities in the future. AQIP is ARB's only ongoing funding source for these types of projects.

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MS. LEVINE: This slide shows our proposed funding allocations along with the estimated number of vehicles that the funding levels would support.

Note that the table shows two separate funding targets. The $40 million target reflects the appropriation for AQIP projects in the Governor's state budget. However, we are again projecting that revenues will be lower than the full appropriation. We are incorporating contingency provisions to address this revenue uncertainty and we will most likely implement the smaller program.

The $27 million target is a conservative estimate of total funding we expect based on AQIP revenues over the last three funding cycles. This allows us to fund a
potential of 8,000 vehicles. In addition to the proposed $15 million allocation for CVRP, up to eight million in additional funds may be available next year.

Staff proposes to reallocate three million from the first year that was directed towards truck financing. And as I mentioned earlier, the Energy Commission has approved up to five million of their AB 118 funds to the CVRP. This increases the total funding available for CVRP to up to 23 million providing rebates for about 4,000 additional vehicles.

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MS. LEVINE: The CVRP is designed to accelerate the widespread commercialization of light duty zero emission vehicles and plug-in hybrid electric vehicles by providing consumer rebates to partially offset their higher cost.

Since the initial launch in early 2010, demand has picked up significantly. And we have issued over 7700 rebates. As you may remember, last summer we exhausted available funds prior to the Board meeting and we had to establish a waiting list to cover the gap until the 2011 money started to flow.

We made some changes to address the increased demand, such as reducing rebate amounts as well as tripling our investment. These changes have served the
program well, as we are on target to exhaust 2011 funding right around the time that funding from this plan becomes available. Looking ahead, we still have some challenges in the program, primarily the continued pressure on the program to meet growing demand.

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MS. LEVINE: A challenge over the past year has been how we could modify the program to increase manufacture diversity. This issue was discussed at last year's Board meeting since Nissan had received close to 90 percent of the rebates at the time primarily because they were the only major manufacturer with an eligible vehicle. As you can see, a lot has changed since last summer. Seven new vehicle models have been added to the program since October 2011 and we are expecting to add another five by the end of 2012. We believe a significant measure of success is that diversity has come to the program naturally.

Staff has analyzed several possible options to incorporate manufacturers diversity such is a manufacturer cap, back stop, or set aside. However, after significant outreach and stakeholder feedback, staff believes that the appropriate approach is to continue to allow the market to mature naturally and is therefore not proposing any modifications to the CVRP specific to manufacturer
diversity.

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MS. LEVINE: We are proposing very minor refinements this year. The current CVRP includes a provision that allows consumers to put their name on a waiting list to receive future rebates fund when the current year's money runs out. This has been quite popular with both consumers and manufacturers, but is only appropriate for bridging a short term funding gap. It is not appropriate when demand far outstrips available funds or to cover a long time period.

Instead, staff proposes that the Board provide the Executive Officer discretion on whether to allow a waiting list based on specific criteria outlined in the funding plan. Additional changes including adding BEVX as an eligible zero emission vehicle type and continuing the car share set aside.

We are not proposing a reduction in the rebate amount. We believe we are currently at the low end for the incentive to remain meaningful to consumers. While no major refinements are proposed for this year, we recognize that it is a transitional year and changes may be necessary in the future to address market needs.

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MS. LEVINE: As we look forward, demand continues...
to increase. This chart displays the total funding needed to continue incentives at current levels. Beneath the chart are the anticipated sales volumes by vehicle type. We believe we could see potential sales of CVRP eligible vehicles of about 15,000 in 2012 with greater than 20,000 in 2013. If this level of demand occurs, we will only have sufficient funding to rebate about one-third to one-half of expected sales.

As I mentioned previously, we have been able to secure an additional eight million in funding which will get us closer to meeting potential demand.

Over the next year, we will need to evaluate expected vehicle sales and available funding to assess whether fundamental changes are necessary. Key questions on how we direct future incentive efforts may include focusing funding to pure zero emission vehicles, fleet purchases, or non-attainment areas.

Note the red line that represents the current funding for CVRP set to expire at the end of 2015. Staff is actively working with stakeholders to extend the funding for AQIP as well as other ARB incentive programs, beyond the sunset date.

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MS. LEVINE: Let's move on to our hybrid and zero emission truck voucher project, the HVIP. The HVIP
provides vouchers for California fleets to buy down the cost of hybrid or zero emission trucks at the dealership when placing an order.

The project's streamlined approach has proven popular with California fleets, vehicle dealers, and manufacturers. It is a diverse marketplace. However, the higher cost relative to conventional vehicles has been a significant deployment barrier.

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MS. LEVINE: ARB has funded over 1,000 vouchers, averaging about 31,000 per vehicle. Electric trucks are also part of the program and about one quarter of the vouchers have supported the purchase of zero emission trucks. These purchases have so far been driven by large fleets with the top six participants receiving 85 percent of all funding. These fleets, which include beverage companies such as Coca Cola and Pepsi and partial delivery companies such as UPS and Fed Ex have typically been early adopters of advanced technology vehicles.

Many of the fleets that participated in the initial launch of the HVIP have saturated their fleet with hybrid vehicles and are waiting to get some user experience before making additional investments. Many of these fleets are now making initial investments into zero emission trucks.
To achieve the large scale fleet transformation the vision presented earlier, we need to find ways to expand beyond these fleets. Many of the changes we are presenting today are aimed at increasing participation in the program.

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MS. LEVINE: The HVIP has about 20 million remaining from year two and year three combined and we are proposing to add ten million with this funding plan for a total of 30 million in funding.

While fleet participation over the past year has been slower than expected, it is essential to continue a large investment into advanced technology trucks. This is part of the down payment needed to achieve the transformation of the truck fleet to zero and near zero emission vehicles described earlier this morning. We are already seeing success on the light duty side and we need to continue to push for the same level of success with trucks.

The program changes we are presenting today are meant to address some of the deployment challenges we are facing with these vehicles and we expect demand to increase once the changes are implemented. In the event that demand does not increase, staff has included contingency provisions that would redirect up to ten
million in HVIP funds to other AQIP projects that have greater demand. This ensures that adequate funding is available for HVIP while providing funding where demand is highest.

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MS. LEVINE: To encourage more participation, we are proposing several changes to the project. The most significant change is an increase to the voucher amounts for zero emission trucks. Due to the high incremental cost, we are proposing voucher amounts in the range of 12 to 45,000 depending on size which represents about half the incremental cost. We are proposing additional voucher funding of up to 20,000 per vehicle for hybrid trucks that exceed minimum requirements.

We are also proposing to add funding eligibility for several technologies including aerial bomb vehicles with electric power takeoff, exportable power, and commercial plug-in hybrid pickup trucks. This will expand opportunities for fleets that have shown strong interest in cleaner technology. In addition, we will be incorporating additional outreach efforts. We are proposing that these changes become effective after Board approval, except in circumstances where changes cannot be administered without additional cost.

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MS. LEVINE: We are proposing to continue investments in advanced technology demonstration projects with a two million dollar funding target. This matches the allocation for each of the past two years. Our goal is to help accelerate the next generation of advanced emission reduction technologies with a focus on those within three years of commercialization.

We already have twelve projects in progress demonstrating advanced emission controls on locomotive, marine engines, commercial lawn and garden equipment and school buses. In addition, last year emissions testing and drive cycle analysis of hybrid trucks was approved. The results of these projects will inform future investment decisions. Priorities for the new funding cycle include zero emission off-road equipment such as transport refrigeration units and zero emission transit vehicles. These complete the list of priority projects the Board approved in the first year.

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MS. LEVINE: To conclude, the proposed funding plan builds on our past successes, providing continuing funding for existing categories, and complement the Energy Commission's investment plan approved last month. Because we are seeing strong demand and have limited funding, we've had to make difficult choices regarding allocation
and incentive levels for each category. We believe our proposal strikes the right balance. This funding provides the critical investment needed now given the long time frames required for significant fleet turnover.

We recommend the Board approve the proposed fiscal year 2012-13 funding plan. Thank you.

CHAIRPERSON NICHOLS: Thank you. I see we have some colleagues here from the Energy Commission. Were they going to speak or --

EXECUTIVE OFFICER GOLDSTENE: Mr. Perez was going to say a few words.

CHAIRPERSON NICHOLS: Okay. Thank you.

MR. PEREZ: Good morning, Madam Chair and distinguished members of the Board.

I'm Pat Perez, the Deputy Director for the California Energy Commission's Fuels and Transportation Division.

Let me say at the outset that the Energy Commission is very pleased to support the 2012/2013 Air Quality Improvement Funding Plan that is before you today. As pointed out by Mr. Goldstene and Ms. Levine, the complimentary program that we have at the Energy Commission which is the alternative that renewable fuel vehicle technology program works in tandem with ARB's program. Certainly, your program is designated to provide
funding support for commercially available electric and
fuel cell electric light duty vehicles as well as hybrid
and electric trucks.

The Energy Commission's program focuses on
funding for the fueling infrastructure to support the
rapid deployment of these vehicles. But also provides
complimentary funding for alternative fuel production as
well as advanced technology truck demonstrations and also
workforce training.

Together, our respective parts of AB 118 are
intended to move California markets and consumers to
adoption of advanced technology as well as low carbon, low
emission fuels and vehicles to help meet our state's
policy objectives and goals for a low carbon
transportation energy future.

And certainly as you heard this morning, the
Vehicle Clean Rebate Program vouchers are playing a key
roll in spurring not only consumer demand for plug-in
electric and electric passenger cars but also providing
the environment, an environment which is very exciting
right now in California as so many auto makers launch
all-electric and plug-in electric vehicles. And I was
certainly very fortunate on Friday along with Tom Cackette
to drive the new Model S Tesla vehicle, a very exciting
moment for all of us. And underscores our appreciation
how this ARB program as well as the Energy Commission's complimentary activities are accelerating deployment of cleaner vehicles. But also providing our driving motorists with additional choices and facilitating the commercialization of new technological advances here in our golden state.

Because of the reduced revenues available to the AQIP program that was mentioned earlier, we understand that the current allocation may not be sufficient to cover the significant and growing demand for these vehicles. We are very, very pleased to be able to support and augment your program with the $5 million from our adopted investment plan. So that's very exciting to be in a position to augment and facilitate and help ARB moving forward.

Certainly, our investments in electric chargers, work force training, manufacturing support are also contributing to this new synergy of electric vehicle purchases, deployment, and creating a manufacturing base in California. And certainly we have become the global hub for electric car development and use.

We also very, very pleased with ARB staff's recent adjustment and refinements to the plan, to the hybrid and zero emission truck and bus voucher incentive program for medium and heavy duty technology trucks.
Certainly the electric truck market is really beginning to take off. Commercial acceptance of electric trucks will be a key in reducing the disproportionate levels of petroleum use as well as carbon emissions and criteria emissions associated with their existing and future truck fleets as we move and transport goods throughout California.

The proposed funding in ARB's plan will continue to drive market demand and acceptance of electric trucks.

And in closing, the Energy Commission is really pleased to support the fiscal year 2012/2013 AQIP funding plan that is before you. And we certainly look forward to our continued collaboration with ARB's manufacturers and staff here today as well as our valued stakeholders as we all work together to develop the next generation of low carbon vehicles and trucks. So thank you for your time.

CHAIRPERSON NICHOLS: Thank you very much for joining us, Mr. Perez. That's great.

Any questions before we turn to the audience?

Ms. Berg.

BOARD MEMBER BERG: Thank you very much for your report today.

One of the things I was thinking about as we were talking about the clean vehicles rebate program, do we have kind of a sense or some criteria about at what point
we get to say this program is a success?

    MS. LEVINE: We think it's a success now.

    BOARD MEMBER BERG: No, I understand.

    CHAIRPERSON NICHOLS: Do you have any idea how
long you need to continue support --

    BOARD MEMBER BERG: Absolutely, this is a
    critical --

    MS. LEVINE: To where we into longer need to
provide rebates?

    BOARD MEMBER BERG: Right.

    MS. LEVINE: Okay.

    BOARD MEMBER BERG: How does this not become a
subsidy program but in fact allow the market to take hold
and to grow?

    Unidentified speaker. That's a great point. I
would say that is in fact the overall objective for all of
our funding projects within AQIP is to move the advanced
technologies to a point where they no longer require
subsidies, a commonplace in the market and just another
choice just like you can chose a color of a car, to the
point where there is no incentives needed. That is the
ultimate objective, yes.

    BOARD MEMBER BERG: So my question is have we
thought about how we define that? Do we have numbers that
we're reaching for? At what point? What is some of the
criteria we're reaching for in order to make that
decision?

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: I think
when we presented the clean car project and regulations to
you in January, we showed the incremental price for some
of these vehicles. And it was still quite high, all the
way out to 2020 on the order of $10,000 a vehicle. And we
have $7500 federal subsidy that does continue we hope for
a while.

But I think it points out that we will probably
run out of money before we could actually say that these
things are completely on their own. But fortunately, the
federal piece is bigger than ours and will I think provide
some help until the volume gets up and the price comes
down some more and we have more diverse population of
types of vehicles. So I don't think we know the exact
point. But we're not going to be able to keep up after
the next couple of years.

CHAIRPERSON NICHOLS: I guess I have a somewhat
different point that I would make here, which is that as a
participant in the plug-in vehicle collaborative along
with the Energy Commission and the PUC, we have been
talking about how long it's going to be necessary to have
up front purchases in addition to other kinds of
incentives, like access to car pool lanes, deployment of
infrastructure, et cetera. And I don't think we have an
answer for that yet.

But it seems pretty clear that at this point that
$10,000 increment is a really critical issue hurdle for
people to have to get over. And I guess Tom's point was
that their projections are looking at maybe another eight
or ten years in which that would be the case. Obviously,
we would hope we could do much better than that. But it
seems to me there has to be some more research done based
on consumer behavior really to tell what the right price
point is where people would be willing to pay a little bit
more because they understand they're going to get a
benefit over the lifetime use of the vehicle because
they're using electricity rather than gasoline. But I
don't think anybody really at least in public has been
able to come out and say exactly what that point is yet.

BOARD MEMBER BERG: Well, I think in that
conversation as resources are scarce, that we continue
bringing up this type of dialogue so that people are aware
that as numbers are growing it doesn't mean the job is
done yet. And I think that getting people used to
understanding how many vehicles we need on the road and
the price differential and the consumer change and
acceptance, it isn't going to happen in a couple year
period of time.
CHAIRPERSON NICHOLS: Right. That's a very good point. Great job. Thank you. Others? Yes.

BOARD MEMBER SHERRIFFS: You talked about the penetration in the fleets. And I was wondering if there had been discussions with rental companies, the Alamos, the Hertz, the Avis in terms of their interest potentially. Because it would be a great way to expose the public to seeing and using these and realizing they're terrific.

MS. LEVINE: We've had many conversations with the rental fleets. And last year when we took the plan to the Board, we actually incorporated some changes to the program that made it easier for those fleets to access the money. And we have seen those fleets come in and take rebates.

CHIEF DEPUTY EXECUTIVE OFFICER CACKETTE: And we also have a couple of car sharing programs that are using electric vehicles also. And I think those are another way that many people can get exposure and ultimately find they meet their needs they could end up buying a vehicle.

CHAIRPERSON NICHOLS: Yes, go ahead.

BOARD MEMBER SHERRIFFS: Coming from the central valley, have a number of farming friends who, in fact, are interested in electric vehicles. They can see a real place for it. I'm wondering -- it's great the Energy
Commission is here as well to reflect on that. If much is being done in that area of small pickup trucks that are electrified, there's not much information out there in the farming community. So that may be a --

MS. LEVINE: On the passenger car side, the San Joaquin Valley just recently re-launched their drive clean program which provides an additional $3,000 rebate for many of the vehicles that are eligible for our program. And we have seen an uptake of rebates in the Central Valley since that rebate became available.

On the pickup side, we are proposing in our hybrid and zero emission truck and bus voucher incentive program to include commercial plug-in hybrid pickup trucks into that program, and they'll receive a rebate of about ten to twelve -- is it ten to 12,000?

MR. CALAVITA: It would be in the eight to $10,000 range. And it would be for commercial entities who want to access that voucher. If they want to access that vehicle, it would be in the CVRP to get a lesser amount. If it's a farming entity, it would be great.

MR. PEREZ: From the Energy Commission's perspective, one of the exciting things about the agricultural farming area is that in the number of proposals that we're receiving from this area for off-road equipment such as electric forklifts and equipment, we're
seeing more and more as we move forward with additional solicitations. In fact, I believe we funded one or two of those in our most recent solicitation. So we're seeing greater interest by that sector.

CHAIRPERSON NICHOLS: Great. Thank you. Good questions.

We have a dozen witnesses who have signed up, so why don't we turn to them. Beginning with Susan Hayman and then Seyed Sadredin and Bonnie Homes-Gen.

INNOVATIVE STRATEGIES BRANCH CHIEF NEGRETE:
Chairman Nichols, I'd like to introduce Susan Hayman. She is going to present to the Board based on one of the demonstration projects that have been very successful. She has a presentation for you.

CHAIRPERSON NICHOLS: Great. Thank you. Not just a normal witness.

MS. HAYMAN: It is a great honor for Foss and for me personally to present this model of the tugboat Carolyn Dorothy to you, Chair and the Air Resources Board. This model symbolizes the long journey we have made together in providing the innovative technologies can be conceived and developed by those of us who own and operate vessels and brought to the market through the financial and technical support of our public partners.

In this case, it was the ports of L.A., Long
Beach, South Coast Air Quality Management District and ARB. This tug Carolyn Dorothy is the world's first hybrid tugboat and it has been operating in the San Pedro harbor since 2009.

It is the nature of our business that harbor tugs are equipped with very large diesel engines, but they only utilize their full power for very short bursts of time. Most of the time the engines are working at very low loads which is very inefficient. Hybrid technology utilizes batteries, smaller diesel engines, and motor generators to deliver only the power needed for the work the tug is doing. The public health benefits and cost savings are undeniable.

After seven months of rigorous emissions testing directed and financed by ARB, results showed a 73 percent reduction in particulate matter, 51 percent of NOx, and 27 percent reduction in CO2 which compared with its sister tug doing the same work in the same harbor. Based on the outstanding results of this first tugboat, the Port of Long Beach successfully applied for AQIP funding for Foss to retrofit a second tug, another sister vessel, the Campbell Foss, to hybrid technology. The cost of this retrofit was approximately 2.3 million with AQIP providing one million of the funding and Foss the remainder.

The second tug has been operating as part of the
Foss fleet in southern California since the beginning of this year and is finishing emissions testing over the next few weeks. There is now also a hybrid tug in Rotterdam which was brought out a few months later utilizing the same technology. So there are now three hybrid tugs in the world, two of them right here in southern California.

Foss is planning to convert additional vessels to hybrid and there has been a great deal of interest in this technology worldwide. Indeed, this technology is applicable to other marine vessels with appropriate duty cycles, including angler handling vessels, ferries, supply boats, crew boats, et cetera. The Campbell Foss is working flawlessly. And our crews love the boat in no small measure due to the fact it's much quieter than our other vessels. This hybrid technology is an extremely cost effective solution to reduce all forms of pollution with an additional very attractive aspect that we as the operator accumulate savings based on reduced fuel consumption and reduced maintenance costs.

Of course, this model symbolizes something very important to both of us that private/public partnerships do work and how much we at Foss value our partnership with ARB. I also particularly appreciate the technical help, support and guidance from ARB staff, including Earl Landberg, Todd Sterling, and many others.
Thank you for your continued support in advancing the deployment of this extremely important technological advance for our industry.

CHAIRPERSON NICHOLS: Thank you very much, Ms. Hayman. I've actually seen this real tug in action in the port of Los Angeles a couple of years ago when Lisa Jackson came out to visit the port. And we had the Governor and we had the mayor there. And the port was in -- the tugboat was in prominent display and it looked good and seemed to be doing its job very well. So this is terrific. Are we allowed to keep the model?

MS. HAYMAN: Yes, you are.

CHAIRPERSON NICHOLS: That's wonderful. I hope we can keep it on display in the major conference room at the Air Resources Board. That would be just great. Thank you so much.

MS. HAYMAN: Thank you.

CHAIRPERSON NICHOLS: Okay. Do you have any toys for us?

MR. SADREDIN: I lost the finger in the coming to agreement with South Coast --

(Laughter)

MR. SADREDIN: -- on the vision document. That was a great exercise.

Thank you, Madam Chairman and members of the
Board. I'm here to support your staff recommendation for the funding allocation and expending plan for the AB 118 AQIP program.

As you know, San Joaquin Valley unfortunately has been underserved historically when it comes to deployment and market penetration with zero emission vehicles. As you saw in the visioning document, mobile sources expending vehicles are the largest source of nitrogen oxide emissions which is the key pollutant both for ozone and particulate matter and we really need to make this work in San Joaquin Valley.

And I think if we can make electric vehicles work in San Joaquin Valley, you can make it anywhere because there is cultural resistance to it. There are poverty issues that if we can get over that, that's going to go a long way in terms of the State goals with respect to zero emission vehicles.

We have begun to turn around, turn the corner in terms of vehicle acceptance and market share in San Joaquin Valley. About a year ago, the district began with the help of your staff with the funding from ARB and CEC to really take a concentrated effort in getting the public to get a buy-in for these vehicles. We put in over $5 million of our local funds into this. We have HVIP plus program that provides additional funding in addition to
the State's HVIP plan. The drive clean program, the
public benefits grant which is aimed at municipalities
throughout San Joaquin Valley and we've been able to last
year to deploy 51 electric vehicles with municipalities.
And also two million dollar project for manufacturing
electric utility vehicles for UPS that were built in San
Joaquin Valley and deployed in San Joaquin Valley and
we're going to do another around of that shortly.

I said we have turned the corner last year. We
increased the clean vehicle rebate program in terms of the
number of people that took advantage of that rebate from
26 to over 150. We went from 450 initiated HVIP to 115.
But we are still -- we still have a long ways to go. And
I want to urge your Board to continue your investment in
this area and in San Joaquin Valley in particular, both
for being non-attainment as well as really needing these
emission reductions to make this program really work. So
thank you very much.

CHAIRPERSON NICHOLS: Thank you.

Bonnie Holmes-Gen.

MS. HOLMES-GEN: Good morning again, Chairman
Nichols and members.

Bonnie Holmes-Gen with the American Lung
Association in California. And I wanted to state first of
all our strong support for the AB 118 program and that we
believe that both the CEC and the ARB components of the program have been very successful and we're pleased at how this is rolling out. Of course, we all need to work together to continue this funding stream. That's very important.

We do support the investment plan that's before you today and believe it funds effective projects that advance zero emission technologies and help to achieve our State and federal air quality standards. And so we're pleased with these projects. We support all the projects, but I did want to highlight the discussion that's just occurred around the clean vehicle rebate project. We do believe that there is more funding that's needed over the next couple of years to support -- or more to support the roll-out of battery and plug-in vehicles. And we hope that this area that ARB will track this very closely in terms of how fast this funding is expended and try to figure out a plan for how we can continue support moving forward.

I just wanted to comment that we really appreciate the ARB's support and engagement in the plug-in electric vehicle collaborative. I know the Chair and others have put a lot of time into this. And there is some great efforts going on around the state. And I wondered if it might be a good time to have an update to
the Board in the near future about what's happening with
the PEV collaborative and specifically the efforts at the
local government level because we really need our local
government leaders to support this roll-out effort. And
there are a lot of good efforts going on. And this needs
to be a collaboration between the State Board the air
districts and local governments to really support this
roll out.

So given the interest that's been expressed, it
seems like it might be a good discussion to have here.

And finally, we applaud the work that's been done
to step up the outreach efforts in the San Joaquin Valley.
I know this was a discussion item last year, the fact
there was a low level of demand there. So I appreciate
the work of the air district there and the ARB together to
try to get more outreach and increase the use of funds in
that region. So thank you very much. Appreciate your
time.

CHAIRPERSON NICHOLS: Thank you. And thanks for
the suggestion that ARB has made a large commitment of
staff and other important support to this collaborative
effort and we really haven't brought the briefing to the
Board. So I'm going to ask Mr. Goldstene to look for a
time when we can do that in the near future. That's a
great idea. Okay. Juanita Martinez, John Clements, and
Matthew Kevnick.

MR. MARTINEZ: Hi. My name is Juanita Martinez with Smith, Watts, and Martinez on behalf of General Motors.

I wanted to first thank ARB and staff for the CVRP program. As you know, EVs are a great technology to help California meet the goal of reducing petroleum use and vehicle emissions. EV technology batteries are still the most expensive part of a vehicle and EV remain more expensive compared to their traditional gasoline vehicles.

EVs are a significant factor and the incentives that the CVRP provide are great incentives for expressing and accelerating the market. California remains a top market for our Chevrolet Volt. When you look at Volt sales in California, we are looking at 25 to 30 percent of all US sales here in this state alone. Providing that California market is hungry for EV and incentives, the incentives here are providing and making that difference.

For example, the sales data from our Chevrolet Volt shows that the California vehicles incentives directly impact the sales. Prior to the Volt qualifying for the CVRP, their sales were 150 units per month. After this, after the Volt was able to qualify, we expanded the sales to more than 400 units per month. We'd like to encourage ARB to continue the CVRP as it is currently
designed.

GM would also like to compliment ARB and the California Center of Sustainable Energy for maintaining a great program and keeping administrative costs low, about three percent, which allows the maximum amount of incentives possible to reach the actual eligible vehicles. GM realizes CVRP has a set budget and ARB has looked at creative ways to spread the rebate across as many to as many customers as possible.

GM has also noted that once a rebate drops below a certain threshold, particularly around $1,000, some customers may not take advantage of the incentive. So we like to encourage ARB to maintain the current funding source for the current incentive level. Diversity and free market action are taking place now as you can see with the diversity of the vehicles in the market. The CVRP program is seeing a change in the number of different vehicles taking advantage of the rebate and we'd like to continue to let the market run as it currently is.

Thank you.

CHAIRPERSON NICHOLS: Thank you.

John Clements.

MR. CLEMENTS: Good morning, Madam Chair and members of the Board. Seyed's modest back there. The toys are actually tools. And there are two
school buses parked out front from Kings Canyon Unified, which is in the San Joaquin Valley APCD. If it was not for him and his staff, supporting us with administration of the lower emission school bus program on top of using AQIP funds for through hybrid voucher incentives, we wouldn't have the first production model all-electric lithium ion electric battery powered school bus in the nation and the San Joaquin Valley. And we wouldn't have five hybrids.

We've taken advantage of 2010 program and the 2011 program to fund five hybrid electric school buses for our district. And during these tough economic times, we used our lower emission school bus dollars, but we wouldn't be in those alternatives if it was not for AQIP HVIP funds. Thank you very much. I'm here to support that.

I have a picture I would like to present to you of that first electric bus from our community, city of Reedly in the San Joaquin Valley. Our kids are grateful to have the opportunity to ride on those buses. The hybrids are currently in use. The electric will soon be in use and it will be accompanied by two more programs, your AQIP demonstration program which will serve other schools throughout the central valley which will help to share the message with. So thank you very much.
CHAIRPERSON NICHOLS: Thank you. Thanks on behalf of your kids, too. Doing a good job for their health as well as for the air as a whole.

MR. CLEMENTS: I'll be downstairs for ride and drive.

CHAIRPERSON NICHOLS: You mean we get to drive a bus? Are you serious? Wow. All right.

Mr. Kevnick.

MR. KEVNICK: Madam Chair, members of the Board, I'm Matt Kevnick with Toyota. And I apologize for not bringing any toys or ride and drive vehicles. I'll make a note to do that next time.

On behalf of Toyota, I'd like to indicate that we simply support the staff proposal for the 2012/2013 fiscal year clean vehicle rebate program. We see the continuation of this project as a means to help promote market acceptance of clean vehicle technologies.

Just a point or two to mention from Toyota's hybrid experience, market acceptance is really enhanced when you provide consumers with choices. And allowing the CVRP to continue as a first come, first serve program, it's consistent with this approach because it entices manufacturers to provide an array of clean vehicle technologies to meet the differing customer needs. And obviously in providing vehicles that the customers want,
we all achieve a benefit because the technology costs come
down. The market expands, and we promote the technology.

And a point on the manufacturer diversity, we
agree with the staff's assessment that this will occur
naturally through market forces because manufacturers will
strive to develop and introduce vehicles that meet what
their customers want.

With that, I'd like to thank you for your
attention.

CHAIRPERSON NICHOLS: Thank you very much. We
have three witnesses from Nissan I guess you can all come
up at one time, if that's agreeable. Good morning.

MS. WOODARD: Thank you, Chairman Nichols.

I didn't bring any toys either, but I do have
Mark Perry and Bob Cassidy with me as well. We appreciate
the opportunity to speak today. We want to say we are
very supportive of the staff recommendation for the AB 118
AQIP funding plan. We want to thank you for your
leadership in this area and commend the staff for their
diligent work and hard work and research on this area.

We also want to thank them and the third party
for the management of the CVRP. We have heard nothing
about things even when the money ran out from consumers
and we were put on a waiting list. It was very well run.
And we appreciate that.
Nissan is committed to electric vehicles. Our plant in Tennessee is getting ready to come on track in late December this year.

Ms. Berg, I do want to address you on a question about how long the incentives should last. Nissan has said that we think it should have lasted at least the end of 2016. We are targeting to hopefully get our cost down enough that we don't need incentives any more after that. It's our responsibility to get up to scale to drive costs down where we don't have to take incentives at that point. So the CVRP does make a difference to our consumers and I'm going to let Mr. Perry say a few words as well. Thank you.

MR. PERRY: To amplify Tracy's remarks, it really comes down to sales. Sales in the marketplace. We're proud of the fact we have about 5,000 Nissan Leafs in the market here in California. After 18 months on sale, California right now represents almost 40 percent of our national sales so far. That's a little bit of California's early lead. We've been on sale 18 months. Other parts of the country we just started in all 50 states really April 1st. So California had a lead. So we think that 40 percent may drop down a little bit, but again a great job so far.

Again on effectiveness, we have lots of data. If
anybody ever challenges you on effectiveness of the rebates, we can show you what's happening in California versus what people would typically think other early adopters are. And the combination of CVRP, infrastructure and HOV access, those three layers of incentive, both financial and non-financial, you can see it in the market demand difference between people here in California versus Texas versus Florida versus Chicago versus Austin. Pick a state. Pick a city. You can pick up the difference and point to those three factors what makes California again special.

Our job is not done. You know our boss. He's told us we're going to double our sales this year so we're hard at work trying to get that done. It's not an easy task. That's the thing we've been assigned and that's what we're running toward. Just to say this exact in case the Board doesn't know, we took a very aggressive stance in the last 30 days to address pricing. We've talked a little bit about this with the Board. We now have a $289 a month lease on the Nissan Leaf, which puts it very affordable in the marketplace. And again in an effort to spur adoption, spur the takeup and again the CVRP funds absolutely are necessary and are very helpful. So thank you.

CHAIRPERSON NICHOLS: Thank you. That's it. All
right. Thank you so much.

    Mark Aubry and then Eileen Tutt, and Ted Harris.
And that's it for my list.

    MR. AUBRY:  Good morning.
    CHAIRPERSON NICHOLS:  Good morning.
    MR. AUBRY:  Madam Chair, Board and staff.  Thanks

    for having us here today.  My name is Mark Aubry, the
    Chairman of the Electrification Leadership Council.  We
    appreciate the opportunity to present a point of view on
    the HVIP portion of the 2012/2013 AB 118 funding plan.
    The ELC team is especially appreciative of the staff's
    willingness to invest time on our proposal and to provide
    input and guidance.  The staff has done an excellent job.
    As an example of ARB's staff's laudatory work on
    the 2012/12 funding plan development, the staff recognized
    the increased cost premium for commercial electric
    vehicles when compared with hybrids and responded with
    larger voucher amounts to offset these higher costs.
    I would normally take this time to briefly
    address the ELC's plan to deploy 1500 all-electric
    commercial vehicles in South Coast AQMD over the next 24
    months through what we call the EV ecosystem.  However,
    what I'd like to do today is to focus my remarks on
    addressing a proposed interim policy for the HVIP program,
    a program that ELC members support.  We have provided a
copy of this policy change request to the staff previously
and in hard copy today for you to review.

Members of the ELC have proposed a comprehensive
commercial deployment plan that includes 1500 or more
all-electric commercial vehicles grid upgrades, electrical
EVSC equipment, and supporting workforce development
programs. The ELC has submitted proposals to the ARB, the
CEC, and South Coast AQMD to support this project.
Through this process, the ELC team has identified an
interim policy revision for HVIP that can have major
near-term impact. The ELC is proposing an interim policy
under which conversion of diesel powered delivery advances
to all-electric drive would become HVIP eligible.

As you know, the HVIP fund currently has a
positive balance, and we suggest this interim policy stay
in force until that balance is reduced. There are clear
trends emerging that support our proposal for an interim
HVIP policy. One trend we are seeing is growing interest
in a new approach to deploying commercial electric
vehicles. This new approach involves factor level OEM
conversions of diesel trucks to all-electric drive.

As you may know, commercial delivery vans, such
as a class five UPS truck, are increasingly powered by a
variety of fuels, CNG, diesel electric and all electric.
And because of the mild climate, a California based
delivery van has a useful life of over 25 years. Of course all of these 25 years diesel engines are overhauled on a scheduled basis, but an overhaul simply restores a diesel engine to its original state. Fleet operators are beginning to explore a different path. Instead of overhauling diesel motors, operators are removing diesel engines and scrapping them, and these operators are testing a conversions to all-electric power.

There are a number of other things we could present here today, but due to time, ELC will oversee the administration of the conversion process. And we suggest it would be worth ARB's investment of time as we would seek to work through these next steps together. Thank you for the opportunity to present today. Look forward to continuing to work with you and your staff. And I look forward to any questions that you may have for me.

CHAIRPERSON NICHOLS: Thank you, Mr. Aubry. I suggest that you wait for a little bit. We may want to get into further discussion with you.

Eileen Tutt.

MS. TUTT: Good morning, Chairman of the Board, members and staff. My name is Eileen Tutt, and I am the Executive Director for the California Electric Transportation Coalition. Our members include large and small utilities and some very progressive auto makers like Shevron Corp.
Nissan and GM who are here today.

We're also proud members of the Plug-In Electric Vehicle Collaborative. Love to see that come before the Board. We are here largely in support of the staff's proposal. That's the main reason. The staff has been incredible on this issue, and we really appreciate the fact there's more money in the CVRP, particularly this year than last year. The demand is clearly increasing and we are going to run out of funds for that program.

So I also have an ask of you all, particularly because we have the Energy Commission here. Just in case you haven't heard, the Governor's budget did include -- that was signed yesterday last night did include a three million reduction in the CEC AB 118 pot of money. And I think it's very important that the five million that's being moved from the Energy Commission into the CVRP be maintained because we are going to run out of money. I'll tell you that incentive program draws a lot of vehicles to this state. It is a huge attractor of vehicles to the state.

And one of the problems right now is the uncertainty for those who are buying the vehicles. They don't know whether or not they're going to get the rebate money because they don't know if it's going to be there. So we cannot lose that $5 million. And I hope that is not
impacted by the budget that was signed last night.

I also want to commend the staff on the presentation this morning. It was very well done. And I appreciate it. And I think part of the importance or the nexus between these programs is that success in the light duty vehicle market for electric vehicles will translate and help build success in the broader transportation sector that's going to need to be transformed according to the vision. So this program is vital. It's very important, and we support the staff's effort. We support the staff's plan. And I thank you for your time.

CHAIRPERSON NICHOLS: Thanks very much.

MR. HARRIS: Thank you, Chairman Nichols and members of the Board. I'm Ted Harris, California Strategies and Advocacy and a core member of EVI, Electric Vehicles International. And we're here today in strong support of the HVIP program.

Both want to talk a little about the success of the program to date and some of the key improvements or changes that are recommended.

First, little background on EVI. EVI is a California-based company headquarteried in Stockton in the heart of the Central Valley creating jobs and helping clean the air in California and beyond. The HVIP program has been really incremental and really instrumental in
helping just next month launch the largest class six zero emission roll out of UPS vehicles in the world. And we'd strongly encourage all of you to participate in a celebration we're still scheduling, but we'll get all the details to members of the Board and the public.

But that program was made possible in part by the support and partnership from the Energy Commission and HVIP plus from U.S. EPA from South Coast from San Joaquin Valley Air Pollution Control District and Sacramento AQMD. So to get 100 vehicles at that scale deployed took a lot of people working together. And the current levels of funding proposed in HVIP are similar and approach the level from the HVIP plus that was proposed and used in that program last year. So this will continue the success that we had from last year. And want to thank everyone for that success and hopefully we can continue that into the future.

I did want to touch on a couple things today. One, the incremental savings for users for class six diesel vehicles is $1200 or more per month. So there is a big end user benefit. But the big incremental cost, over a $100,000 more per vehicle versus a scaled diesel. So you have a big up-front cost, but it is coming down as battery prices come down.

I should also mention that deployment UPS is
contributing a lot to the incremental as well which is somewhat rare for clean vehicles.

We also want to echo support for the proposal for having the repower program be considered as part of HVIP. There are cost effective ways to take existing vehicles that have a lot of active duty life left that can directly clean the air right now and can help cost effectively scale down the price of the power train, which is a key part of the cost. Brings down batteries. Brings down the whole power train. And whole program could support power train manufacturing of EV power trains in Stockton to help jobs as well.

One last comment. On the question on farming and agriculture, the Energy Commission did support a Ford F50 commercialization for a range extended Ford F50 pickup truck with PG&E and that might be applicable for a lot of agricultural applications.

So with that, thank you.

CHAIRPERSON NICHOLS: Thanks very much. That concludes the list of witnesses that with we had before us. So it's back to the Board for discussion and action. We've heard a tremendous amount of support for the staff's work here, which is great. There is one suggestion pending, and I wanted to give staff an opportunity to respond to that. I'm not familiar with this request, but
I understand that it has been brought to the staff and possibly some Board members.

UNIDENTIFIED SPEAKER: Sure. Thank you, Chairman Nichols. Let me give a little bit of background on this and staff's perspective on the proposal.

While electric truck conversions are not currently eligible for funding through the AQIP funding, staff does recognize that there is an opportunity for electric conversions and could present as another option for fleets to consider in implementing advanced technologies. When we talk about providing public funds, we at the staff level feel it's important to step cautiously and make sure that we establish criteria that would differentiate between robust complete systems and demonstration types of projects. We currently believe there are no electric truck conversions for sale by OEM manufacturers, but we understand that demonstration projects are underway and that there will be data available from those projects in the near future.

So we have yet to see the results of the technology. And again, we think it's important to differentiate between the robust systems and the demonstration types of projects. So I think that leaves us with a question as to whether this is the right time for investments in conversion versus in the OEM types of
products that are currently a part of our program.

CHAIRPERSON NICHOLS: Is this the type of demonstration project that the Energy Commission would typically fund, assuming that they had the funding available for it?

MR. PEREZ: Certainly as part of our program, we fund a number of demonstrations. And this is something I believe we could consider as we move forward in the development of the fiscal year 13/14 plan. And the good news on that plan is that we will be launching the public workshop soon on that this fall, and I would encourage that all parties come forward and bring their suggestions to the Energy Commission at that time.

CHAIRPERSON NICHOLS: There has been this distinction between us and the Commission in terms of your focus more on the advancement of new technologies and ours more on getting the technologies deployed into the fleet where they can actually achieve results. I mean, it seems like kind of a nice line of division there.

MR. PEREZ: It really is. And we see some big opportunities in that area too and look forward to engaging a further discussion on how we might craft future solicitations and develop the criteria to better evaluate these new emerging opportunities.

CHAIRPERSON NICHOLS: Great. Any questions or
discussion on the part of the Board? If not, I would entertain a motion to approve the plan.

BOARD MEMBER ROBERTS: So moved.

BOARD MEMBER RIORDAN: Second.

CHAIRPERSON NICHOLS: All those in favor say aye.

(Ayes)


We're going to take a break and we have an executive session at lunch to get a report on some updates on some litigation. And we'll be back with the last and final item of the day after lunch. And let's give ourselves until 1:30 just to be on the safe side. Thanks, everybody.

(Whereupon a lunch recess was taken.)
CHAIRPERSON NICHOLS: This afternoon session of the Air Resources Board is devoted to AB 32 and to our cap and trade regulation for greenhouse gases.

There are two separate items in front of the Board. One of them is a set of amendments to the regulation that deal with the operations of the Cap and Trade Program, some specific proposed amendments from the staff relating to how the program will actually be implemented and enforced.

The second, which is a separate resolution, would require a separate resolution and is handled separately deals with linking and the rules for linking other jurisdictions that have programs that are effectively the same as ours so that we would be able to do joint implementation.

And I see that there's been some press coverage on this issue already, so I think it probably would be best to cut out of the beginning and discuss the procedure.

Before we do that, however, I'm reminded I need to report on the closed session that we had at noon, which is easy to do because we had a briefing by our counsel on status of several lawsuits that the Air Resources Board has been involved with. But the Board did not take any
action on those. So I have no action to report but am required to put that on the record.

So back to cap and trade. And we are going to be hearing an update from staff on the status of the program, and then we're going to be hearing from them on both of these items.

However, in the interim, between the time that the notice for the hearing was prepared and today, the Legislature has passed and the Governor has signed trailer bill legislation -- a bill that is associated with the budget, which requires that the Board seek and receive approval from the Governor before acting on a proposal to link another jurisdiction. And the Governor is given 45 days from the time that we make the request to make certain findings of which will be discussed a little bit more later, which we believe that he will be able to make. But it's an important procedural step that we need to go through before we do anything.

So I think it's important that the Board hear some information about where things stand in our discussions with Quebec, because we've had very strong and very positive working relationship with the Province of Quebec. And we've also seen that they are going to be moving forward in parallel with us, not on exactly the same schedule, but a closely aligned schedule so they will
begin issuing allowances and operating their own Cap and
Trade Program in the same time frame that we will be. But
in order to formally link our two programs with each other
and hold joint auctions or treaties of each other's
allowances as being identical, we need to go through a
further step.

So we will not be taking any action to formally
link today, but I'm hoping that we can ask the Governor
based on today's hearing that the Board will agree that we
should ask the Governor to make the certification that the
staff should ask for him to make as far as the
enforceability of the Quebec program.

So with that, I'll turn this over to Mr.
Goldstene to make the staff presentation.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Chairman
Nichols.

In this meeting, staff will present proposed
amendments to the cap and trade regulation that the Board
acted on last year. Some of these changes are needed for
program implementation, and others will enable us to link
California's program with other programs, including
Quebec.

In developing the modifications to the program,
the staff has worked very closely with stakeholders to
ensure that the proposed amendments would support and
secure a very state-of-the-art program.

And with regard to our work with Quebec, we've also coordinated closely with them in our partnership through the Western Climate Initiative. And the design of our programs is, of course, very similar.

We've also ensured that the market infrastructure is being well developed for our market monitor auction and services contractors who will serve the needs of market participants in our partner jurisdiction.

What we have tried to do here is made changes that would avoid any problems that we've seen in other systems throughout the world. And the amendments will represent improvements to our program as a result of lessons learned in other programs.

With that, I'd like to ask Rajinder Sahota from our Stationary Source Division Climate Change Program Evaluation Branch to make this presentation.

(Thereupon an overhead presentation was presented as follows.)

PROGRAM MONITORING SECTION MANAGER SAHOTA: Thank you, Mr. Goldstene. Good afternoon, Chairman Nichols and members of the Board. This Board Item is to discuss staff's proposed amendments to the cap and trade regulation.
PROGRAM MONITORING SECTION MANAGER SAHOTA: As part of my presentation, I will present two items for Board consideration.

The first item will include the proposed amendments to help staff implement the program and enhance system integrity. The second item includes the proposed amendments to allow for linkage of California and Quebec's Cap and Trade Programs.

Linkage would allow California entities to use Quebec-issued compliance instruments to meet their compliance requirements in California and for California-issued compliance instruments to be used in Quebec by their entities.

Before I get to the proposed amendments, I will also provide an update on the implementation of the program. This update will include a report of some of the key implementation items staff has previously discussed with the Board and continues to work on. We plan a broader update to the Board on the Cap and Trade Program in the next several months.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: California's long-standing pollution control programs have demonstrated that strong environmental regulation and economic growth can go hand in hand. AB 32 represents a
pioneering effort to address climate change. It mandates a 2020 greenhouse gas emissions target equivalent to 1990 emissions levels.

As discussed in the scoping plan, the Cap and Trade Program is a key component of the suite of measures needed to meet the AB 32 mandate. The enforceable cap is ensure to ensure we meet the AB 32 goal, providing a powerful backstop so that even if other measures do not achieve their estimated reductions, we will meet our objective.

The program creates a carbon price that provides a broad, economy-wide incentive for investment in clean technology and increased energy efficiency. The proposed regulation would limit aggregate emissions but allow covered entities the flexibility to find the best and lowest cost emission reductions strategies.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: It has taken three years and an extensive consultation process to develop the final regulation. We held over 40 public workshops and over a thousand individual stakeholder meetings while developing the regulation. We received over 1100 written comment letters, each of which we responded to in our final statement of reasons on the original regulation.
We have also collaborated closely over the last five years with the Western Climate Initiative partner jurisdictions. As of last month, WCI had released over 130 public documents, held 86 public consultation events, and received public comments on 48 separate occasions.

The Board initially considered the proposed regulation in December of 2010 and directed staff to work with stakeholders to make changes as provided in Resolution 10-42.

The rule became effective January 1, 2012. This year, staff held two workshops and an informal comment period on draft regulatory text in the development of the proposed amendments presented today.

This process also included extensive stakeholder discussions in close coordination with the WCI partner jurisdictions and Quebec, in particular.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: The next few slides will provide an update on the implementation of the program. We are developing the tracking and auction systems needed to actually run a Cap and Trade Program.

One of the key areas currently being addressed is related to compliance instrument tracking. As a reminder, compliance instruments are allowances and offsets issued
under the program. Staff has been working with the U.S. EPA and their contractor to develop the market tracking system, as they have extensive expertise in this area.

The system will be available this July for registration and account application. Everyone that will hold an allowance or offset will be required to have an account in this system.

In preparation for registration, staff conducted system testing with stakeholders in April and will provide training on the system before registration begins in July. ARB's website was recently updated to include help desk contact information.

Staff has also been working closely with our auction platform contractor and financial services provider to prepare the first auction. We will be holding a practice auction in August as part of system testing that stakeholders will be able to participate in. The results of this practice auction will provide us additional information that will be valuable in ensuring that we are fully prepared for the first auction scheduled later this year for November 14th. The November auction will only include California-issued allowances.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: We have designed the Cap and Trade Program to deter market
manipulation. We plan extensive program monitoring to
detect potential irregularities in the auction and the
market.

There are several activities underway. The first
is the establishment of the Market Simulation Group. The
MSG will be conducting computer simulations to stress test
design features of the regulation. The first stakeholder
meeting was held earlier this month where the MSG sought
stakeholder input to solicit ideas for simulation.

In addition, we have established a Market
Surveillance Committee. This group will be reviewing the
functioning of the market and provide advice to ARB if
there are concerns or potential future improvements in the
program. This Committee will be periodically meeting with
stakeholders to understand any concerns as they help ARB
monitor the market.

We have also contracted for services of a market
monitor. This contractor has been coordinating with the
tracking services, auction platform, and financial
services contractors to establish procedures and systems
that allow for successful monitoring and auditing of the
program. The market monitor also helped review the
proposed amendments to ensure the regulation would capture
the data elements to monitor the market.

Together, these auctions will support the
administration of a robust and well-functioning market
program.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: I'll
now provide a brief update on the topic of offsets.
Offsets provide a cost containment mechanism by allowing
for the limited use of voluntary emission reductions that
have occurred at sources not under the cap. As part of
the offset program implementation, staff worked with a
contractor to administer offset verifier and registry
staff training last week and this week. This is the first
of such training opportunities.

ARB accredited verifiers will review offset
project data reports to provide integrity in the
Compliance Offset Program. This training is the first
step to their receiving ARB accreditation.

Two voluntary registries have also submitted
applications for approval as offset project registries
under our program. Approved offset project registries
will help ARB administer the Compliance Offset Program,
but will not be able to issue any compliance offset
credits. To date, applications have been received from
the American Carbon Registry and the Climate Action
Reserve. We hope to have the first verifiers and
registries approved in the next few weeks. We will
continue to offer offset verifier training through the fall.

To ensure the availability of sufficient offsets, staff has been committed to evaluating potential new offset project types for protocol development. Staff has also had extensive discussion with the WCI jurisdiction to ensure that any project types selected would be allowed for compliance in a regional program.

Last August, staff had indicated it would evaluate three potential offset project types for protocol development. These three project types included rice cultivation, fertilizer management, and the replacement of pneumatic devices. After discussions with WCI partners and stakeholders, staff is proposing not to pursue development of the pneumatic project protocols as those sources are covered by the Cap and Trade Program beginning in 2015. Staff is proposing to start a public process to evaluate and develop a rice cultivation protocol and coal mine methane destruction protocol. We believe these two protocols will provide an opportunity to achieve a significant amount of high quality emission reductions.

We are continuing to pursue research to support the eventful development of a potential fertilizer management offset protocol. Staff will also coordinate with WCI partners to ensure any protocols that are
developed meet the ARB's rigorous standards and would be eligible for use in a regional program. This coordination will also ensure that any protocols developed by linked jurisdictions would also be acceptable for generating offsets that would be accepted for use in California.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: Last October, you directed us to continue work with stakeholders on various issues and report back or recommend amendments this summer. Staff is planning a more detailed update on these items later this year but wanted to provide you the status of our work on these issues to date.

In May, we held a workshop to discuss provisions related to the delivery of electricity to the California grid. Of specific interest was the definition of and prohibition against resource shuffling. Staff isn't able to bring amendments to the resource shuffling back to you this year. Staff is planning to provide regulatory guidance to clarify the regulatory intent and will continue to meet with stakeholders regarding their concerns.

You directed us to work with experts to evaluate the cap and trade market provisions before the start of compliance next January. In response, ARB and U.C.
Berkeley have established an inter-agency agreement for a Market Simulations Group. In June, the Market Simulations Group held a public meeting on the campus of U.C. Berkeley to talk with stakeholders about specific market concerns that this group could model. The Market Simulations Group will be working diligently through the summer and is planning more public meetings and a report on their work this fall.

ARB is committed to minimizing leakage in accordance with the requirements of AB 32. While staff believes our allocation system is sufficient to achieve this goal, we are continuing to evaluate the risk of emissions leakage as we implement the program. To that end, we are developing an inter-agency agreement with U.C. to analyze the potential impacts on industry from cap and trade regulation. Staff is also planning a public workshop on July 30th to discuss approaches for leakage monitoring going forward.

A key part of the industrial allocation system is the emissions efficiency benchmarks. We have contracted with Ecofys and the Lawrence Berkeley National Laboratory to develop benchmarks for new products entering the California market and to help us further develop the benchmarking approaches for a variety of sectors. Ecofys and LBNL have been gathering information from industries
and will be providing information to ARB staff to inform our work over the next year. This benchmark will continue into 2013 with any amendments coming back to the Board sometime next year.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: In addition to the broader concerns noted on the previous slide, there were some specific issues that you directed us to evaluate.

Holding limits are designed to prevent the exercise of market power, and we believe that it is important to reconsider holding limits in the full context of the entire program. We have had discussions with the Market Surveillance Committee regarding holding limits and expect this to continue with the public later this summer.

In addition, the Market Simulation Group I mentioned earlier is evaluating how the market may work in practice, including the impact of holding limits on the market.

Both water agencies and public universities have expressed concerns over the impact of cap and trade. We continue to have active discussions and are evaluating potential use of auction proceeds to support their emission reduction activities.

We have continued to evaluate the progress of

California Reporting, LLC
resolving legacy contracts that do not allow for reasonable means of recovering costs associated with greenhouse gas emissions. Active discussions with counterparties been productive. Staff is planning a workshop in the fall to discuss potential solutions to this issue.

The cap and trade regulation provides allowances to electrical distribution utilities for the benefit of rate payers. ARB staff is working with the Public Utilities Commission staff to ensure equitable rate payer benefits while maintaining appropriate incentives to reduce emissions and to work to evaluate the impact of yesterday's trailer bill language.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: Now I'd like to focus on the two sets of proposed amendments. The first set is focused on requirements to help staff implement the program. In general, these amendments focus on the mechanics of the program administration and enforcement.

The second set of amendments focus on linking the California and Quebec Cap and Trade Programs. These amendments would allow regulated entities in each jurisdiction to use the allowances and offsets issued by either jurisdiction to comply with their regulations. As
Chairman Nichols noted, we are not recommending Board action on these amendments today.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: As part of general implementation, staff is proposing to hold a single auction in November of this year. Staff plans to hold a practice auction for readiness testing of the tracking, auction, and financial services components in August. Individuals that registered for the program in January would be eligible to participate in the practice auction.

In discussions with staff, stakeholders expressed a strong interest in simplification of the account structure in the instrument tracking system. The regulation contains proposed amendments to consolidate accounts for entities with a direct corporate relationship. This means that an entity with multiple facilities will be able to administer a single set of accounts, instead of multiple sets of accounts for each facility.

We understand consolidation may not be appropriate for all entities so these proposed amendments also provide entities the flexibility to opt out of consolidated accounts if the compliance obligation is not going to be handled by a single parent company.
PROGRAM MONITORING SECTION MANAGER SAHOTA: This slide contains a summary of the provisions to establish an enforceable program and enhance program integrity.

Staff is proposing to limit access to registration in the tracking system to individuals with a permanent residence in the United States. If any entities register for tracking system accounts, they must have a representative with a permanent residence in California or a local service agent where legal documents can be served as part of potential enforcement activities.

Individuals registering in the system must also submit specific documentation to verify their identity. Staff worked closely with the market monitor and stakeholders to develop these requirements and balance the amount of requested information versus the need to ensure integrity in the program.

Lastly, the proposed amendments require a disclosure of any felonies in the past five years and excluded individuals with criminal backgrounds within that time frame from registration in the program.

These provisions are all designed to minimize the types of problems seen in other emission trading programs.

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regulation also contains new provisions to help implement transfers in the tracking system and avoid theft of compliance instruments. The tracking system is designed with a push-push-pull feature. This would require two representatives to initiate the transfer of compliance instruments to another account and one representative from the destination account to confirm the transfer request.

This feature is being designed to prevent unauthorized transfers. Provisions on transfer requests were modified to clarify information requirements and to provide a clear process to remedy deficient transfer requests.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: Staff is proposing to remove the existing provisions known as beneficial holdings that allow one entity to hold a compliance instrument in their account on behalf of another entity. Staff discussions with market monitoring experts raised concerns about the potential for the provisions to complicate monitoring efforts.

Staff intended the beneficial holding provisions to deal with issues arising from long-term electricity contracts. However, after conversations with stakeholders, staff concluded that the provisions did not resolve the contract issues sufficiently to justify the
complications to market monitoring.

The cap and trade regulation includes purchase limits to minimize the potential gaming of auctions. Staff included purchase limits in the regulation to ensure equitable treatment of all covered entities in the auction. The utilities were exempted from the purchase limit due to the requirement that they cosign their allocated allowances. Staff is proposing an auction purchase limit of 40 percent for the utilities which will allow them to require the allowances they need while ensuring equitable access to allowances for all covered entities.

The holding unit feature prevents entities from accumulating significant amounts of allowances and affecting market functioning. We have heard stakeholder concerns that the holding limit may need to be adjusted if the compliance obligation is expected to increase substantially due to new facilities coming online or unforeseen fluctuations in emissions.

In response, staff is proposing a mechanism for the Executive Officer to approve increases in exemptions to the holding limit under limited situations.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: The next area of amendments allows staff to clarify and
implement the requirements of the auction and reserve sales. These proposed changes will further support the effective functioning of the auction.

Some of the detail added included a three-hour bidding window on the day of each auction, a designation on the order in which different financial bid guarantees will be processed, a process to address tie bids, and a clear identification of how each quarterly auction will include a current vintage and future vintage auction.

The same mechanics were added for the allowance price containment reserve sales, except those sales only have reserve allowances which do not have a vintage date.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: I will now turn to the second set of amendments which are designed to create a joint market program between California and Quebec. A joint market program would broaden the compliance instrument market to provide greater flexibility to California businesses by offering a wider range of emission reduction opportunities and greater market liquidity and enable greater greenhouse gas reductions.

Once this joint program is established, California entities will be able to use Quebec-issued allowances and offsets for compliance. And Quebec
entities will be able to use California-issued allowances and offsets for compliance.

All compliance instruments would be fully fungible across the jurisdictions. If California links with Quebec or another jurisdiction, staff is committed to updating the Board and the public at least once a year and in advance of significant changes to a linked jurisdiction program, including the consideration of new offset protocols or linking to another jurisdiction.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: The next four slides provide a summary of Quebec's climate change program and specifically their Cap and Trade Program.

Bill 42, similar to AB 32 in California, requires Quebec to address climate change and authorizes the establishment of a Cap and Trade Program. Like California, Quebec has been a WCI partner for five years and has participated in the development of WCI recommendation for a regional market program. Quebec's 2020 greenhouse gas emissions target is 20 percent below the 1990 levels, and thus slightly more stringent than the 2020 target mandated in AB 32.

Prior to the coordination efforts that began this year to harmonize the California and Quebec regulations
for linkage, Quebec had existing mandatory greenhouse gas reporting and cap and trade regulations. Earlier this month, Quebec released amendments to their existing mandatory reporting and cap and trade regulations that would harmonize their regulations and allow for a joint market program in California. These regulations are expected to become final in September of this year.

As we walk through the program in a bit more detail, it is important to note that not all areas need to be identical, but that overall the programs have similar stringency and rigor to support a joint market. As part of usual program oversight, staff from both jurisdictions will monitor their programs and recommend any changes to the respective regulations as needed.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: A rigorous mandatory reporting program is essential to support an effective Cap and Trade Program. Quebec's mandatory reporting program is consistent with California's mandatory greenhouse gas reporting program.

Both programs require reporting by the same types of industrial sectors with an identical threshold for inclusion in the Cap and Trade Programs. The reporting methods for each sector are consistent with the requirements in California's regulation.
And, like California, Quebec requires third-party verification of its greenhouse gas inventory reports.

Quebec’s draft amendments strengthen existing missing data provisions. These are important to deter gaming and provide a conservative estimate of greenhouse gas emissions. Both regulations exceed the minimum recommendations to support a rigorous market program as recommended by WCI.

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PROGRAM MONITORING SECTION MANAGER SAHOTA:

Quebec’s Cap and Trade Program is also an economy-wide program that covers the largest greenhouse gas emitters and electricity importers. There are an estimated 80 total regulated entities whose emissions would account for 15 percent of the market in a joint market program with California. The program is designed with the same holding and purchase limits so that all regulated entities in a joint program would be held to the same requirements to ensure market integrity.

Like California, Quebec has quarterly auctions and reserve auctions. As part of a joint program, California and Quebec would hold joint quarterly auctions.

Both programs have an allowance price containment reserve which is comprised of allowances that set aside from the annual allowance budgets. There would not be
joint reserve auctions, and only California entities would be able to bid at the California reserve auction.

Quebec also has a three-year compliance period, but they do not require a partial annual surrender as does California. Staff does not believe this presents any concerns as part of a joint program.

Quebec's draft amendments also include the same identity verification requirements as California before individuals are given accounts in the tracking system. The enforceability provisions in Quebec's program are also equivalent to those in the California programs.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: This slide provides an overview of the proposed offset program in Quebec. The offset criteria and offset issuance process are consistent with the design of California's program. There is similar stringency for offsets to meet the AB 32 offset criteria and program oversight by the government of Quebec.

As with California, Quebec also has an eight percent offset usage limit for their regulated entities. The recently released draft amendments include three proposed compliance offset protocols. The livestock protocols requires the capture and destruction of methane, similar to the ARB livestock protocol.
The ozone-depleting substances protocol only applies to ODS from foams, as Quebec has a program in place to address refrigerant ODS. And those reductions would not be considered additional.

The small landfill protocol requires that capture and destruction of methane at landfills that have less than 450,000 tons of residual waste in place, this protocol only applies to small landfills as California has a regulation that requires landfills larger than that threshold to address methane emissions. By setting this threshold, Quebec avoids providing offset credit to large landfills that would be regulated if they were in California.

At this time, our protocols only apply to the United States and Quebec's protocols only apply to projects that occur either in Quebec or Canada. This prevents project developers from shopping for jurisdiction with less stringent protocols. They will only have one choice, depending on the location for which jurisdiction would issue and which protocol is applicable to an offset project.

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PROGRAM MONITORING SECTION MANAGER SAHOTA: For both sets of amendments, staff carried out a California Environmental Quality Act environmental analysis in California Reporting, LLC
acCORDANCE WITH ARB CERTIFIED REGULATORY PROGRAM. THE ANALYSIS IS BASED ON POTENTIAL COMPLIANCE RESPONSES OF COVERED ENTITIES AND RELIES ON THE PRIOR ANALYSIS PERFORMED FOR THE CAP AND TRADE REGULATION IN THE APPENDIX O TO THE OCTOBER 2010 STAFF REPORT REFERRED TO AS THE FED.

FOR THE NON-LINKAGE AMENDMENTS, THE ANALYSIS FOUND THERE WOULD BE SIMILAR IMPACTS AS THOSE IDENTIFIED IN THE FED, AS THOSE ARE MOSTLY ADMINISTRATIVE CHANGES.

FOR THE LINKAGE AMENDMENTS, THE ANALYSIS FOUND SOME POTENTIAL INDIRECT IMPACTS THAT MAY OCCUR DUE TO CALIFORNIA ENTITIES SEEKING OUT QUEBEC-ISSUED OFFSETS. THESE INDIRECT POTENTIAL IMPACTS WOULD BE SIMILAR TO THOSE DESCRIBED IN THE FED AND STAFF REPORT FOR THE LANDFILL MEASURE, WHICH FOUND THE LIVESTOCK PROTOCOL HAS THE POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS TO ODORS, CULTURAL RESOURCES, NOISE, AND TRANSPORTATION, TRAFFIC.

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PROGRAM MONITORING SECTION MANAGER SAHOTA:

TODAY, STAFF IS RECOMMENDING THAT THE BOARD APPROVE RESOLUTION 12-27 THAT WOULD ALLOW STAFF TO FINALIZE THE AMENDMENTS RELATED TO IMPLEMENTATION AND PROGRAM ENFORCEABILITY.

STAFF IS ALSO RECOMMENDING THAT THE BOARD APPROVE RESOLUTION 12-28, DIRECTING STAFF TO TAKE THE NECESSARY STEPS SPECIFIED IN THE BUDGET TRAILER BILL LEGISLATION.
adopted yesterday to enable California to link our Cap and Trade Program with Quebec. These findings include the jurisdiction ARB proposes to link with has a Cap and Trade Program as stringent as California's program, including the offset program, and that the program has equivalent or greater enforceability.

This concludes the staff presentation. And we would be happy to answer any questions you may have.

CHAIRPERSON NICHOLS: Thank you very much, Ms. Sahota.

I see we have about 14 witnesses that have signed up. We don't have too large a crowd today. But if you are planning to testify and you haven't signed up yet, I would really appreciate it if you would do that in the next five minutes, because we have people who have airplanes and other plans this afternoon. We want to take as much time as we need, but we would like to make sure that we can plan our work.

So if there aren't any comments right now, which it doesn't appear that there are, I just want to say before we get going here that obviously this is a complicated technical regulation. The rule is requiring a great deal of work to get ready to actually begin the full allocation of allowances in November. But it appears as though with this set of amendments, we will have the
entire rulemaking in effect and that from that point on there will still be a need for a lot of communication with the regulated community as well as interested members of the public. There will undoubtedly be a need for guidance-type documents to be issued. But this is the point at which we're kind of trying to wrap up the specific pieces that will make this program work.

So I'm pleased there are a number of people here who do have -- who have had a strong role in the design of this program and looking forward to hearing what they have to say. So let's start -- sorry.

BOARD MEMBER SPERLING: Just to make -- this might be a reiteration of what you said before, but it didn't fully sink in.

CHAIRPERSON NICHOLS: I'm used to that.

BOARD MEMBER SPERLING: But if we approve these two, what does this mean going forward in terms of the linkage with Quebec? I understand we have to get approval.

CHAIRPERSON NICHOLS: Yeah, I didn't say that very clearly. So thank you for actually making that point.

BOARD MEMBER SPERLING: One of the things -- just so you address it also -- is some people have mentioned to me they had some concerns about tidying up a lot of the
rules and so on with Quebec that it's not been put in place yet. There's information, disclosure, and things go wrong and how do you deal with it, and a lot of those kinds of things.

CHAIRPERSON NICHOLS: Staff can add to this, if they would like. But here's where I think we are.

I think we are ready to make a judgment that Quebec's program is sufficiently stringent and enforceable for us to link with them. But there is work that needs to be done before the two of us could actually conduct a joint auction.

So my view of the process is that we would submit our stack of paperwork on which I base the statement that I just made to the Governor with specific citations to their rules and their program that says Governor, their program is worth us being linked. They're ready to link. And he would have the 45 days to hopefully agree with that. And if that happens, it would come back to the Board and we would have to then formally adopt the linking proposal.

However, in addition to just saying, yes, we're linked, there is also work that has to be done on both of our sides as we move forward to actually having the auction. And our sense has been that given the workload that the contractors on both sides have with that, that it
was very likely that the first joint auction would not
take place until sometime next year. So in other words,
even before the legislation passed, I think we had pretty
much concluded and had discussed with Quebec the strong
likelihood that we would do our first auction in November
and theirs would happen sometime in 2013. So they were
looking at February. There is no mandate for a specific
date. But that was the track they were on.

So the delay in terms of the formal linkage
doesn't effect that one way or another, because both
jurisdictions are still working as hard as they can to
take care of all of the detailed work that has to be done
to make an auction work.

I'm sure that we're going to hear from some of
the witnesses their concerns about linkage, and I suspect
we'll get more detail about that. But I do want to assure
everybody to start with that we will have another
opportunity for them to be heard before the Board before
we actually sign anything on the dotted line that says
we're linked to each other. So we're engaged, but we're
not married yet.

BOARD MEMBER SPERLING: And we get another

chance.

CHAIRPERSON NICHOLS: We can think about it some
more before we set the final date for the wedding.
Okay. Any other kind of initial questions?
If not, let's begin with Norman Pedersen and
Frank Harris and Erica Morehouse.

MR. PEDERSEN: Good afternoon. I'm Norman
Pedersen. I'm here for the Southern California Public
Power Authority.

SCPPA submitted written comments on both linkage
with Quebec and the non-linkage related amendments.

In our comments on linkage, we urge the Board to
consider delaying linkage with Quebec until the California
and Quebec program start operating, until the inevitable
start-up problems are resolved, and the program show they
are stable and effective.

We also expressed concern about the potentially
adverse impact Linkage could have on California allowance
prices. A WCI study projected a potentially negative
impact. The Board, as we just heard, will now defer the
linkage issue in light of the passage of SB 118. SCPPA
urges the Board to take its comments on linkage into
account when it gets to the point on whether to link or
not.

Regarding the non-linkage changes to the cap and
trade regulation, we submitted a written comment that
strongly supports a new section that allows electric
utilities to consolidate their accounts for their various
generating facilities and their imported electricity. For many, consolidated accounts will reduce the administrative burden of the Cap and Trade Program and will have potential benefits for all participants in the Cap and Trade Program.

Beyond supporting the new provisions for consolidated accounts, SCPPA proposed more than a dozen revisions to the proposed amendments that would further reduce the administrative burden of the Cap and Trade Program on covered entities. Particularly, we propose revisions to the new "Know Your Customer" requirements. The new Section 95834 requires all individuals seeking access to the tracking system to provide extensive personal information, including personal bank account information. These requirements are so intrusive they will likely make it difficult for a covered entity to find employees that will be willing to submit the required information to the ARB.

There are several ways in which the "Know Your Customer" requirements could be revised to avoid the intrusiveness, while fully ensuring the security of the tracking system. We recommended specific alternatives in our comments. I hope to see 15-day language on the table in the lobby this morning that would reflect some of SCPPA's comments, both on the "Know Your Customer"
requirements and also the other points that we raised, which I won't go into now, in our written comments. Unfortunately, I have not seen any proposed 15-day language, but I hope there will be some way that the Board can take our written comments on, again, more than a dozen points into account.

And thank you very much for your attention.

CHAIRPERSON NICHOLS: Thank you.

Frank Harris.

MR. HARRIS: Good afternoon, Chair Nichols, Board members, and staff.

My name is Frank Harris. I represent Southern California Edison. SCE appreciates the opportunity to speak before the Board today.

Over the last many years, six years ago, starting with AB 32 as a whole and three years on the cap and trade regulation specifically, SCE has worked very closely with the ARB staff and stakeholders to develop a program that will help achieve the State's emission reduction goals, while not imposing unreasonable or unbearable economic burden on our customers.

California is taking a leadership role to address global climate change. It's critical that the State's Cap and Trade Program work effectively to demonstrate the value of a market-based approach. The date to go live
with cap and trade, as Chair Nichols mentioned, is fast approaching. And while much of the policy discussions have been wrapped up, where we are focused right now is on the many details of implementation and the requirements of making this program actually work as designed.

To date, many of the important details of program implementation are yet to be formalized. SCE continues to have some serious concerns that the auction and the interactions with the various systems needed to make the program work have not been sufficiently evaluated and tested.

As of today, SCE is not confident that the auction will operate as intended without further Board direction to staff to implement some specific steps. These steps include allocating the needed resources to implement activities to engage stakeholders that ensure that the market design and the systems are fully tested prior to go live. This includes establishing a robust set of readiness criteria which, at a minimum, should include multiple test auctions. Currently, there is a test auction expected I think August 27th. Today's presentation said late August.

However, it's insufficient to have simply one. If the results of that auction don't necessarily yield any problems, it's not clear that it was broadly
representative. We would like to have a second practice
or test auction to make sure that those results are robust
as you would like. If there is a problem that's
demonstrated in that test auction, of course, you would
want to implement some sort of a repair or fix and then
run another practice auction.

In addition to those repeated auction design, we
would like to see a more end-to-end design for this test
auction which would include all elements, including the
kit system feeding the allowances into the auction and
then transferring them back into the individual regulated
entity's accounts after the auction. And so right now we
don't see that that's part of the design.

It's very crucial the parties are going to make
million dollar investment and procurement decisions have
full confidence that this mechanism is going to work as
designed. We simply encourage the Board to direct staff
to implement further tests and evaluations to make sure
this system operates as expected.

As it stands, we are ready to work with staff.
We submitted written comments with a lot more detail on
this issue. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.
BOARD MEMBER RIORDAN: Madam Chair?
CHAIRPERSON NICHOLS: Yes.
BOARD MEMBER RIORDAN: Could I ask staff regarding this repeated auction, even if your first run works well, would you go back and double test it? I'm wondering what your response might be.

ASSISTANT DIVISION CHIEF CHANG: So we do have -- this is Edie Chang.

We do have a practice auction scheduled for the end of the August. So it's an opportunity. It's important to realize the practice auction is one aspect of the testing we're going to be doing of all of these systems before we go live with an auction platform and with the registration for the auction.

Some of the testing that Mr. Harris refers to with regard to interaction between the tracking system and the auction platform to make sure they can talk to each other and that information can be transferred, that is not part of the practice auction, but those are things that we are going to be testing separately.

What the practice auction does is it gives the stakeholders an opportunity to sort of go through the system without real money on the line. And it allows us to also develop and test our procedures for how we're going to run the practice auction.

We don't have plans that if the timing is such that we're running the practice auction at the end of
August. Registration for the November auction actually opens in mid-September. So we've got two weeks between those. If something were to go very, very wrong, I think we would obviously need to re-evaluate and determine if we could run an auction. I don't think we could put ourselves in a situation where we knew something was going to go wrong that we would go forward with an auction.

CHAIRPERSON NICHOLS: There is a limit to the number of repetitions you can do the exact same exercise.

BOARD MEMBER RIORDAN: I understand that. But I also understand the meaning of putting the money investment into it and not having it function correctly. I'm torn. I'm sort of conservative on this side which says maybe we ought to try. But let's see. I'll think about that.

CHAIRPERSON NICHOLS: Well, and we may want to also ask some more detailed questions about the other testing that are going on in addition to the practice auction.

BOARD MEMBER ROBERTS: What would it take to go through this more than once?

ASSISTANT DIVISION CHIEF CHANG: Excuse me?

BOARD MEMBER ROBERTS: What would it take to do this twice? Those of us who lived through something called the ISO and the great debacle have extreme concerns
with regard to something that is this complex, no matter what the assurances are.

ASSISTANT DIVISION CHIEF CHANG: The main issue is time. That's what it will take. So we're developing the auction platform right now with the auction, with the auction contractor. And right now what the plan is is to have this practice auction at the end of August.

If we wanted to plan for another practice auction, what that would mean from a practical perspective is I don't think we would be able to have a November auction, because there simply wouldn't be time because we have to notice the November auction 60 days before the auction actually happens.

BOARD MEMBER ROBERTS: So maybe we would have a December auction then?

ASSISTANT DIVISION CHIEF CHANG: I think that would be difficult. I'm just sort of playing out the time lines in my head.

If you run the August practice auction, you do an evaluation of how that goes. Then you have another process to run another practice auction. That whole process might take more than a month to run through. So I'm not sure that December would work. We would have to -- we have to play out those time lines and talk with the contractor about what's possible.
CHAIRPERSON NICHOLS: You might want to talk about the relationship between this auction of the State-held allowances and the Public Utilities Commission and their role in all of this, too. Because it's a little more complicated than just one auction. There's one auction, but there is the financial consequences of all of this are playing out over a period of years, not of one day of auctioning.

ASSISTANT DIVISION CHIEF CHANG: Well, so the utilities have to cosign their allowances into this auction. And so they are --

CHAIRPERSON NICHOLS: The allowances they're given --

ASSISTANT DIVISION CHIEF CHANG: The allowances they're being provided are on behalf of the rate payers and they are cosigned into the auction. So it's actually a joint auction of allowances that the revenue is going to the State of California and auction and which the revenue is being returned to the utilities because they are required to cosign their allowances.

But I think the other piece of this is, this is just one part of the testing that we're going to be doing. Actually, when the Chairman said about asking questions about submitting additional testing, we can get more details definitely. But we are doing user acceptance
testing as different modules of the auction platform are being developed. And we are working with both the tracking system and the market and the auction platform developer on how the systems talk to each other so that the file transfers are happening smoothly. These are all things that are under development right now. And I think we're starting user testing the next week or so on the auction platform.

CHAIRPERSON NICHOLS: Not to belabor this point too much. But the most likely thing to have happen to go wrong in an auction is something like a phone line stop working. And therefore, you can't do the auction. And so you have to shut it down and start over again or postpone it or abort it.

The things that are likely to fail that are going to cause -- that would cause real problems with electricity markets are actually other aspects of the system which are also being tested at the same time. That is the only point I was trying to make. Not to make you even more worried, but it should make you more concerned that there's other pieces of this.

BOARD MEMBER ROBERTS: That's precisely part of the concern right there, the complexity of this whole thing.

You know, I think we all should realize and I'm
sure we are all aware, if this thing blows up in any way, shape, or form, the opportunities of the future of cooperative efforts elsewhere in the United States is going to have suffered a severe blow. And I just want to make sure that to the greatest extent possible we test it and over-test it. I would rather Over-test. And what you're saying is a lot of complexity and a lot of pieces that need to be tested and that's precisely why I made the comments.

CHAIRPERSON NICHOLS: I agree with you.

BOARD MEMBER BERG: Madam Chair, since there could be a lot of discussion on the Board, maybe we could go through the witness list and make some issue list and then kind of engage. Otherwise, I don't know when to jump in and --

CHAIRPERSON NICHOLS: I understand. I think it's probably wise. Thank you for your contribution here and we will continue.

Okay. Erica.


Showing that two different governments with two different economies can work together and put a price on carbon and reduce greenhouse gas emissions would be a transformative step for North America and a step that
could really launch a regional effort to join the
international movement that's desperately needed to
address the threat of climate change and to create a
prosperous and green economy.

And California has been vigilant in designing the
most rigorous Cap and Trade Program so far as we heard
today in the staff report and this is going to work with
other measures targeted in the AB 32 2020 goal to make
sure that's possible.

And because Quebec and California have been
working together through the WCI process and sharing
information and best practices, they've really been on
parallel tracks to create Cap and Trade Programs that
include the central components of good design, which are
mandatory reporting rules and the stringent cap and
scientifically rigorous offsets and effective enforcement
measures. And this makes Quebec an excellent partner for
California to link with at this time.

And the main thing with other jurisdictions that
meet California's rigorous environmental standards can
provide both economic and environmental benefits,
including increasing market liquidity and broaden the
emission reductions that are possible and also expanding
the demand for emission reduction technology, many of
which are made here in California.
And linking with Quebec in particular can bring capital flows into California to increase investments in on-site emissions which can create local jobs and local emissions reductions.

For all of these reasons, Environmental Defense Fund supports the current proposal to accept compliance from linked jurisdictions and to link Quebec as well and also the other proposals to strengthen the Cap and Trade Program through "Know Your Customer" provisions and others. We've submitted comments on that.

And we also appreciate the staff's commitment today to develop a public process around offsets protocols for rice. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Craig Anderson and Kate Beardsley and Tamara Rasberry.

MR. ANDERSON: Good afternoon, Chair and members of the Board. My name is Craig Anderson. I'm the Director of Environmental Affairs for Solar Turbines with about 4500 employees in California.

Our turbine engine research and test facility in San Diego has been reporting and verifying greenhouse gas emissions through the climate registry and now with ARB since 2006 and will be one of the initial businesses in the Cap and Trade Program.
First, Solar very much appreciates the time and effort ARB staff has spent over the last two years understanding our very unique business. Thank you, Mr. Cliff, in particular. And we also very much appreciate the personal visits by Member Roberts and Chair Nichols to our facility.

Our concern today is that the linkage with Quebec will do very little to reduce the leakage risk which is critical to our facility under the Cap and Trade Program. Solar has to make long-term decisions, business decisions to continue and create jobs in California. We are actively planning and taking actions to meet our business commitments for 2015 and 2020, including the construction of new test facilities.

Solar is a very unique business. It's the only one in our entire source category. Under the current leakage designations, our facility will either need to procure tens of thousands of allowances or reduce our engine testing by more than 50 percent. Because the testing is required by our customers to meet safety criteria, it is doubtful that we will be able to reduce anywhere close to that amount.

We are being asked to perform business planning, assuming that we will be able to support more than half of our production activity by participating in a market that

California Reporting, LLC
is yet to be tested at a cost that is yet to be
determined. This scenario presents real risk to our
business. Therefore, while we recognize the need for ARB
to work through the pros and cons of linkage with Quebec,
we request the Board prioritize the leakage risk
categories and the methodologies for developing them for
immediate review so that unique businesses like Solar can
plan accordingly right now. Thank you.

CHAIRPERSON NICHOLS: Thank you.
Kate Beardsley.

Ms. BEARDSLEY: Good afternoon, Chairman Nichols
and Board members. My name is Kate Beardsley. I'm
speaking today on behalf of PG&E.

PG&E believes that ARB continues to make progress
on both the development and implementation of Cap and
Trade Program. There are key amendments to the regulation
being proposed today which further flush out extremely
important implementation details. However, issues do
remain, and I will highlight three key areas where we are
requesting further work and consideration from staff and
the Board.

The first is holding limits and the removal of
the beneficial holding section. As was noted in the staff
presentation, the beneficial holding section was removed.
However, a substitute has not been provided yet.
PG&E's concern that the removal of this section and the lack of change to the current holding limit unfairly disadvantages entities such as PG&E that have an electricity portfolio consisting of both our utility-owned power plants and power plants under contract.

So while we do not oppose the removal of the beneficial holding section, we realize it's complex. We are eager to work with staff on substitutes for that. And we are asking for certainty regarding when the holding limit issue will be further addressed and resolved.

The second issue you already heard about, the "Know Your Customer" requirements. We are also concerned about the quantity of information being required to be provided. So our request with that is that ARB either look to comparable markets and perhaps streamline the approach or outline the security provisions that you all have in place to ensure that this information is protected, consistent with industry standard.

The last item is somewhat echoing what SCE was commenting about with respect to practice auction. We fully support the practice auction. But we do believe that in order for the practice auction to fully prepare both ARB and the stakeholders for the first auction, we recommend that ARB proceed with the practice auction with a few key considerations in mind.
The first is completeness. We also think that the practice auction needs to be a full end to end. The current practice auction being envisioned today is close, but it's missing this kind of integration with the market tracking system. So we would like to see if that could somehow be captured in a practice.

The second is robustness under duress in that it would be really helpful to have certain scripted stress scenarios tested in a practice auction so that you can see that the infrastructure in place is able to stand strong in light of a variety of scenarios that could occur.

And then the final consideration is evaluation; to be able to have staff look at the results from this practice and make changes as needed.

So if ARB is unable to incorporate the above considerations in the practice auction, we request that ARB consider other ways to involve stakeholders in testing, et cetera. Thank you very much.

CHAIRPERSON NICHOLS: Okay. Thank you.

Tamara.

MS. RASBERRY: Thank you, Madam Chair and members of the Board again.

My name is Tamara Rasberry, and I'm representing the Sempra Energy Holding Company, San Diego Gas and Electric, and the Southern California Gas Company. And we
just wanted to say for the record that we support ARB's linkage with Quebec. And we support this to provide a successful market model.

We have very detailed comments that we submitted to the Board last Friday. I just wanted to summarize just very high level key points. You heard earlier from my colleague at SCPPA about the "Know Your Customer" requirements. We are very concerned that the personal information requested from the system registrants is quite burdensome. We understand the importance of protecting the system from fraud and threat. But Section 95834 requires much more information than we believe ARB needs to accomplish this objective.

Also, as mentioned earlier by my colleague at Pacific Gas and Electric that the elimination of the beneficial holding section in Section 95921 will not allow San Diego Gas and Electric to acquire and hold allowances for the entities we are contractually obligated to purchase allowances for. We would like the staff to revise that section to clarify this type of business transaction is permissible.

We also have concerns with the holding limit violation language in Sections 95911(e)(3)(b) and 95913(g)(3)(a). I won't go into details about that. It's very complex, but it's also found in our comments towards
this regulation.

    And my last comment is on Section 95833(c) on affiliate transaction rules. This is an issue we brought up in our original comments on the original proposed regulation that you voted on in 2010 and again in 2011. And we are very concerned that the affiliate transaction rules -- it's not clear if it's the Board's intent to treat entities like investor-owned utilities as a separate entity or if we are a single entity with our unregulated sister company affiliates with Sempra Energy Corporation.

    California law prohibits coordination between regulated entities. And the unregulated entities of corporation. And we think it would be helpful for that section to be modified and make it clear that federal and State affiliate transaction rules require these types of entities to be treated independently.

    Thank you.

    CHAIRPERSON NICHOLS: Thank you.
    Tony Andreoni, William Westerfield and Cindy Parsons.

    Mr. ANDREONI: Good to be back. Thank you, for the opportunity, Chair Nichols and members of the Board, to provide comments on ARB's proposed Cap and Trade Program amendments.

    I'm Tony Andreoni. I represent the California Reporting, LLC
Municipal Utilities Association, or CMUA for short.

CMUA is a state-wide organization of local public agencies that provide water, gas, and electricity service to California consumers. Our membership includes over 40 publicly-owned electric utilities, or POUs, which provide electricity to one-fourth of all Californians.

Our members are committed to local economic development and job creation and have demonstrated leadership supporting environmental issues, such as climate change, renewable energy, low carbon transportation fuels, as we heard earlier, under AB 118 and energy efficiency is very high on our list, while at the same time minimizing cost impacts to our customers.

CMUA appreciates recent changes to the regulation, and we are pleased to voice our continued support for AB 32 and the Cap and Trade Program.

However, our members do have concerns with the proposed "Know Your Customer" or KYC requirements. This was mentioned by SCPPA and we have a few members that will also be mentioning this. We have also provided written comments to the Board.

CMUA understands that the ARB wants to be able to confirm the identity of individuals and to avoid any issues with fraud and market manipulation that occur in an emissions trading system.
However, the KYC requirements are intrusive and it would be difficult for our members to require their staff to provide personal information to the ARB.

Furthermore, any breach of security within ARB's records could pose significant liability. We suggested alternatives to what was proposed in our comment letter. And many of our members suggested alternatives as well.

One recommendation was to require agents to disclose the type of information required under the U.S. EPA acid rain market trading program, which has been in existence for years. This program uses security imbedded within the system's program. CMUA stresses that the proposed KYC requirements would be difficult for POU employees and prefer alternatives that do not require personal information to be disclosed.

We also do share the concerns raised by Supervisor Roberts as making sure that the system is functional for our members. This is extremely vital to our members.

We look forward to working with you and your staff as you consider additional amendments, especially related to the electric sector, as was discussed earlier, and as you begin to implement this important rule.

Thank you.

CHAIRPERSON NICHOLS: William Westerfield.
MR. WESTERFIELD: Good afternoon, Madam Chair and other members of the Board.

My name is Bill Westerfield. I represent the Sacramento Municipal Utility District.

I'll start by expressing SMUD's support for the Cap and Trade Program and most of the proposed amendments before you today. However, we have real concerns about the "Know Your Customer" requirements.

Quite frankly, when our traders heard about these requirements, they were shocked. Some of our traders had been on the trading floor for 10, 15, or 20 years and they tell me this is the first time that any regulator has requested personal, sensitive, and potentially compromising information in order to trade commodities. And that is what we're talking about here, because greenhouse gas allowances are environmental commodities in a closed market.

These are not securities. These are not negotiable instruments that are traded in an open market requiring banking industry control.

In comments that we filed yesterday, SMUD laid out a number of arguments for why we feel that the ARB has over-reached in requiring disclosure of sensitive and confidential information. And we discussed in those comments a number of legal and policy problems with the
For one, we believe that the ARB is prohibited under California Information Practices Act from collecting this personal information and disclosing it to its banker, Deutsche Bank.

Second, requiring SMUD to disclose this information exposes it to potential liability for invasion of privacy court actions. This regulation would force SMUD to abandon its information security policies designed to detect the legitimate privacy concerns of employees.

However, we believe that ARB has plenty of reasonable alternatives and, in fact, does not need to do its own investigation of our employees. No other commodity platforms require this personal information to confirm that our employees are who we say they are.

In SMUD's comments, we discussed several reasonable alternatives that are less intrusive and equally effective. For example, California ISO issues additional certificate which is installed on the trader's business computer. The digital certificate is unique to each trader and is necessary to make the trade or to access ISO applications. No confidential, personal information is involved.

In our communications back and forth between the ISO and SMUD to ensure that the trades used by -- are only
made by authorized SMUD representatives and would address
the problems that have been seen in other trading schemes.

A similar process could be used by ARB with equal
security, which would make disclosure of personal
information unnecessary to confirm the identity of our
authorized account representatives. So we urge you to
reject this specific proposal on the "Know Your Customer"
requirements and adopt a less intrusive alternative. And
we hope to see some 15-day language to address this.
Thank you.

CHAIRPERSON NICHOLS: Thank you.
Andy Katz -- sorry. Cindy Parsons first and then
Andy Katz.

MS. PARSONS: Good afternoon. Cindy Parsons
representing the Los Angeles Department of Water and
Power.

We appreciate the opportunity to provide comments
on the proposed amendments relating to the Cap and Trade
Program implementation. LADWP also submitted written
comments, and I'd like to highlight a few of those
comments.

First, LADWP supports the amendments which allows
publicly-owned utilities to consolidate their facility and
entity accounts into a single account. Publicly-owned
utilities are vertically integrated so they operate both
in-state generating facilities as well as electricity distributing customers. Being able to consolidate those accounts will resolve the difficulty of having to predict how to divvy up the allowances into separate accounts prior to the actual emissions occurring.

Emissions for electricity-generating facilities vary significantly from year to year depending on a number of factors, including outages, wet or dry years, and availability of electricity from other resources. Dealing with individual accounts would be very challenging from a compliance perspective, and the rule does not allow the transfer of allowances between accounts. Therefore, we appreciate this amendment and support it.

Secondly, LADWP is very concerned about the "Know Your Customer" requirements that will require our employees to disclose their personal information while acting on behalf of the entity which is the LADWP. These requirements are very intrusive and could result in significant liability in the event that personal information is compromised.

Rather, LADWP encourages ARB to look to EPA's acid rain program as a model for developing ARB's emission tracking system. EPA's registration structure is also used for reporting of greenhouse gas emissions to both EPA and CARB. If the EPA registration structure is good
enough for reporting of greenhouse gas emissions, which
serves as the basis for the cap and trade compliance
obligations, we think it should be good enough for the
compliance instrument tracking system as well.

Lastly, LADWP recommends allowing three business
days rather than three calendar days for the transfer of
allowances between different entity accounts. Without
this change, if a transfer is initiated on a Friday, the
push-push-pull would have to occur over the weekend in
order to complete the transaction by the third calendar
day, which is Monday.

To avoid this, account representatives would tend
to initiate transfers during the first half of the week,
which could skew market prices and transaction volume.

Our recommended change to three businesses days
would allow transactions to be processed starting the next
business day.

In closing, I'd like to refer to you our written
comments for additional details. And thank you for the
opportunity to comment.

CHAIRPERSON NICHOLS: Thank you.

Mr. Katz and then Kassandra Gough and Brenda
Coleman.

MR. KATZ: Good afternoon, Chairman Nichols and
Board. Andy Katz representing Breathe California.
And I want to congratulate the Board on reaching this very, very significant step in achieving a regional greenhouse gas emission reduction program by linking with another jurisdiction.

My comments that I'd like to focus on urging the Board to enhance the work that's already been done. I'd like to commend the staff on all of the work in coordinating with the WCI and with the Province of Quebec. But I do think it's important looking in the long term and looking at the future of ensuring the success of AB 32.

To clarify a process for ensuring that linked jurisdiction's programs continue in the future to meet the requirements of AB 32, I'm thinking specifically of environmental integrity criteria that are specified in AB 32. When you think about offsets, it's that they're real, permanent, quantifiable, verifiable, enforceable. They're additional to what would have otherwise occurred. And the overall program and compliance instrument from another jurisdiction is equivalent to California's jurisdiction.

Like to urge the Board to clarify that if a jurisdiction changes its program, that, for example, adopting new offsets protocol or linking with another third jurisdiction that CARB will evaluate these changes and that if CARB finds the linked program no longer meets AB 32 requirements, those linked jurisdictions's
compliance instruments would not be accepted until the Board finds that the program does meet the requirements.

I hope that this marriage is successful, and I fully expect that in the case of Quebec that that's likely to happen.

up front understanding helps sustain partnerships. That's why Breathe California is encouraging a more robust framework to work on ways to clarify this beyond asking the staff to keep the Board updated, something that helps identify and clarify what is this process moving forward.

So again, want to appreciate the work of ARB staff to develop the Cap and Trade Program and to develop it into a program that can be something that achieves regional reductions. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Kassandra and then Brenda and then Paul Mason.

MS. GOUGH: Thank you, Chair Nichols and Board members.

My name is Kassandra Gough. I'm the Director of Government and Legislative Affairs for Calpine, the state's largest independent power producer. We're also the state's largest renewable energy provider and the owner of the state's largest combined heat and power facilities.
As the state's largest independent power producer, we have the greatest number of emissions among our fellow power producers. It's not because of our efficiencies, but because of our size. We have over 6,000 megawatts in the state. And we've invested $6 billion since 2001 to build clean efficient generation for California.

We submitted 25 pages of comments again last week. We've done it a number of times. And I know that staff could probably recite our issues because we've had a number of conversations about them. And yet, we've seen no changes to the regulations.

So it's through the lens of our obligation, the size of our obligation that we view these regulations and that we offer these comments.

We are not receiving any free allowances, and therefore we're going to be in the market purchasing every allowance that we need for every facility. And you heard earlier from SDG&E for every contracted facility we have as well.

You've heard parties comments about the removal of the beneficial holding relationship which was supposed to be a mechanism whereby the utility which has a tolling contract for our facilities -- in other words, they run our facilities, we do not -- could buy allowances and
transfer them to Calpine or entities so we could retire them. That's been removed. It was imperfect as originally written, but I think a number of us had offered really helpful suggestions that have not been incorporated.

So here we are left with a very strict holding limit, a large compliance obligation, and now Calpine is going to be required to buy all of those allowances. You heard SDG&E said we can't do it because of the holding limit being small for them. It's small for them, too.

But we're book ended here. We also have a 15 percent auction purchase limit. You heard earlier that the utilities used to have no auction purchase limit but they lowered it 40 percent. Well, just by example, PG&E, our biggest customer and sometimes our largest competitor in 2010, our emissions were nearly eight million metric tons. PG&E's was two million metric tons.

Why do they get a 40 percent auction purchase limit when they're not going to be buying for our facilities because of the constraints on the holding limit? And yet, we get 15 percent, which we barely eek through.

We ask that the Board make through 15-day changes changes to the auction purchase limit and the holding limit. And also, we ask that the Board direct staff to
take action today on the legacy contracts and direct staff
to withhold allowances to those entities who are receiving
a free allocation for emissions associated with steam and
electricity for which they do not have an obligation under
long-term contracts. We have the obligation. They do
not. They are essentially getting unjustly enriched. We
ask that the Board direct staff to withhold those
allowances from those entities as we move forward and work
on the other long-term contract issues. Thank you.

CHAIRPERSON NICHOLS: Okay. Paul Mason. I'm
sorry. Brenda Coleman. Brenda and then Paul.

MS. COLEMAN: Good afternoon, Chairman and
members of the Board.

Brenda Coleman here with the California Chamber
of Commerce. I'm a policy advocate for the Chamber.
However, today, I'm also speaking on behalf of the AB 32
Implementation Group. IG is a business and taxpayer
coalition working for AB 32 policies that will achieve the
goals of AB 32, while protecting the economy and jobs.

We are pleased to hear that the Board will be
taking action pursuant to the budget trailer bill language
directive of 1478 as it relates to linkage. The IG
submitted extensive comments which we hope you will take
into consideration. Several of these comments have been
expressed by several of the other speakers already.
However, briefly, we are opposed to the linkage today because of the following reasons:

There has not been sufficient opportunity to review and comment on the Quebec regulation.

There are no sufficient benefits, rather, to linkage and there remain a myriad of unanswered questions and potential problems with California's yet to be started market.

Quebec's auditor in general has found serious flaws with the integrity of the systems to measure carbon emissions to the point of calling the measurements arbitrary.

And finally, linkage with Quebec without first assuring the market functions properly and market manipulation protections actually work poses new and unnecessary risk and complications.

We hope that CARB will move toward making reasonable rational changes to the leakage regulation to make it more cost effective, beneficial, and administratively workable. We look forward to working with CARB going forward. And thank you so much for the opportunity today.

CHAIRPERSON NICHOLS: Okay. Thank you.

MR. MASON: Good afternoon, Chairman Nichols, members of the Board, staff.

Paul Mason, Pacific Forest Trust.

First, I just want to thank the staff for the colossal amount of work and the Board for all they have done to implement AB 32 and help California keep moving toward reducing our emissions. Like most Californians, Pacific Forest Trust is very supportive of that effort.

In terms of the regulations that are before you today, I want to focus my comments on what are not in the regulations. We're generally supportive of linking with Quebec and linking with other jurisdictions as those opportunities arise. But we think that it would serve the Board well to establish a process and criteria for evaluating these other jurisdictions as they want to link with California. So it's not a new free-standing evaluation each time, but there are some guide posts to measure against. Staff has done that in the case. But as additional opportunities arise in the future, I think having some consistency to how different opportunities are evaluated would be very beneficial.

Additionally, as these other jurisdictions are adopting offset protocols, I think it would be very useful for ARB to again have a guidance document, a process for independently evaluating those offset protocols that are
adopted in other jurisdictions to make absolutely sure that they meet the criteria of AB 32 and any other applicable California standards, rather than just letting them come into the system because another jurisdiction has approved them. I think it behooves to the Board to retain a little more oversight over the compliance instruments that we use in our system.

So those are areas that I think -- I'm not sure what the best mechanism is at this point in terms of 15-day changes or additional language in the resolution or guidance documents from the staff. But those are two areas that I think would be very beneficial to further clarify with additional linkages in the future.

Thank you. And we look forward to working with the staff.

CHAIRPERSON NICHOLS: Thank you.

Ann Chan followed by Michael Wang and Belinda Morris.

MS. CHAN: Good afternoon, Madam Chair, members of the Board and staff. I'm Ann Chan, Senior Climate Change Specialist for the Wilderness Society.

The Wilderness Society appreciates your continued leadership on climate change that supports linkage to other jurisdictions and underscores the timeliness of this effort at the end of the week that has seen over 1,000
heat records broken across the United States in catastrophic wildfires across the west that have impacted many lives and the public lands that the Wilderness Society seeks to protect.

The staff presentation noted the existence of three draft offset protocols and a geographic restriction on these potential offsets to Canada and California. TWS has submitted written comments seeking additional clarifications that echo the comments of Breathe California and the Pacific Forest Trust about additional clarification that's needed regarding a process for evaluating any protocols after linking or any modifications to protocols or modifications to link jurisdictions' programs that could significantly change the types of compliance instruments available, for instance, by expanding the geographic scope of available offsets.

We'd also like to see additional clarification regarding any remedies that might be available pursuant to a finding that any after-adopted protocols or amended protocols or not in compliance with the WCI offset essential elements recommendations for additionality, verifiability, and additionality. And also any remedies that might be available for findings that after adopted protocols or modifications are in violation or
inconsistent with other relevant environmental laws.

We feel these clarifications are important to maintaining the integrity of the cap. And we offer our assistance in working on any of these issues. We believe that this is a very important step that ARB is taking with very high precedential value that will help move us towards greater coordinated national and international action that's urgently needed to address climate change and preserve our natural resource legacy. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Michael Wang and then Belinda Morris.

MR. WANG: Good afternoon, Madam Chair and members of the Governing Board.

I'm Mike Wang with Western States Petroleum Association. WSPA has supported market-based approaches in the past and we continue to do so.

We understood that linkage was intended to reinforce the Cap and Trade Program as the market-based approach chosen by the ARB. So it's somewhat disappointing that many of our comments that we submitted in March and again in April appeared not to have been included in the recent staff proposals.

For example, the proposed linkage provisions are neither simple nor supportive of the cap and trade effort. Instead, it makes things harder. It's simply not linkage
to a broader market and not a way to make compliance
easier and less costly. So it's good that additional work
on linkage is contemplated.

Our previous submissions and those we sent to you
yesterday also discuss several technical issues, such as
holding limits. I'll not get into the details of those
issues at this time. However, the unresolved policy and
technical issues remain troubling to those parties who are
entrusted with implementing the emission reductions that
you all claim in your program.

We note, for example, that the refining industry
is highly trade and should be classified that way. The
BCG report that was recently released clearly documents
that fact. ARB should make program changes to recognize
that the refining industry is highly traded as a first
step to improve the efficiency of the Cap and Trade
Program. Thank you.

CHAIRPERSON NICHOLS: Thank you.

Belinda Morris. And I believe you are our last
witness for this item.

MS. MORRIS: Good afternoon, Madam Chair and
members of the Board.

I'm Belinda Morris, California Director of the
American Carbon Registry. American Carbon Registry really
appreciates all the hard work you and your staff are doing
to get the Cap and Trade Program launched, and we support all the work that you have done.

We are really looking forward to the opportunity of serving as an project registry for the program. And we particularly appreciate your efforts to bring more protocols into the program and encourage you to consider additional protocols as we feel there will be a need for additional offset tons early on and throughout the program.

We are particularly excited that you are working on the rice protocol, a protocol that I personally have worked on. We feel that's really important to have agriculture as part of the offsets program.

Lastly, we would be very interested in following up with staff on the possibility of the new rice protocol being considered because we do believe there is a potential that the protocol can generate valuable tons in the program in the first compliance period when we feel it could be a shortage of tons for the program. Thank you very much.

CHAIRPERSON NICHOLS: Thank you.

That concludes the testimony. I think we can close the record at this point, and we can proceed to discussion by the Board.

There have been a number of issues that have been
identified that people want to work on. This is not the last time this issue is going to come before the Board. This is, I think, the end of the regulatory process, but it is far from the end of the implementation or oversight portion of this process.

And I wanted to verify with staff that you have a time line. I don't know -- if it's in the report, perhaps it needs to be shown again of activities that you're going to be undertaking between now and the time that the market would actually start. And that does include coming back to the Board at least in September to address a number of these issues that are being raised here that require further action by the staff. So this is not by any means a rush towards November. We have time to continue working.

But I want to make sure that Board members get a chance to have their issues discussed and addressed and that there is another at least one more opportunity built into this process under which the Board as a whole would be enabled to be comfortable with that, in fact, we're ready to go. Because I fully understand -- and I know the staff does, too. But this is the first time that this has been back to the Board in a while, that the weight of responsibility is on us for the success of this program. And we do favor in general a belt and suspenders and
second belt approach to making sure there is safety as far as -- particularly as far as the electrical supply system is concerned, but just in general for the program.

So having said that, I want to make sure I've heard from the Board. And I'll start with Ms. Berg.

BOARD MEMBER BERG: Thank you, Madam Chair.

And actually, I'm going to piggyback on your comments. I think when we passed cap and trade, one of the things that became very apparent to me is that, as a Board member, I really do not want to micromanage each detail. I think getting into each detail is cumbersome when you don't have all the information.

That said, I'd like to hear from staff that you feel that you have the resources and that you have the time to address some of these critical comments that have been made today. And some I'm hearing quite frankly some frustration that specific issues aren't being addressed. And I just want to hear that we do have the resources and we are going to address some of these things prior to going live, so to speak, number one.

Number two, I'm very happy to hear that staff will be coming back to the Board. And what I would like to suggest that I would like to see is I really would like to see a report where staff comes back and really outlines the testing that has been done on the various levels of
the systems and get a report back from staff on what the outcomes were of the testing. And in fact, that as a group, you are saying to us that you feel we have the systems in place and that you are, in fact, ready to go live.

Secondly, I would really be interested in having you back that staff report up with the experts that you outlined in slide six, which would be the experts that you have gone out to help us monitor this program and to give the Board a level of comfort that when we, in fact, go live that we feel that we have crossed as many T's and dotted as many I's as we can think about. Because anybody will tell you we cannot get it 100 percent right because we're not super human. But with that, we can do as much as possible to make sure that all of our processes, procedures, and all the hard work that you've been doing is, in fact, at a place where you're really super confident.

And the final thing is I'd really like to hear that we do not feel so pushed in a corner on a time line that if, in fact, we need more time to get this right, that we will take the time to get it right. I think that is a critical element that we don't feel like we're just marching towards a time line that we have to go at a certain time.
So I think that the only issue that I'm hearing loud and clear is the "Know Your Customer". I'd like you to go back and take a look at that based on the testimony that you've heard today.

And with that, those are my comments. Thank you.

CHAIRPERSON NICHOLS: Thank you.

I would like the staff to talk a little bit more about the balance they struck on the "Know Your Customer" issue, because this has been heavily, heavily discussed. This is not a surprise suddenly this issue came up today. I think it would be good for the Board to hear about that.

And there is a couple of other things that were raised. I don't think we -- or at least you went rather quickly over the plan for dealing with the long-term contracts that was raised by Ms. Gough. I think it's very important that people hear your plans for dealing with that before November, because this has been one of those issues that has been coming back and that we have not been able to address up until now. I think we had hoped there would be some action taken frankly by private parties who have chosen not to do so. So that's going to come back onto our laps as well.

But, yeah, just like to give the staff a chance to respond to your comments. If you want to do that now, that would be fine.
DEPUTY EXECUTIVE OFFICER COREY: I'd like Edie Chang to respond to "Know Your Customer," and I would like to go back and walk through the practice auction and provide a little bit more background on that and then go to Ms. Berg's questions and comment overall.

CHAIRPERSON NICHOLS: Sound good.

ASSISTANT DIVISION CHIEF CHANG: So why don't we start with the "Know Your Customer."

The first thing I want to do is explain what it is that we are asking folks to provide to us. What we're asking folks to provide to us is their name, their permanent residence, their employer, some sort of government photo ID that proves they are who they are. We want them to attest they haven't been convicted of a felony in the last five years. And then we want proof that they have an open bank account. And I think the open bank account has been one of the areas that folks have been concerned about.

The reason that we ask for proof of an open bank account is banks, when you open a bank account, do their own "Know Your Customer" checks. So they want to make sure that you are who you are. And actually as a result of the Patriot Act, they have to check for things -- they're looking at things like terrorism and money laundering and things like that as well.
Our understanding is in the U.S. to open a bank accounts you need to appear in person to do that. And we don't require that folks appear in person to qualify to register into our system. So those are the things that we're requiring.

We don't want your bank account information. We don't want your account number. We don't want your balance. What we want is a letter that says this person has a bank account at this bank is sufficient. And we've actually posted preliminary forms for registration into our tracking system on our website so these forms are available now to folks.

The reasons how to become to these are the things we're asking folks to do. We wanted to make sure that we knew who was in the tracking system and who are moving instruments around. We want to make sure they are real live people, that if we detect problems, we can take enforcement actions against them. So that is the purpose of making sure that we do these "Know Your Customer" checks.

We did look at what other sort of trading systems require. This is consistent with the direction the EU ETS is heading. It's similar to what they do in the UK for their carbon trading system. We did look at the banking industry in terms of the kinds of checks they ask folks to
go through. These are the kinds of things that make us
confident that we can oversee this market, that we are
going to know who is in this market, and that we can
enforce in the market.

There has been some concern about the need to
provide Social Security number to the financial services
provider. And I want to clarify, we are not asking for
anyone's Social Security number. The State of California
is not asking for that. If you are an individual
participating in the auction, so if you're participating
in the auction, you have to provide a financial guarantee.
We want to make sure if you bid, you can back up your bid.

If you're an individual participating in the
auction -- so my example was my mom. If my mom wants to
register into the tracking system and participate in the
auction, in order to establish an account, Deutsche Bank
is required to ask for certain kinds of information to do
their own "Know Your Customer" checks, and that includes
Social Security number. If you are going to be
participating in the auction on behalf of a covered
entity, you are not required to provide that kind of
information. That is only for individuals who are
registering to participate into the auction.

So I'm trying to think of anything else

CHAIRPERSON NICHOLS: Several people were trying
to use the analogy of the EPA acid rain trading system and the amount of information they require, which is considerably less.

ASSISTANT DIVISION CHIEF CHANG: It is considerably less.

CHAIRPERSON NICHOLS: And my immediate reaction was that’s not the same kind of auction system because the number of players is so much smaller and they're all the same basically. But I'm curious if you looked at that and saw that -- is that, in fact, a more streamlined system and have you made this as streamlined as you can consistent with proper enforceability.

ASSISTANT DIVISION CHIEF CHANG: Our understanding of what the acid rain program requires, it's more a verification that you are the same person -- you're the same individual who registered, but there is not necessarily an identity check that you say who you are.

So it is not sort of a check on that -- if I register into the system as Edith Chang at this address that you have checked and you know I am, indeed, who I say I am. You have to provide answers to some questions and then you verify those answers when you go back in so you know you're the person who originally entered the answers, but you may not know you are who you say you are.

CHAIRPERSON NICHOLS: And you choose not to go
down that path because --

ASSISTANT DIVISION CHIEF CHANG: We want to make sure that we knew that everybody who was in the system is a real person. The sort of internal jargon we use is we don't want dogs registered into our tracking system. We want to make sure that if there are folks that are trying to manipulate the market, that our market monitor is seeing things that are odd, that we actually do have a real person that we can take action against and enforce against.

CHAIRPERSON NICHOLS: I know you consulted with a lot of enforcement-oriented people at the federal and state level in developing this system who were very worried that this particular market needed to be more protected than some others might be.

ASSISTANT DIVISION CHIEF CHANG: We did talk to the CFTC and we also looked at the requirements that the SEC has for securities traders.

One of the folks who testified said it's not appropriate to look at banking industry standards. We did look at banking industry standards because we are concerned and we heard a lot of concerns about folks about how this market can be gamed and manipulated. And we want to ensure that we have adequate protections in there.

I would also state that's the same standard that
we're using as we're developing the security for the
computer systems we're developing, that our standard is an
industry standard that is secure on those systems as well.

CHAIRPERSON NICHOLS: I suppose if you needed to
or chose to, it's easier to lighten the standards rather
than to make them more stringent also. If, in time, you
decided we were asking for more than we needed, that it's
much easier to go to a less stringent system than to
require more after there is a problem.

Yes, Mr. Roberts?

BOARD MEMBER ROBERTS: Just a quick question.
And all this information is very satisfying. I'm feeling
much better about this whole area.

There was a comment that you made the question
you referred to the felonies for five years. Are you just
asking somebody or are we doing --

ASSISTANT DIVISION CHIEF CHANG: We do ask -- on
the form, we ask that you attest that all of the
information is true. And if you have a felony in the last
five years, we ask what the jurisdiction is and what the
year is.

We are also going to be doing checks of the "Know
Your Customer" information. So the information that you
provide to us has to be notarized. So someone has
actually looked at your information before you send it to

California Reporting, LLC
us. But we also are going to be doing double checks of that to make sure that the information hasn't been falsified and checks things like that.

BOARD MEMBER ROBERTS: That was my follow-up question. We routinely do those background checks.

ASSISTANT DIVISION CHIEF CHANG: This falls well short of a background check, but we want to make sure that we have a mechanism to ensure that the information that is provided to us is correct.

BOARD MEMBER ROBERTS: Okay.

CHAIRPERSON NICHOLS: Yes, question on this one. Go ahead.

Rich was going to comment further about the time line.

DEPUTY EXECUTIVE OFFICER COREY: There are two areas I want to touch on.

The first was to amplify a bit on the practice auction and what its objective is and what's on the front and back of that. I think it's really important sort of to round out what is going to be involved.

The objective of the practice auction is -- this was a recommendation in terms of our stakeholders. We thought it was a great idea and we would integrate it into the roll-out of the program. But it's to ensure there is a familiarity with the system in terms of a user interface
and actually it helps, in fact, on the staff side, too.

But leading up to the practice auction, there are two months. We have beginning in the next week or so in terms of user acceptance testing in terms of the systems, the registration systems, the auction platform, the linkage between those systems, stress testing those systems. So before the practice auction takes place, the systems will have been exercised extensively by the contractors and by us. And we'll be confident the system is going to work effectively and be available.

Part of that practice auction leading up to it will involve training and videos that we'll be making available to the participants. There will be a post auction survey voluntary to those that participated to make sure we're clear in terms of their experience and see if there are any adjustments that are necessary.

And in terms of this discussion, one thing that did occur to me that wasn't initially planned was it could be valuable for a summary of that practice auction to be put together, provided to the Board, put on a website and characterize this is how it played out and also discuss at the following Board meeting. Just a printout in very clean plain language how that experience played out. The first auction is one element of extensive testing of the systems and their functionality of the systems.
The other element that I want to get to goes back to Ms. Berg's comment. Basically, to me, at its core was: Do you have sufficient team on the program? And are you ready? Are you going to be ready? If you're not, are you willing and prepared to indicate that?

We spend a lot of time in terms of making sure that we put the right team on this program, our staff and equally in terms of contractors. The competitive process we went through to select contractors for both administration, the auction platform, market monitoring, financial services provider, and the work with those contractors for extensive amount of time in terms of making sure the systems are in place.

We're confident that we are, that we will be ready. But we're completely prepared if there is any indication that there is an issue, one, to make you all fully informed, the public as well as and recommend an adjustment. But at this point, as we look forward, we'll be prepared for that November auction.

But also listening to this discussion, I'm thinking about the report back to the Board in September in terms of staff's program. So there will be value in terms of I think actually having some of the contractors present, because in a sense, it's a count down at that point in terms of the auction. Registration would have
happened. Preparation for participating in the auction, hearing from us on status, hearing from us in terms of the practice auction, hearing from the contractors, hearing from the market monitoring and the role of the market monitor, the Market Surveillance Committee that we have, and also some of the market simulation modeling that we have underway to help inform the oversight of the program and kind of mapping out and laying out the overall effort prior to that final launch to the auction.

CHAIRPERSON NICHOLS: I think it's important that the Board gets an opportunity to touch, see, talk to, question the system as it gets closer to the point where we're actually going to be launching.

You know, we've all spent -- not you, but you're part of this now, too. Many of us have spent years on this process. And all of us have spent many hours listening to and trying to absorb all the criticisms and all the concerns. And you know, we understand that on anything that's big and important there is always going to be some little bit of holding of the breath before you take off, no matter what.

So I don't think we're demanding that nobody ever have any questions. But I do think that we'll all feel better if we have had an opportunity to hear in more detail exactly how these things are going to be done and
see who the people are who are going to be doing them.

    So, yes.

    DEPUTY EXECUTIVE OFFICER COREY: Madam Chair, one more thing that occurred to us, to the extent there is a big interest in the part of the Board members to participate in the practice auction, there would be an opportunity.

    CHAIRPERSON NICHOLS: I was waiting for that. I was going to ask. They will make this opportunity available. So by all means, let people know.

    I think that the reality is that every member of this Board is implicated to the extent of having put their fingerprints on this thing. And we'd like to have the pride of having been part of it, too, as well.

    BOARD MEMBER RIORDAN: I think if I can remember back to some of our very early discussions and some of the experts that appeared before us, there was one -- and I cannot recall who he was -- was a gentleman -- and he specifically I think in his presentation wanted to be assured -- for us to be assured that this system would work. And even suggested putting somebody into the system to game the system to see if there was a gaming opportunity. And so that sort of is in the back of my mind. And so I might just reflect that gentleman's testimony that day because I think that's --
ASSISTANT DIVISION CHIEF CHANG: And we talked about as part of the practice auction having folks set up to try to game the system to see what happens or try to do something that wouldn't normally be allowed. That is part of what we want to test.

CHAIRPERSON NICHOLS: I haven't been looking down to this side as much as I should have. So any comments here at this point? You do.

BOARD MEMBER D'ADAMO: Well, on that issue, manipulation, I thought that that's what the stress test was going to consider, the Market Simulation Group; correct?

DEPUTY EXECUTIVE OFFICER COREY: Part of the Market Simulation Group is to do just that. Basically, to look at the market data establishing the regulation and seeing if someone can exercise market power and manipulate the system.

BOARD MEMBER D'ADAMO: Good. And well I feel a lot more comfortable, too. I think we focused initially on the practice test, and it turned out to be just one of the many bells that's out there. There's lots of bells and whistles that we are going to be running through.

What I'd like to do is look at slide nine real quickly. And you know, I could hear the frustration from Kassandra from Calpine. And you know, that's on this
issue of holding limits and legacy contracts. But if staff could quickly go through and give us a quick update on these issues, water agencies, public universities. I'm just adding the two that I keep hearing about from stakeholder groups: Leakage, waste to energy legacy. And let us know when you're planning on coming back. So this would be September for all these issues and kind of puts a status report?

My way of labeling all these issues is there just seems to be some lingering fairness issues that are out there. I know on many of these, it didn't fit in nicely to some of the boxes that we initially created. So just wondering how it's going for some creative ways of dealing with these issues.

CHIEF CLIFF: On the holding limits -- I'll step through each of these as we go along.

On holding limits specifically, as this mentions, we're working with the Market Simulations Group. We did have a meeting on June 7th I believe to discuss with stakeholders specific activities that could be modeled by the Market Simulations Group to look at issues that stakeholders are concerned about. And one of those is the effect of holding limits.

So what this Market Simulations Group is going to do would be to design a computer model of the market,
including the rules as they exist, and then sort of perturb that model to determine what sort of outcomes might result from specific type of activities. And if that result is that there's something that requires an amendment to the regulation, we, of course, would bring that back.

It might result that there is a certain area of the market that we need to look at a little more carefully. It might result in some sort of enforcement scrutiny that we hadn't previously considered. So we're not presupposing what might come out of that.

But we do believe that we've set up the rules to be properly protective of the market. That said, we want to have this Simulations Group look at what sort of outcomes could result from the rules that we set up.

So we have had the one public meeting. There will be additional public meetings with the idea of having a report out this fall in advance of the first auction.

On the water agencies and public universities, we've had quite a few discussions with them. They really -- as we've discussed with the Board in the past, allocating to them directly just doesn't fit in with the entire -- the way the rule is set up. There isn't the right sort of rationale for allocating directly to them.

But we do understand, as Board Member D'Adamo
said, there is an equity issue here that we need to look at. So that's why we've been working to try to evaluate the potential use of proceeds. There will be proceeds from auction. Of course, that's subject to appropriation by the Legislature and the Governor through the budget process. ARB would be developing a plan, and I think that if we can figure out a way to make some sort of support for the activities that water agencies and public universities would undertake, emission reduction activities they would undertake, that would be an appropriate use of auction proceeds.

On the legacy contracts, we have been working really actively with various counterparties. There are those that feel they aren't able to pass along cost or aren't able to appropriately recover the cost of the cap and trade program. And then there's the other side, the counterparty in that contractual arrangements. We've had conversations with both individually and the combined sets with both parties on the phone or in the room. It's been very instructive.

It turns out that, you know, as we've talked through this issue in the past and over the past year or so, we suggested that we're really encouraging those parties to come together and figure out some resolution without the government stepping in. We always recognize
that at the end of the day this wasn't going to be
resolved for all parties. It turns out it's been pretty
successful. There have been many parties who have
resolved these contract issues. And we're down to
something like maybe a dozen contracts out of all of the
contracts throughout the state that don't allow for this
cost pass through according to the information that we've
been provided.

So we're still evaluating what we can do. And
we're committed to having a workshop later in the year,
say early fall, where we can discuss with stakeholders
some specific ideas about how to address this issue. And
we're evaluating at the staff level now. I think it's
premature to suggest that we have any sort of resolution
specifically, but we think we can go back to stakeholders
with some ideas about what to do and, you know, keep this
issue moving.

That said, any sort of change that would require
a rule change wouldn't be in effect before the first
auction. But I think it's clear we could come up with
some ideas we could talk through with stakeholders and
then come back to you next year if there are appropriate
rule amendments that we would suggest.

And leakage I think was the other one that you
mentioned. So as directed in Resolution 11-32 and
actually in Resolution 10-42 back from December 2010 when the Board first considered cap and trade, you directed us to continue to monitor the leakage risk to industries in California.

We've been obviously busy with a number of other things, but that hasn't kept us from trying to work with stakeholders to really understand their specific concern. We've been getting some information that's provided to us from these stakeholders. More information about their emissions intensity or their trade exposure. And we're now putting together an interagency agreement with the University of California to do some specific analysis that will help us kind of move the ball forward on this. We were always committed to making changes in advance of the second compliance period if changes are appropriate. And we just need to work through that analysis.

In the allocation of allowances, we're trying to balance this need to prevent or minimize emissions leakage with minimizing the windfall profits that could occur if industries get too many allowances. So that requires very thoughtful analysis and a very careful analytical framework. This is really what we did was kind of stated the science. We're trying to move that forward with this interagency agreement with the University of California.

And we also will be announcing in the next couple
of days a workshop on July 30 to talk to stakeholders about how we'll monitor leakage going forward and ideas for that, as well as talk through what sort of research we're planning to do under this interagency agreement.

CHAIRPERSON NICHOLS: So I want to just -- let's finish up if other people have comments. Yes?

BOARD MEMBER SHERRIFFS: On the university issue, using proceeds to help support the good things they're doing sounds great. Of course, it's hard to guarantee that would happen. Do we have other ideas?

CHAIRPERSON NICHOLS: It's not our money. Seriously, the Legislature has to appropriate the funds. That's the way it works.

And I was about to say the Board should be updated on what the PUC is doing as a result of the same trailer legislation that dealt with the cap and the linkage.

The Legislature has also directed the Public Utilities Commission as to exactly how they're supposed to deal with the auction proceeds, the value of the allowances that go to the utilities -- the investor-owned utilities. And that is going to have an impact also on what the public sees in terms of electric rates.

And also it looks as though the PUC is going to, in effect, be given discretion to distribute the value of
up to 15 percent of these allowances, which is a lot of revenue, for purposes consistent with AB 32.

So there is going to be -- there is going to be revenue coming to the State of California. And there are many people watching very carefully to make sure that it's spent in ways that are beneficial to the state and also that support AB 32.

The state of that discussion at the moment is that everyone agreed that there would not be an attempt to spend any of the money in this year's budget, even though there will be revenue coming in in the fiscal year, that they will not -- they would not attempt to expend it through the budget process. But there will be legislation and there are bills pending that are going to be acted on in the next couple of weeks.

But the use of the revenue for the kinds of purposes that we're talking about here is very much within the scope of what's being discussed. So that's part of our responsibility is to stay on top of that.

I know Supervisor Roberts has been following the water side of this thing very carefully. And a number of us have been looking at the universities and the schools and others where there's specific needs there.

Again, we are ultimately going to be tasked with developing an expenditure plan for the State funds in
accordance with some general guidelines that will go through the Department of Finance to the Governor and have to be approved by the Legislature. But we will have a role in all of this going forward.

   Yes, Dr. Sperling?

BOARD MEMBER SPERLING: On some of these issues, I know there is this tension between getting decisions made and needing more information, needing staff resources, but I've heard from quite a few stakeholders about the frustration about when decisions on certain things are going to be made.

   Would it be appropriate to set some kind of calendar when some of these decision are going to be made along the way? And you know through -- and of course, prioritize what's more important? Because a lot of these do affect stakeholders, and the uncertainty creates lot of problems for them.

EXECUTIVE OFFICER GOLDSTENE: That would be part of our September update to be specific about where we are. And if a change is to be made in any of these areas, I think almost all of them require a change to the rules, which would take time. So we have to give you a recommendation and a time line for making the rule change.

CHAIRPERSON NICHOLS: A lot of the requests that I've heard are really for guidance as opposed to rule
changes. Therefore, specific responses to questions of how certain things would be treated or considered, which doesn't change the need to do it.

But I think we're also at the point where some of those requests could be turned into actual proposals coming from those who want the answers. In other words, some of that is already there. But I've noticed there's some opportunities there for people who want something specific to actually tell us what it is they need in clear terms so we can act on it and do something with it.

BOARD MEMBER D'ADAMO: Just for clarification, I sense there is some confusion out there in terms of timing. So I just want to make sure on this list that you just went through, unless there is a guidance issue where it wouldn't require regulatory change, we're looking at staff coming back later this year for possible amendments for the second compliance period.

CHAIRPERSON NICHOLS: No. Go ahead. I don't think so.

BOARD MEMBER D'ADAMO: Or can they take effect in the first compliance period?

CHIEF CLIFF: If we were to come back with amendments for the second compliance period, that would be sometime in 2013.

BOARD MEMBER D'ADAMO: So would there be a
possibility for us to take action -- let's say staff determines that it's possible to resolve any number of these issues. Is it possible to come back and get a change implemented during the first compliance period?

CHIEF CLIFF: I think not likely in advance of the first auction or the beginning of the first one.

BOARD MEMBER D'ADAMO: I just think I'm confused on this. And I know I talked with a lot of food processors, and they seem to be confused in terms of how soon -- let's say this study comes out, how soon? And that's just an example. I don't want to pin you down necessarily on food processing.

But there's two issues here. There's the need to resolve these issues substantively, and then there is the process issue. And I think it would be helpful for us to be more clear about what is even within the art of the possible with respect to our regulatory calendar, the first and second compliance period, just to get everybody on the same page so we don't have any false expectation within the stakeholder communities.

DEPUTY EXECUTIVE OFFICER COREY: Ms. D'Adamo, understand -- and the September update, what we can do is walk through the path forward, because some of these -- and Steve talked on these. There are studies underway, for instance, on the benchmarking. You talked about food
processors. What that study may inform. And for instance, if that is suggested, the need for subsequent amendments that would be conclusions would be determined in the 2013 time frame and then to follow at some point forward. So what we could do is clarify in a sense the path and approximate time frame for these things to play themselves out.

CHAIRPERSON NICHOLS: Yeah, I think what this should look like is a work plan which includes the time frame for addressing these issues and some opportunity for the Board, if they feel it's necessary, to say this should go before that. Or you should speed up this one and that one isn't quite as important. I think that's within our area of policy jurisdiction that people are going to want to have some input to.

I just wanted to raise one more issue because I think people are getting a little bit more comfortable with this issue of market readiness and how this is being addressed. I think it's really important that we sit down sooner rather than later, like in the next couple of weeks -- I know the 4th of July is next week -- with the utilities, particularly with PG&E and Southern California Edison, because they're the ones who have the most at stake here.

And frankly, I had the feeling these people
actually had moved into our office. I don't seem to be able to turn around without seeing Frank and Kay in our office.

But obviously, they have the need for some very concrete and specific assurance. And so it's not just a matter of whether we're feeling comfortable about this. They need to be feeling comfortable about this since they're the ones that have to serve the customers.

So I would like to have the direction to the staff that this is something that you need to be doing. I've seen heads nodding, so I'm going to take that as consensus that this is something you need to be doing within the next couple of weeks.

And again, you can report back in September, but I think it has to happen before the Board would be in the a position to get back together.

Yes.

BOARD MEMBER ROBERTS: Thank you.

First of all, sometimes it's not just who's here speaking to us, but who isn't here that's maybe indicative of some things going on. I think may be good news the water districts that have been concerned aren't here.

And I think to some extent, Madam Chairman, it's a reflection of your efforts to meet with these people and hopefully offer what will be solutions.
I think the unease that maybe universities feel is maybe similar to being dependent on the Legislature in the future. You know, I'm from a county and we always are nervous since we depend on the Legislature. That seems to face long-term issues in the kind of unexpected way. Enough said on that. But I think I've been meeting with them and will continue to do.

Also one of the issues raised of cogeneration. Those people aren't here. And I know staff has been meeting with them directly and hopefully that's being resolved.

CHAIRPERSON NICHOLS: I believe so. But under our public comment period, we do have someone from Qualcomm who's asked to testimony. So they didn't testify on this item, but they are going to testify more generally on cap and trade.

BOARD MEMBER ROBERTS: I'm surprised they're not testifying on the item. Qualcomm specifically is one of the groups. And it seemed like appropriate they may --

CHAIRPERSON NICHOLS: They may have --

BOARD MEMBER ROBERTS: They should be speaking on this issue, but we'll listen to them under public comment. This has been very informative today. And there have been so many things that have come up that have helped me.
I still remain concerned. I guess I'm looking at solar, and I look at the list of medium linkage which there are such things as breweries cut and sew. So after seeing their facilities and test procedures and knowing there is no way they're going to reduce by 50 percent what they're doing. And it's one of the significant exporters for California. In fact, it's probably one of our few remaining manufacturing exporters in the significant way. I remain concerned.

CHAIRPERSON NICHOLS: I know that there is an ongoing conversation here and there has been a lot of conversation already. But within the last couple of days, I received a copy of a letter that came from the company through Senator Kehoe's office with some very specific requests that they're making for a letter to go into their planning process. And I would like you to know that I asked for my staff to prepare something ASAP so we can respond to that request. So we're not going to just let it sit.

BOARD MEMBER ROBERTS: Thank you. I haven't seen that.

CHAIRPERSON NICHOLS: No, I would be happy to share it with you.

BOARD MEMBER ROBERTS: The fact we live in San Diego, they could be anywhere in the state and have the
same feelings.

CHAIRPERSON NICHOLS: They are a category one so that automatically entitles them to some different treatment.

BOARD MEMBER ROBERTS: Had they been in our high category, I think that would have literally and certainly in the foreseeable future would have taken care of these issues.

And I think it's the uncertainty of the process that we need to be making continuing investments that has them concerned. So I would be appreciative of anything staff can do to either expedite some certainty or take a good look at what we have. Again, I don't know. We have a lot of breweries in San Diego, but I don't think they're on the same list. So in any event, we will get I guess into Quebec in greater detail.

CHAIRPERSON NICHOLS: Yes. That will be coming back presumably when the staff sends the letter out. In 45 days, we'll have something back.

BOARD MEMBER ROBERTS: I think these are the major items.

Personally, I'd like to go over this with staff and get more background on exactly who is on these various committees of the market surveillance and things like that. And I think these are going to be extremely
important in ensuring that the systems are working even in
the test.

So again, my compliments. This has been very,
very helpful for me personally.

CHAIRPERSON NICHOLS: There were two things that
we do need to do though. One is to move the set of
amendments that we're going to be doing forward so they'll
be ready in time. And then the other is to direct staff
to submit the necessary paperwork/factual record to the
Governor so that they can at least move forward with the
process of making a decision on this.

This is a situation where we are really wanting
to make sure that we have honored the desire of the
Legislature to have this kind of openness about the
process. And there will be that opportunity to come back
again after the Governor makes his findings so that people
who want to testify further about that issue will be able
to do it.

So any additional comments or a motion?

BOARD MEMBER D'ADAMO: I'll move adoption -- you
want separate motions?

CHAIRPERSON NICHOLS: Yes.

ASSISTANT DIVISION CHIEF CHANG: Before you vote
on the linkage resolution, I just wanted to note on the
12-28, the bill number that is in there is actually not
the one that the Governor --

CHAIRPERSON NICHOLS: They changed the number for the trailer bill.

ASSISTANT DIVISION CHIEF CHANG: I want to make sure that we have the right bill number. And I think you all can modify that. The correct bill number is SB 1018.

CHAIRPERSON NICHOLS: Okay. All right. Thank you. That probably could just be done ministerially, but it's just as well to be correct.

BOARD MEMBER D'ADAMO: Move adoption of Resolution 12-27.

CHAIRPERSON NICHOLS: Is there a second?

BOARD MEMBER DE LA TORRE: Second.

CHAIRPERSON NICHOLS: All in favor, please say aye.

(Ayes)

CHAIRPERSON NICHOLS: Any abstentions or opposition? Okay. Very good.

BOARD MEMBER D'ADAMO: Move adoption of Resolution 12-28 reflecting the appropriate bill number SB 1018.

BOARD MEMBER DE LA TORRE: Second.

CHAIRPERSON NICHOLS: Okay. And again all in favor? Aye.

(Ayes)
CHAIRPERSON NICHOLS: Opposed? Great. Thank you. This was a very productive discussion. And to be continued.

We have one public comment, and that is Mike Rosen. Mike, hurry on down. Did you mean to testify?

MR. ROSEN: Well, I apologize. I probably should have recognized this was -- the previous item was the appropriate item to testify under. But you've --

CHAIRPERSON NICHOLS: We'll listen to you anyway.

MR. ROSEN: You more or less discussed it.

Really quick, Qualcomm, Incorporated, they're a San Diego based technology company, 12,000 employees in San Diego and growing. And I think you've hit on it a little bit.

We are in the unique situation, they are category one. I don't know who else is in their situation. But you know, proud of their environmental stewardship and their environmental record.

And over the years, they have taken great strides to reduce the energy intensity of their presence in San Diego. They have two combined heat and power cogeneration facilities. Those CHP units have reduced their greenhouse gas emissions from if they had been just stayed with SDG&E. Their emissions are essentially 6,000 metric tons less than had they stayed with SDG&E. Somehow this has put them into a -- made them a covered entity. These
co-gen units which all the energy is used on site, they
don't export any of the energy is used on site. Somehow
they are a covered entity and they get no allowance for
this. They're going to eat the cost of complying with cap
and trade.

And frankly, they'd have been better off never
trying to do anything to reduce their emissions profile.
And if they want to grow in San Diego, which they want to
grow in San Diego and California, other places in
California, you know, combined heat and power works for
them and they would like to do more of it. It seems to be
the goal of the Governor and of this body to do more CHP
and frankly they won't do more if they're going to have to
be under this cap and trade rubric.

So, like I said, you already discussed it a
little bit and sound like you have some staff working on
it. That's very positive. I just wanted to come here and
make those comments. Thank you.

CHAIRPERSON NICHOLS: We need to be sending the
right incentive message. This is one of the situations
where you have us and the PUC, different proceeding. And
we need to get these coordinated and make sure that we're
putting our message together with our action on what we
like, which is more of cap and -- more of combined heat
and power. Thank you.
All right. Without further ado then, I believe we are adjourned. Thank you all very much.

(Whereupon the Air Resources Board adjourned at 3:59 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 11th day of July, 2012.

_______________________________
TIFFANY C. KRAFT, CSR, RPR
Certified Shorthand Reporter
License No. 12277

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